

Feasibility Study

Copper Valley Intertie

**State of Alaska, Department of
Community and Regional Affairs,
Division of Energy**

Volume 3

**Transcripts of Public Testimony
Public Comment**

April 1994

R·W·BECK

Copper Valley Intertie Feasibility Study

(PROVIDED AS A SEPARATE BOUND DOCUMENT.)

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COPPER VALLEY INTERTIE FEASIBILITY STUDY

Appendix P

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PARTIAL TRANSCRIPT OF PROCEEDINGS
(Public Testimony Portion Only)

VALDEZ, ALASKA

Monday, February 7, 1994

Proceedings recorded by electronic sound recording. Transcript produced by transcription service.

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1 VALDEZ, ALASKA - MONDAY, FEBRUARY 7, 1994

2
3 (Tape No. 1, Side 2)

4 MR. ROETMAN: Paul Roetman.

5 HEARING OFFICER: Got a spelling?

6 MR. ROETMAN: R-o-e-t-m-a-n.

7 HEARING OFFICER. Okay. Please go ahead.

8 MR. ROETMAN: Okay.

9 PAUL ROETMAN

10 Just a real short comment. My name is Paul Roetman.
11 I represent the Prince William Sound Economic Development
12 Council. We represent Chenega, Cordova, Tatitlek, Whittier,
13 and Valdez.

14 With electricity being the -- a primary barrier to
15 economic development, our full Board has shown and expressed
16 strong support for the Copper Valley intertie project. As a
17 regional economic development organization, we realize that
18 improving this infrastructure is certainly beneficial to us
19 all. To quote our President, Tom Van Brocklin, what he said at
20 our last quarterly meeting last month:

21 "Anything that we can do to reduce electric
22 rates is a positive for economic development, in
23 Valdez and Prince William Sound."

24 Thank you.

25 HEARING OFFICER: Thank you. Anybody else?

1 (No audible response)

2 HEARING OFFICER: Okay. Well, I guess we're done
3 then. Thanks a lot.

4
5 (Whereupon, the proceeding in the above matter was
6 adjourned)

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15 Additional Note From Hearing Officer R. Emerman:

16 After the tape recorder was turned off, Ms.
17 Donna Fischer came forward and asked that
18 her brief remarks be paraphrased for the
record. The sense of her remarks was as
follows:

19 Donna Fischer remarks, paraphrased by R.
20 Emerman: Ms. Fischer expressed concern
21 with the high rates in effect from Eureka
22 to Valdez, and expressed her belief that
23 the intertie would be beneficial to the
whole area. By bringing down rates, the
24 intertie would help induce businesses to
25 locate in the area and help diversify the
local economy from dependence on the oil
companies.

1 (No audible response)

2 HEARING OFFICER: Okay. Well, I guess we're done
3 then. Thanks a lot.

4
5 (Whereupon, the proceeding in the above matter was
6 adjourned)

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24 whole area. By bringing down rates, the
25 intertie would help induce businesses to
locate in the area and help diversify the
local economy from dependence on the oil
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PARTIAL TRANSCRIPT OF PROCEEDINGS

(Public Testimony Portion Only)

GLACIER VIEW, ALASKA

Tuesday, February 8, 1994

Proceedings recorded by electronic sound recording. Transcript produced by transcription service.

1 GLACIER VIEW, ALASKA - TUESDAY, FEBRUARY 8, 1994

2
3 (Tape No. 1, Side 2)

4 TOM BERKLEY

5 My name is Tom Berkley, B-e-r-k-l-e-y. I own Eureka
6 Lodge on the Glenn Highway. I'm a member of the Copper Valley
7 Electric Association, and I pay them a lot of money every
8 month, and I get a little newsletter -- it's very nice.

9 Copper Valley Electric Association is a group of
10 people, including me and the rest of the consumers, and --
11 Colleen, where you going?

12 (Inaudible response)

13 MR. BERKLEY: Oh, okay. Thanks a lot, guys.

14 BY MR. BERKLEY (Continuing):

15 And they're people just like us -- they got to go out
16 and grab a cigarette, or they got to eat, they got to drink,
17 whatever. They're just like real people. And I sincerely
18 believe that this -- what you have seen, what we have all gone
19 through, for the last year or so is real. This is not some-
20 thing phony; this is real.

21 They're not sitting there in Glennallen dreaming up
22 monuments in the forms of 90-foot poles between Glennallen and
23 Sutton as a monument to their achievements. This is a neces-
24 sary thing that we need. And we've been through it all, the
25 reasons that we need it. And all we're asking is a little bit

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1 JIM COLVER

2 Jim Colver, C-o-l-v-e-r. First I'd like to address
3 the economics of the study, the intertie study.

4 The study shows, despite much pro-intertie influence,
5 that an intertie is not the least-cost alternative for CVEA
6 consumers. Study shows that a hydro project at Allison Lake is
7 the best least-cost alternative. It does not make common or
8 economic sense to gamble on a four-fold increase in demand at
9 Petro Star Refinery to justify the intertie. There is no
10 advance purchase agreement with Petro Star to protect rate-
11 payers, to guarantee to purchase enough power to pay for the
12 line. This puts consumers on the hook, which could result in
13 even higher rates.

14 If you take the \$46 million cost and divide it by the
15 2,943 consumers you have in Copper Valley, that's \$15,630 of
16 debt per consumer. But the -- another question is, What is the
17 economic cost to the MEA consumer? It goes through the MEA
18 service area. The study doesn't identify any related cost to
19 the MEA consumer, and I think that's a valid point that needs
20 to be followed up on in the final report.

21 And in some areas, it appears that the cost estimate
22 for the intertie is too low. The study has an average labor
23 rate of \$121 an hour, which is supposed to include helicopter
24 time. Helicopter time costs at least \$600 an hour.

25 Right-of-way acquisition costs appear to be too low.

1 of cooperation. Sure, we're going to stomp on your territory.
2 But we -- it would be nice if we could have the same advantages
3 that you folks do down here. Okay?

4 And please remember, in all this discussion about
5 money and who's paying for what and what about this and what
6 about that, we're paying for it. Okay? We're paying for it.
7 That's it.

8 HEARING OFFICER: Thank you.

9 (Inaudible comments)

10 HEARING OFFICER: Your name?

11 MR. STRICKER: My name. You want my address also?

12 HEARING OFFICER: Yes, sir.

13 MR. STRICKER: All right.

14 HANS STRICKER

15 Yeah. My name is Hans Stricker, and I'm a home-
16 steader. I'm not hooked up to MEA power.

17 And I just want to say what I said earlier, to make
18 sure they hear it and got it clear -- that they take the
19 Boulder Creek route. I've heard what they've said about the
20 environment and all that, and I really wasn't impressed. But I
21 think for myself, I just had to say that because I think that's
22 the better route; it'd make me happier.

23 So that's all I got to say. Thank you.

24 (Pause)

25 / / /

1 in the future, we may not have the luxury of deciding where to
2 site and have the distance because, as one of the factors in
3 the siting criteria, they use 600 feet as just the bottom line.
4 If you were 600 feet away from a private residence, that was
5 good enough.

6 So I think we need to back up there and look at that
7 criteria, in the event that the line is upgraded to a higher
8 voltage in the future, so that we don't have any conflicts or
9 any potential cancer-causing electromagnetic fields out there.

10 One major flaw in the siting factors was that there's
11 no section that says what the community preference is. There's
12 a visual, and there's a cultural, and there's environmental
13 factors. But probably paramount, with the most amount of
14 points, should be what the community preferences are for sit-
15 ing. So I think that's one thing that you missed. When
16 you're -- if you're going through the data, you obviously saw
17 some of the comments that people had on where the preferred
18 route would be, and that should be given about the highest
19 weight.

20 Now, I see that didn't work very well with your --
21 the community preference was for a Boulder Creek route, but
22 yet, using your siting criteria, you ended up with an Anthra-
23 cite Ridge route along the south side, which is -- goes
24 across -- and I'm -- now I'm going to rebut why -- using your
25 own siting criteria, why the Boulder Creek is a better alterna-

1 The dollar value per acre is low, and the right-of-way width
2 was computed at 125 feet instead of the standard 150-foot wide.
3 And there's no accounting or budget for buying out right-of-way
4 across the mining claims in the back country.

5 Another concern is the design. There's no mention of
6 the access roads that are intended to be built to access the
7 line. This is an integral part of the whole project and needs
8 to be right out in front, right with the alignment, where the
9 proposed access roads are going to be, 'cause they'll have as
10 much or more impact on the back country than the line itself,
11 and a lot of impact on the adjacent lands, and will increase
12 the access and pressure on the fish and wildlife resources.

13 The -- another concern on the design is the EMF safe
14 factor. Now, the study assumes that at 600 feet away from this
15 138,000-volt line that you'll be safe at 600 feet. Well, the
16 authorizing legislation that provided for this intertie says it
17 could be -- that the line could be expanded to a higher capa-
18 city, which would probably be 230,000 volts.

19 Now, so we need to design around what it could be
20 upgraded to; that means a proper right-of-way width and the
21 safe EMF distance, which would certainly be more than 600 feet.
22 If we're going to prudently design this thing for the possibil-
23 ity of any upgrade in the future, we got to use the extreme
24 pessimistic figure to incorporate any kind of upgrade this line
25 may incur because, once this route is established and upgraded

1 to limit the amount of additional access into the back country
2 because of the project. A mile from the highway and at --
3 there's a major trailhead at Puritan Creek. You got a lot of
4 people going in and out of there; you're going to increase the
5 access to the impacted area along the highway there. So again,
6 using your siting criteria, it doesn't fly.

7 So therefore, using those criteria, the Boulder Creek
8 option would be the preferred alternative in this eve- -- in
9 that area, starting at the Simpson cabin and then continuing on
10 to where it gets back into the Alfred Creek.

11 Now, we've just heard from MEA that there's no imme-
12 diate plan, or even in the immediate future, to build a substa-
13 tion, which was the reason why we supposedly routed the line in
14 the Anthracite Ridge/Puritan Creek/Cascade Creek area. So that
15 argument is now thrown out, and so we now don't really have to
16 put it by Victory and in that area because the substation is
17 not necessarily a go in the near future. Definitely, we can't
18 design around something we're not even going to build. We need
19 to think about what some of the other parameters are, and I
20 think number one would be the community preference in this
21 situation.

22 In summary, in looking at this project, it never
23 makes sense to build a project to buy some.....

24 (Tape Change - Tape No. 2, Side 3)

25 BY MR. COLVER (Continuing):

1 tive.

2 Number one, you used a cultural resource conflict
3 evaluation. Okay? So the location that you put the route
4 along, the Anthracite Ridge, is adjacent to the Nelchina Trail,
5 and that's areas where indigenous people have traveled for many
6 years. There's probably a lot of artifacts and archeological
7 history out there. So that is something that would not fly in
8 that category as a cultural resource.

9 Visual intrusion. The Anthracite Ridge route is
10 within a mile of the highway, along the Cascade area and Puri-
11 tan Creek, and there's a lot of little private parcels of land
12 in there. You're definitely really close to property in there.
13 So again, your siting criteria there did not really effectively
14 weigh it out.

15 Scenic viewshed. Within a mile of the highway, it's
16 going to be visible. As the road gets upgraded, the clearing
17 limits are going to go back, and we're going to have -- within
18 a mile from the highway, if we use that Anthracite Ridge route,
19 you're going to have the power line right there.

20 Stream crossings. Another factor that was used in
21 siting the route was how many streams does it cross. Well, you
22 cross no less than seven streams in the section between Simpson
23 cabin and Hicks Creek. So again, that -- using your own
24 criteria, it doesn't make the grade.

25 And increased access. One of the criteria was trying

1 And I just do not like the intertie in any route, in
2 any shape, or any form. But the Boulder Creek route is the
3 most preferred if that's the one I need to accept.

4 DWIGHT DIETRICH

5 Yeah. My name's Dwight Dietrich, and I got power
6 from Copper Valley Electric in 1992; I was on alternate energy
7 for 10 years before that. I worked with these folks for
8 several years to hook up. I've enjoyed their power. They've
9 worked well with us in that project, helping us out. And if
10 they can do this and, you know, not step on anybody's toes,
11 keep it away from the people, and it looks like they're doing a
12 pretty good job, I support it.

13 And I think what we also have to remember is this
14 power that MEA is getting in this community is coming from
15 transmission lines from somewhere else.

16 (Pause)

17 HEARING OFFICER: Thanks. Anybody else?

18 (No audible response)

19 HEARING OFFICER: Okay. Well, thanks a lot. End of
20 the meeting.

21
22 (Whereupon, the proceeding in the above matter was
23 adjourned)

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PARTIAL TRANSCRIPT OF PROCEEDINGS
(Public Testimony Portion Only)

GLENNALLEN, ALASKA

Wednesday, February 9, 1994

Proceedings recorded by electronic sound recording. Transcript produced by transcription service.

C E R T I F I C A T I O N

STATE OF ALASKA)
THIRD JUDICIAL DISTRICT) ss.
_____)

I, **CINDY S. CARL**, do hereby certify:

(1) That the foregoing pages contain a full, true, and correct transcript of proceedings in the above-entitled matter, transcribed by me, or at my direction and supervision, to the best of my knowledge and ability.

(2) That I have been certified for transcript services by the United States Courts.

(3) That I was certified for transcript services by the Alaska Court System prior to January 1, 1993.

SIGNED AND CERTIFIED:

BY: Cindy S. Carl
Cindy S. Carl
Certified Court Reporter

DATE: 2/15/94

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1 project.

2 So that's all I have to say.

3 HEARING OFFICER: Thank you.

4 MR. DOWNES: Thank you, sir.

5 (Off record)

6 (On record)

7 HEARING OFFICER: Go ahead.

8 GARY HARRISON

9 My name is Gary Harrison, and I live in Chickaloon.
10 They're trying to run this power intertie through Chickaloon
11 Village's land, which, if I have anything to do with it, it
12 will not.

13 Also, I want to point out that when they did their
14 study, they did not use what is known as a "Trump" in these
15 hydro projects. The Trump system has been around before
16 Christ, basically compressing air with water through the hydro
17 pipes. And if these new or old technologies were -- or old
18 technologies were used in new manners, they would produce more
19 energy than this community would need with hydroelectric power
20 rather than diesel generator or an intertie that is basically
21 run on gas, which both of them are -- you're going to have to
22 buy your fuel, where hydro, you don't buy your fuel.

23 And how people can think that to maintain these
24 diesel generators and put through this intertie is economically
25 efficient is beyond me. They'd better go back to math class or

1 Number one, why should we buy a 40-year-old power
2 plant when we already have a 25-year-old power plant? That
3 doesn't seem quite economically feasible in any respect. We
4 also feel that the letters that have been presented by other
5 people from other communities are -- the letters that I have
6 read are full of half truths or uninformed, unintelligible
7 comments by people that obviously are not informed. And we
8 feel that maybe it's our fault that we haven't communicated
9 with these other communities our needs and our wants.

10 But we feel that an informed board, informed
11 committee, that decides this will be able to see through some
12 of these letters that we have read that's in this study or --
13 you know. And you and I are both smart enough to see over, you
14 know, that kind of rhetoric. So we feel that anything positive
15 that we can say or we can do as the Copper Valley Chamber of
16 Commerce, we will be more than willing to do in the future to
17 help rectify any of these problems.

18 I will personally go to any community, as part of the
19 Board, to speak to any of them about any of their problems as
20 a -- not necessarily as a Board member, but as a paying member
21 of the community, and try to seek and get their understanding.
22 So that's basically what I wanted to say as public comments,
23 that if there's anything we can do as the Chamber of Commerce
24 and/or individuals in the Chamber, we'll be more than happy to
25 do to help inform the people that are so uninformed as to this

1 (Off record)

2 (On record)

3 HEARING OFFICER: Ron Frank, please go ahead.

4 RON FRANK

5 Well, I'm for the intertie. And I'm here on behalf
6 of Gulkana Village, and I think the intertie, hopefully -- you
7 know, from all the statement and all the pro and cons that I
8 heard in the other meetings and stuff like that.

9 And I -- the reason why I'm for this intertie is
10 because, right now, I can't even afford to put in any electric-
11 ity to my new home because it's going up -- the rate of elec-
12 tricity is going up every year, and the cost of electricity is
13 going up every year.

14 And on top of that, our village is -- it's on the
15 verge of collapsing, you know, because of the -- because we
16 can't keep up -- as a community -- as a village, we can't keep
17 up with the cost of the electricity that's coming in, and we
18 have no other way to generate money. And many time, I guess we
19 have to, you know, sometime get money from the State to pay,
20 you know, for the -- to bail us out, you know.

21 And I think, now, this intertie will probably solve,
22 you know, some of the problems for the villages, you know, for
23 the Native villages. And I'm talking for the Native villages
24 here, for Gulkana and other villages, Chistochina and maybe
25 Tazlina and Copper Center and (indiscernible).

1 something. I don't -- something doesn't compute there.

2 Not only the fact that I believe that they have
3 calculated the price for this intertie to be very low, I have a
4 book that -- produced from the power company, that tells me on
5 high -- or low-head hydro projects, that I should estimate my
6 power lines at a million dollars a mile, and that's on low-
7 head. And this here is estimated somewhere around \$300,000,
8 which is low from many projects which have been produced simi-
9 lar to this. Like the Bradley Lake power line was five hundred
10 and some thousand a mile.

11 With many of these idiosyncracies here, I don't
12 understand why people continually want financial boondoggles
13 such as this. Not only that, but this thing goes through many
14 high-density areas of wildlife. I have a study here that says
15 the wil- -- that these EMRs produce cancer in humans. And if
16 it's running through many critical habitat of these others, it
17 will put -- produce cancers in them. Many of us happen to eat
18 off of this food chain and don't really want to be eating
19 cancerous game.

20 Not to mention the fact that there may be change
21 orders and many other things in this that will significantly
22 increase the price of this intertie.

23 And I probably got more to say, but I can't think of
24 it all right now. But I'm definitely against the intertie, and
25 it definitely does not make economic sense. Thank you.

1 (On record)

2 DONNA TOLLMAN

3 My name is Donna Tollman, and I'm with the Copper
4 Valley Economic Development Council, and our Board of Direc-
5 tors, we are very firmly in support of the intertie because of
6 the economic development benefits that it will provide for
7 Copper Valley.

8 One of the largest barriers that we have encountered
9 in trying to develop project (sic) here is the cost of power.

10 And that's basically all I have to say. I've said it
11 many times, but once again.....

12 HEARING OFFICER: Thank you.

13 (Off record)

14 (On record)

15 MR. WELD: Where is the -- where do you speak in this
16 (indiscernible - microphone interference)?

17 (Inaudible comment)

18 MR. WELD: Okay. Is it on?

19 HEARING OFFICER: Yeah, it's going.

20 MALE SPEAKER: Jerry?

21 MR. WELD: Oh.

22 JEREMY WELD

23 I'm Jeremy Weld, J-e-r-e-m-y W-e-l-d, a mobile
24 business person from North Country Communications. I'm Presi-
25 dent of the Chamber of Commerce.

1 And if that's not -- you know, if that's not pos-
2 sible, you know, I think there's alternat- -- our alternative
3 is to build our own hydroelectric here in our area because we
4 have a whole bunch of potential here in this area that we never
5 tap in. You know? And that's the alternative, I think, that
6 we should look into, too.

7 And I don't know how many interests the Governor has
8 on this project. From what I hear from other people, or other
9 people who give their testimony, I think maybe the Governor has
10 a financial interest in this intertie here. Maybe it's true or
11 not, but if it is -- I hope it's not.

12 But I'm here on behalf of my village and on behalf of
13 my other people in this region because a lot of us -- you know,
14 a lot of us Native people don't have a job because we're not
15 hired on any construction or any project. And if any time in
16 the future, if they're going to use intertie, they're going to
17 go for the intertie, or if they're going to do this thing, I
18 think Native people should have a hundred-percent insurance to
19 be hired on the job, or any kind of job.

20 Because right now, as it is, we are people that are
21 very distressed for a job. And that's all I can say right now.
22 Thank you.

23 HEARING OFFICER: Thank you.

24 MR. FRANK: Okay.

25 (Off record)

1 MR. WELD: Okay.

2 HEARING OFFICER: Anyone?

3 (Inaudible comment)

4 HEARING OFFICER: Are you just going by? Okay.

5 MR. DAVENPORT: John Davenport.

6 (Pause)

7 HEARING OFFICER: Go ahead.

8 MR. DAVENPORT: We're on record?

9 HEARING OFFICER: Yes.

10 JOHN DAVENPORT

11 My name is John Davenport. I live near Gulkana
12 Village. I want to testify in favor of the intertie and make
13 just one or two specific comments.

14 I've heard many comments relating to the study of the
15 environment, as required by the National Environmental Policy
16 Act, but I think one thing that has not been pointed out that
17 needs to be pointed out is that NEPA also requires study of the
18 human environment. I think it has been under-emphasized that
19 because of the prohibitive cost of power in this area, there
20 are many human people -- there are many people in this area
21 that are not hooked up to a reliable power source because they
22 cannot afford it. I think that needs to be pointed out very
23 clearly.

24 I have a real problem with some of the people that
25 come from other areas that already have reasonable power,

1 I want to testify in favor of the intertie and make
2 these specific comments:

3 I think that even in a low load growth scenario, an
4 intertie makes good sense. In the event of that kind of eco-
5 nomic catastrophe, if that ever came to be in our communities
6 of Valdez and Copper River, the intertie would be a possibility
7 of allowing a recovery to develop. And I think in the medium
8 low load growth scenario, the intertie makes much more sense
9 than the Allison Lake project for several reasons, chief among
10 them, I guess, because there is money to build the intertie.
11 And I understand that the cost analysis doesn't take that into
12 consideration, but it really is the intertie, at this point,
13 for our communities, is the only viable alternative.

14 And I think, also, in the high load growth, if that
15 came to pass, and a pipe -- gas pipeline was built, I think the
16 possibility exists that a gas-fired plant either in Glennallen
17 or Valdez could supply electricity back to the Mat-Su Valley,
18 which, under those circumstances, if that gas pipeline were
19 built, the Mat-Su -- the associated growth with another pipe-
20 line on Mat-Su and Anchorage might demand additional -- might
21 allow them to produce additional power without building another
22 generator, and it might be more practical to use North Slope
23 gas than Cook Inlet.

24 That's it.

25 HEARING OFFICER: Okay. Thanks very much.

1 be supplying the power, and they will not guarantee us any
2 wholesale power rates. So it'd be like buying a mortgage for
3 your house with no idea of what your payments would be in the
4 near future.

5 I also think this will be an eyesore running through
6 communities that don't want it, and for 3,000 people in this
7 area, to affect the lifestyles of the people whose communities
8 this will run through, whether it's on public or private land,
9 I don't feel that we can make that decision for the people who
10 have moved to the state.

11 HEARING OFFICER: Thank you.

12
13 (Whereupon, the proceeding in the above matter was
14 adjourned)

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1 access to reasonable power, that testify against the intertie.
2 I find it hypocritical, whenever you can look out your own
3 window and see the power line that supplies your own power and
4 reasonable rates, to testify against those who desire the same
5 benefits for themselves and their families.

6 I am very much in support of anything that will lower
7 the electric rates in this area. Thank you.

8 HEARING OFFICER: Thanks.

9 (Pause)

10 JANE BROWN

11 My name is Jane Brown. I'm a business person in
12 Glennallen, and I have the Jane Brown Art Works Gallery, and I
13 currently am a member of Copper Valley Electric Association.

14 I'm against the intertie as presently proposed for
15 several reasons.

16 I think the assumptions of potential power needs in
17 the future are based on pie-in-the-sky estimates. There's no
18 guarantee of high Petro Star usage in the future, and there's
19 no guarantee that there will be a gas line on this side of the
20 state. And even if there was, I think it would be a high usage
21 for a minimum amount of times, and then the rate would steady
22 off and the gas line wouldn't be using any more power right now
23 than the current pipeline does.

24 There are also no guarantees of our rates being
25 lower. There are no guarantees because Chugach Electric will

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PARTIAL TRANSCRIPT OF PROCEEDINGS

(Public Testimony Portion Only)

SUTTON, ALASKA

Thursday, February 10, 1994

Proceedings recorded by electronic sound recording. Transcript produced by transcription service.

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SUTTON, ALASKA - THURSDAY, FEBRUARY 10, 1994

(Tape No. 1, Side 2)

HEARING OFFICER: Go ahead.

GARY HARRISON

MR. HARRISON: My name is Gary Harrison, and I am very much opposed to.....

MALE SPEAKER: The vandalism of the line?

BY MR. HARRISON (Continuing):

I'm very much opposed to the line.

MALE SPEAKER:vandalism to this line as it's trying to be pushed down our throat.

MR. HARRISON: And.....

(Applause)

HEARING OFFICER: If you could let him.....

MR. HARRISON: The public comment was pretty good on that.

(Laughter)

BY MR. HARRISON (Continuing):

But anyhow, I'm glad to hear there's a lot of other people that are against this line.

There's a lot of things that have not been considered. As they have said, the cost of eco- -- the economic cost of ecology is incalculable. As they have said, they can't find anybody that can calculate it because it's so astronomical.

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1 days and five-minute time limits. Okay? But they can fax
2 stuff back and forth to Seattle for eight months. That's
3 what's been going on.

4 And the numbers have -- on the cost of this intertie
5 have gradually been going down and down and down, and the
6 demand for Petro Star has been going up and up and up. And I
7 think that it's going to -- we're -- it's going to bear out
8 that this is not a feasible project; it's whether or not Edgar
9 Blatchford's going to have any guts to disapprove of it, which
10 he probably won't because he's a Hickel appointee.

11 So we have to make sure that we talk to our legisla-
12 tors and tell them that they are supporting a boondoggle
13 project that's going to cost \$60 million of State money, \$35
14 million zero-interest loan over 50 years, \$75 to \$150 million
15 in interest costs alone. The a- -- AIDEA is one of the funds
16 that they want to raid right now to solve this budget crisis.
17 How are they going to get \$25 million out of AIDEA too?

18 So there's a lot of deception going on right now. I
19 don't know if any of you have saw the article in the paper
20 today that makes a connection between a business man, an
21 electrical contractor named Scott Thompson. And he threw a big
22 bash for Ramona Barnes, and his stated reason in the newspaper
23 article today was because she broke open the \$100 million for
24 the intertie. And they raised \$30,000 to \$50,000 money -- \$30
25 to \$50,000 that evening for Ramona Barnes. And Scott Thompson,

1 on the Glenn Highway. The -- I want you to move the Glenn
2 Highway so they don't have to see this thing. Okay?

3 What's the point? The point is that they're not
4 taking into the social costs of the people who live here at
5 all. A lot of points are going to be made, and these are -- a
6 lot of points are going to be written comments, but I want to
7 hit four points real quick, and I've already said a couple of
8 them.

9 One of them is that the cost of the intertie is
10 grossly underestimated: the cost of labor, the cost of heli-
11 copter time, the cost of the static bar compensator, the cost
12 of right-of-way acquisition, the cost of litigation that will
13 be incurred on all these issues. The demand for Petro Star is
14 being grossly overestimated.

15 In the low-growth scenario, which is the most
16 likely -- and who's going to make this decision? Edgar Blatch-
17 ford? Is he some kind of demographics expert? But anyway, the
18 low population growth is probably the most accurate, and it's
19 the diesel generator. The low to moderate is maybe the second
20 most probable, and that's Allison Lake. Only when you start
21 looking at really high demand by Petro Star do you see the
22 intertie coming in as any kind of a project that has any kind
23 of cost/benefit ratio at all.

24 By the way, the statute doesn't even define what a
25 cost/benefit ratio is supposed to be or what an environmental

1 this electrical contractor, said, 'Well, that's just how the
2 system works.'

3 So we're seeing what the system is here; the system
4 is, Who can give enough money to Ramona Barnes to push this
5 through? The system is, Are we going to have any kind of input
6 here unless we put pressure on our legislators?

7 I think it's pretty obvious what's going on: Neil
8 Bergt gave himself a \$10,000-a-month raise this morning; he
9 owns a third of Petro Star. And no matter what the public
10 officials say, no matter what R. W. Beck says, it's pretty
11 obvious that this is being built for Petro Star Oil Refinery.
12 And you can say it's a industrial consumer, but the practical
13 matter is, It is Petro Star. Don't put another label on it.

14 And there's politics involved in why this thing is
15 being pushed through. People are making money on it, big
16 money. And they don't care what we're going to -- they don't
17 care about us. They changed the route, but yet they tell you
18 tonight that the route can be changed by Copper Valley any time
19 they want. They get the power line away from the highway so
20 the people from Minnesota who are driving up the highway don't
21 see it, but people who live here, they could care less about.

22 The people who live here and have to look at it every
23 day of the rest of their lives, that is not an issue. I'll be
24 able to see it from my window. Well, I don't live on the Glenn
25 Highway, but -- so I -- I'm just at a loss because I don't live

1 one big industry. Copper Valley population grew by .9 percent
2 in the last 10 years, and yet they want a power line that's
3 going to bring 300 percent more power in.

4 HEARING OFFICER: Chris, that's six minutes.

5 MR. ROSE: Okay. That's all I have.

6 (Applause)

7 ALAN LARSON

8 My name is Alan Larson. I'm with Chickaloon Village.
9 I'd like to hit a few of our points as well.

10 Starting with the draft report on page I-7, under
11 Rights-of-Way Acquisition and Permitting, it has, under Native
12 Lands, that they're going to pay \$246,000 for right-of-way
13 acquisition. Well, at a quick estimate, I'd say that that's
14 about nine months of a lawyer team -- I'm sorry -- that I'm
15 personally willing to take this to the Supreme Court, and
16 that's a five- to ten-year process in some cases. So they're
17 going to have to bring up the cost there.

18 And then to environmental assessments, page II-30,
19 under Part H., Route Alternative Comparison:

20 "This exercise of a route comparison is not
21 intended to take the place of a formal impact
22 assessment as may be required by NEPA regula-
23 tions for an environmental assessment."

24 And furthermore, they didn't include costs for an environmental
25 impact statement. We have delivered, and they're sitting on

1 factor is supposed to be; it just says look at it. So they
2 look at it, and then they say they did the study. Well, that
3 doesn't make any big difference because it's a political deci-
4 sion. So again, call your legislators.

5 Another point is the environmental impacts, and
6 because they're not telling us now where the route's going to
7 be or where the access roads are going to be, we have no way to
8 make any intelligent comment on the environmental impacts
9 whatsoever. There's no way we could comment on that. So this
10 process is a farce as far as environmental impacts go. Those
11 issues will be litigated.

12 HEARING OFFICER: Your time's running out.

13 MR. ROSE: Okay.

14 BY MR. ROSE (Continuing):

15 I'll make a couple more points. The alternatives
16 obviously have not been looked into thoroughly. They just
17 keep -- Petro Star keeps saying, 'We can't co-generate.' Well,
18 they produce fuel. Okay? They have nothing to burn? Okay.
19 They are just saying that because they want the State of
20 Alaska, through Copper Valley Electrical (sic) Association, to
21 lay it on a silver platter for them. That's all they want, is
22 a free deal.

23 I think that there's a possibility that there's going
24 to be some growth in population and -- in the area. We're not
25 against people having power up there, but this is obviously for

1 the table right there, our resolutions concerning the environ-
2 ment that require and trigger those environmental impact
3 standards that meet or exceed federal environmental impact
4 statements.

5 These resolutions are considered valid under the fact
6 that the environmental laws state that whosever's laws are most
7 strict are the ones that shall be followed. And clearly, the
8 State of Alaska and the United States government don't feel
9 that it's necessary. We do. And it's there.

10 Okay. Under the helicopter costs which were put in
11 here also, typical costs for this class of helicopter would be
12 \$550 to \$700 for flight-hour plus fuel. If we totally denied
13 them access roads, they didn't include the helicopter costs for
14 the entire feasibility.

15 And what I'm trying to get at in all of the things
16 that I'm saying is if these each individual items (sic) are so
17 undervalued, it's -- then it throws the entire feasibility
18 study off by millions of dollars. And if that's the way it is,
19 then, all they're doing is sending you a set of numbers that
20 are worthless, absolutely and entirely worthless.

21 I can play with numbers until anything looks good.
22 And their feasibility of this study is not entirely assessed in
23 that. Thank you.

24 (Applause)

25 HEARING OFFICER: Anyone? Sure.

1 And that is one thing that is very critical to me and
2 public policy. The public policy is the laws that affect us.
3 We are the public. I live here in Sutton; I have businesses
4 here. If you take my land and my home and compare it to the
5 land and home of Eagle River or Anchorage, the difference
6 between those two is what I call the quality of my life. I
7 put just as much energy into that. It does not have the
8 economic value, but it has what I call my quality of life.
9 That's why I'm living here; that's why I put the energy into my
10 place.

11 I feel power lines are archaic. There is better ways
12 to deal with things. Secondly, I feel like a community's needs
13 should be handled, maintained, developed not to impact others.
14 And this power line does impact us. I do not want to look at
15 an intertie.

16 To say that EMFs are not a concern goes against a
17 hazardous waste class that my husband just attended. The
18 electrical person discussing electrical hazards said, and I
19 quote:

20 "It's really strange, but under intertie, the
21 grass and vegetation grows differently."

22 There's a reason for that: It is not something manufactured.

23 So that quality of life and our health are really
24 important, and they need to be addressed and be properly evalu-
25 ated to make a decision. Thank you.

1 to the industry for all intents and purposes.

2 The question of what happens when and if the gas
3 pipeline comes down along the corridor and through Glennallen,
4 and generation plants could be developed there, has that been
5 considered? Or I guess that's a rhetorical question.

6 I guess I'm frustrated by the fact that we are here
7 having an exercise to kind of get the stress level down. And I
8 appreciate that opportunity, but I'm in -- I'm much more in
9 favor of whoever it was that said that there will be some of
10 those walking power lines blown off. Thanks a lot.

11 (Applause)

12 LYNN WOODS

13 My name is Lynn Woods, W-o-o-d-s. I have been
14 opposed to interties, no matter where they are, and I link that
15 directly to my life-long residency in Alaska. They -- many
16 issues, whether it be gas pipeline, cost of the intertie, are
17 being addressed by others, but one issue that I felt most
18 attached to was character of community.

19 And for R. W. Beck, I would like to invite them to
20 investigate University of Washington's Gary Peevo (ph) has
21 written articles on that and does -- has done consulting work
22 on estimating and valuing character; in addition, David Robin-
23 son, A Survey With a Difference, and Harry Garnum's (ph),
24 Maintaining the Spirit of a Place: A Process for the Preserva-
25 tion of Town Character.

1 able to get this from an expert -- that says the labor costs
2 are too low on this project, that it's a helicopter project,
3 and therefore, it's going to be more expensive than you say it
4 is.

5 And that -- and do compare it to the Bradley Lake
6 project. And that's a \$250,000 per mile difference between
7 this intertie that's going to be going through some incredibly
8 rough terrain -- through the Talkeetna Mountains -- that's a
9 huge difference in the price of the Bradley Lake project and
10 this project. I would like to see that addressed. I would
11 like to see some change or address that issue in the final
12 inter- -- final study.

13 This doesn't -- does not consider the cost of litiga-
14 tion. And you may not think that that's something that needs
15 considered, but Chickaloon, I know, is going to sue. There's a
16 lot of environmental groups who are very interested in this who
17 are going to sue. And people in the -- this valley, we all
18 have money, and everybody seems to be willing to give it. And
19 so I would expect some legal fights.

20 Thirdly, you're going to expect some legal fights
21 because this whole authorization of the money was backwards,
22 according to the enabling legislation. It should have gone
23 feasibility study and then authorization. And that's the
24 grounds for a legal suit also. So there's another place.

25 Now, as far as the -- Petro Star says that they're

1 (Applause)

2 HEARING OFFICER: Next person?

3 ROBIN McLEAN

4 My name's Robin McLean, M-c-L-e-a-n, and I live in
5 Sutton.

6 And I'm really disappointed that you haven't been
7 writing down any of these notes and (inaudible). I know I keep
8 harping on this, but I really would feel so much more confident
9 if you were writing some notes somewhere.

10 But my comments are, first, that Edgar Blatchford has
11 to approve this study, which means that it has to be feasible.
12 And over these months, I've said before, we've been waiting for
13 months to hear about this. They've been -- they told us, well,
14 it was going to be in October; we've waited till February, and
15 they come out and they give us this feasibility study. We find
16 out it's public record, that CVEA has been able to manipulate
17 the numbers a little bit, and even Mr. Emerman was kind of
18 worried about that.

19 And so what I see is that Beck, under pressure from
20 CVEA, has raised the -- lowered the cost of the intertie in a
21 number of ways and raised the perc- -- the need for power that
22 Petro Star says that they need.

23 And the -- as a -- about the cost estimates that I
24 think are incorrect, we've talked about -- we've had a consul-
25 tant -- who you will receive some comments from so you'll be

1 whole thing is a dumb idea.

2 If you look at the population growth, they say in
3 their study that they're expecting 2.7-percent growth in Glenn-
4 allen and .3-percent growth in the Copper Valley, or something
5 like that. If that's true, we take your numbers, then the low-
6 growth estimate is right; then give them some diesel genera-
7 tors. We don't need to pull huge interties through here.
8 Maybe replace the generators every few years.

9 All I have to say, finally, is that this all seems to
10 be a political thing, and the people in Juneau voted this in
11 because some big electrical guy paid off Ramona Barnes to do
12 it. And it's just kind of disgusting that this is really how
13 our State works, and that this is how money gets spent, and
14 they don't really pay attention to what's the best way, the
15 most sensible way, and what's the fairest way to everyone.
16 That's all I have to say.

17 (Applause)

18 MALE SPEAKER: (Inaudible) a postcard if people don't
19 have the time, who've already addressed Edgar Blatchford, if
20 you want to get a postcard from me.

21 HEARING OFFICER: Hi, Tom.

22 MR. STAHR: Thank you.

23 TOM STAHR

24 My name is Thomas R. Stahr, S-t-a-h-r. I'm General
25 Manager of Municipal Light and Power. And first, I've got to

1 going to increase their load by three times in the next decade.
2 Well, it said in the Daily News a couple of weeks ago that the
3 guy who sent that letter said, 'Oh. Well, those numbers were
4 only for this study.' Just totally contradicting it.

5 Now, I want you to find out why there's such a con-
6 tradiction. Why did they say for the study that they're going
7 to increase it by three to four times, and then some other guy
8 says, 'Oh, well, that was just for the study'? We don't
9 believe these numbers because of that kind of thing. It's
10 lucky that we've got people in the press who are paying atten-
11 tion to this because I would never have been able to find that
12 out. They wouldn't have told me.

13 And my final comment is, just that the whole prin-
14 ciple of this thing -- I mean, when I first heard about this, I
15 said to myself, 'Well, why do we need to do this?' And some-
16 body said, 'Well, the State of Alaska has decided that it's
17 important to provide cheap power to people in rural areas.'
18 And I say, I understand that; I really do. And, I mean, I am a
19 potter; I use electricity. I have very high electric bills,
20 and I sympathize with that.

21 The problem is that this is not for those people;
22 this is for Petro Star. And I object to spending my money
23 on -- to give Petro Star cheaper power. I object to it. It's
24 not what that whole theory is, to provide cheap money to the
25 rural areas. That is not what we're doing. Therefore, this

1 conventional feasibility study, and not an evaluation of the
2 true economic choices that are facing Copper Valley and the
3 people of this area; i.e., there is no State no-interest loan
4 offer for Allison Lake, Silver Lake, or more diesels. Based on
5 the actual realities, this project will benefit Copper Valley's
6 customers. Thank you.

7 (Applause)

8 MS. SCHMIDTKUNZ: My name is Charlene Schmidtkunz.

9 HEARING OFFICER: Please.

10 MS. SCHMIDTKUNZ: S-c-h-m-i-d-t-k-u-n-z.

11 CHARLENE SCHMIDTKUNZ

12 I'd like to point out that the Matanuska Valley is a
13 unique place in the world. It extends a short 60 miles from
14 sea level to the foot of the Matanuska Glacier, and 40 miles of
15 that is being considered for a power line, a large power line.

16 The feasibility study says -- hmm -- it doesn't
17 include visual impact from all points in the valley. I per-
18 ceive that the small population is going to grow and that this
19 valley is going to be very important, tourist-based, for
20 Alaska. And this power line is cutting right through it.

21 And it doesn't matter -- the feasibility study says
22 that the most popular route is only visualized from the high-
23 way. And I think that that is a big problem (laugh), because
24 Alaska is going to change. And this valley is going to change.
25 And this -- that feasibility study does not include that.

1 confess, yes, Ramona -- I live in Ramona Barnes' district, that
2 I did give her a hundred bucks. And so maybe that's why all
3 this happened -- I doubt it.

4 ML&P has made a proposal to sell power to Copper
5 Valley at rates such that Copper Valley will save two to two
6 and a half million dollars per year, taking into account
7 repayment of the State no-interest loan. And I want you to
8 understand that's with their current loads, not any more Petro
9 Star -- or just what it's based on right now.

10 And I want to add if this transmission line is not
11 built now with subsidized funding, most or all of it will be
12 built in the future because, just as you now have a transmis-
13 sion line here in Sutton, about two blocks up the road, more
14 will be required to serve local load in the future as it grows.
15 Those new lines will not be paid for with subsidized State
16 loans; they'll be paid for by consumers in this area.

17 Now, based on my utility experience -- and I've been
18 in the industry about 30 years -- I believe this line can be
19 built for less expense than this study indicates.

20 (Inaudible comment)

21 If for any reason you choose to evaluate the price of future
22 line compensation, please study flexible A/C transmission
23 systems because that technology appears to be much lower-cost
24 than static vars.

25 As a final point, I want to point out that this is a

1 the map -- that this project is being built for. It's way down
2 here. And here's the project. Hundreds of miles; all kinds of
3 alternatives. Through virgin country.

4 The costs that have been assigned to all these non-
5 objective values is zero. Zero for wildlife. Zero for scenic
6 beauty. Zero for any type of recreational use. It's incompre-
7 hensible that you can write a study and assign a value of zero
8 to all this area. That is a blast from the past.

9 I hope that this project isn't built.

10 (Applause)

11 And I hope that the State of Alaska doesn't continue to squan-
12 der hundreds of thousands of dollars year after year on bogus
13 studies to build bogus projects that aren't being built for the
14 people of the state of Alaska.

15 This is a -- the public wealth is being used to build
16 a project for one private customer: Petro Star Chemical.
17 There's more fossil fuel in Valdez than any place else in the
18 United States of America. And we're going to build a power
19 line hundreds of miles through the wilderness so that an oil
20 refinery can plug into the wall to fire up its refinery.

21 (Applause)

22 Where else but in the state of Alaska, and maybe some
23 third-world countries, would people do such a project? I hope
24 this is the last of it. Alaska's at the crossroad: We don't
25 have the money. There's a \$2 billion deficit, and we're still

1 That's all I have to say.

2 (Applause)

3 DAN FITZGERALD

4 Yeah. My name's Dan Fitzgerald. I don't live along
5 this area where the power line would be; I live in Anchorage,
6 but I use this area a lot. A lot of my friends use it. And
7 it's one of the greatest recreational areas accessible by the
8 road system. And it's one of the greatest recreational areas
9 accessible to the majority of Alaskans.

10 What we've seen here tonight, hopefully, is kind of
11 the last act in a tragedy, and that tragedy is State of Alaska
12 and the way that its wealth has been squandered since the
13 advent of big oil. This legis- -- the legislature, for years,
14 has -- primary interest has been creating and building large
15 projects, to get campaign contributions and contractors and
16 builders, and theoretically, at least they believe, and maybe
17 this was the way it was in the past -- to get the votes of
18 people who would work on those projects.

19 But apparently, times have changed because we don't
20 even see people here who might be able to work on this project,
21 laborers, out here supporting it. All we have supporting it
22 are the consultant, who's been paid hundreds of thousands of
23 dollars to write this feasibility report, which isn't very
24 feasible, and the people from the electrical associations.

25 There's one customer -- I don't think they're even on

1 ing, 'Oh, here's a money-making opportunity. I think I'm going
2 to bring some power over to Valdez. And along the way, I'm
3 going to supply some power to the good people of Copper
4 Valley.' No. Why? 'Cause it doesn't make economic sense.
5 Why is it being done? Well, because the State has \$35 million
6 to kind of get this thing going.

7 And it'll get rolling, it'll just sputter out into a
8 big scab of -- like the Hickel Highway. There will be a par-
9 tially cleared out area and a bunch of girders, and half of
10 them, it sounds like, from some of the comments in the back of
11 the room tonight, are going to be cut down every other week,
12 and that's where it'll all end.

13 So one last spasm, but let's hope it is the last act
14 of the play. And let's hope that after this fiasco, we won't
15 have to spend all this time and energy fighting stupid projects
16 from the State of Alaska and that the money will be spent on
17 wise, thought-out projects that benefit people, not private
18 businesses who have all the energy that they need.

19 That's all I got to say.

20 (Applause)

21 HEARING OFFICER: Anyone?

22 CHUCK CURRY

23 My name is Chuck Curry, C-u-r-r-y, and I live down in
24 Palmer. I've spent a fair bit of time in the area that the
25 proposed intertie will go along, and I'm against it for four

1 sitting around, the people are coming out, driving their damned
2 cars around, to come to these meetings to try to talk sense
3 into peoples whose jobs it is to do otherwise.

4 But the money's not going to be there any more. The
5 money's not going to -- you know what's going to happen to
6 this? If this is approved, they'll start building, and who
7 knows where they'll start. Maybe they'll start here, and
8 they'll get some place out here, and they're going to be out of
9 money. There's no way that this project is going to be built
10 for \$49 million. They don't -- they're telling you this
11 project's feasible, and they don't even know that -- if they're
12 going to be able to float a bond. Who would buy a bond that's
13 going to be paid for by Petro Star? Petro Star could be out of
14 business next year.

15 So we've got \$35 million of pork coming out of
16 Juneau, and it'll end up here. Maybe that's not so bad, you
17 know. All of this won't get trashed. But that's where I'd put
18 my money on what's going to happen for \$35 million. And it --
19 he's going to sit here and tell you it's costing forty-nine,
20 but you won't see that company being on the line and say,
21 'Well, if it costs any cent over, we'll be good for that.' You
22 won't see Petro Star on the line saying, 'Well, if it runs over
23 \$49 million, we'll just pick up the tab.'

24 The good employees of the State of Alaska aren't
25 going to pay for it. You don't see any private industry say-

1 you an example of that.

2 We didn't address this at the meeting here, but this
3 intertie will be constructed to support a 138-kilovolt load, if
4 I'm not mistaken. Well, that can easily and po- -- very pos-
5 sibly be upgraded to a 240-kilovolt load. Okay. There's some
6 more costs that we didn't address at the meeting.

7 Okay. This whole thing of \$45.9 million is ludi-
8 crous; we're probably looking at much more than \$60 million.
9 And what this is going to do, it's going to cause a totally
10 unnecessary debt burden on not only Copper Valley Electrical
11 (sic) Association members but MEA members, too, because they've
12 got to improve the whole system on this side.

13 Okay. Another reason, when you consider real costs
14 of construction and you start comparing normal gra- -- load
15 growth rates up at Copper Valley, the all-diesel case, followed
16 next by Allison Lake, is still the lowest-cost alternative.
17 And they really haven't addressed some of the, quote, "other
18 alternatives," some that Gary Harrison and Hobbs have brought
19 up at past meetings.

20 Okay. The fifth and the last reason -- and this
21 could be the most important reason for some people -- is the
22 negative impact to the environment, including game populations,
23 from excessive access by the public and undue impact on local
24 lifestyles and our quality of life. I think a lot of people
25 have an idea how this is going to affect their lifestyles, the

1 reasons.

2 One, it seems to me that the cost of this project has
3 been underestimated, not least of which is the fact that none
4 of the environmental effects have been assigned a cost. I feel
5 that the projected demand for the electricity that'd flow along
6 this line has been overestimated.

7 Thirdly, I feel that there are feasible, workable
8 alternatives -- Allison Lake; new, efficient generators for the
9 people in Copper Valley; co-generation at the Petro Star plant.

10 Fourth, I feel like the impacts to the people who
11 live here and the people who spend time hiking, recreating,
12 skiing in this valley are just unacceptable. Thank you.

13 (Applause)

14 MARK BERTELS

15 My name is Mark Bertels, B-e-r-t-e-l-s, and I live in
16 Sutton. I've got some notes here I'd like to address. Okay.
17 I strongly oppose the Sutton to Glennallen intertie for these
18 reasons:

19 Number One: A deliberate and obvious lack of inten-
20 tion to objectively analyze and compare costs, economics, with
21 alternatives during this so-called study.

22 Number Two: Copper Valley Electrical (sic) Associ-
23 ation's attempt to deceive the public into believing construc-
24 tion costs are at \$45.9 million when, in fact, realistically,
25 actual costs could easily exceed \$60 million. And I'll give

1 MS. McDANNOLD: Yeah.

2 HEARING OFFICER: McDonald (sic).

3 MS. McDANNOLD: McDannold (laugh). That's okay.
4 Don't worry about it.

5 HEARING OFFICER: I got it. I got it, I think, Dori.

6 MS. McDANNOLD: Right. That's insignificant compared
7 to what I'm about to say.

8 DORI McDANNOLD

9 I'm here representing the Valley Office of the Alaska
10 Center for the Environment and our 120 members that live
11 throughout the valley. And so I'm saving them the time for
12 coming to speak individually, but you will hear comments from
13 them in written form, and I look forward to writing a detailed
14 comment on this study, this feasibility study.

15 I just would like to say that the validity and the
16 accuracy of this study amounts to about nothing. And the State
17 and the citizens of this state should demand a feasibility
18 study that accurately estimates the cost of construction.
19 Overall costs were grossly underestimated. For instance, the
20 cost for land for condemnation was extremely low and not at all
21 accurate. You didn't include costs for litigation, which
22 you've heard will happen. You haven't included environmental
23 and social costs.

24 For example, like the gentleman before me spoke,
25 there is the Nelchina caribou herd that roams through this

1 people that live in the immediate area.

2 But as far as other environmental impacts that
3 haven't been assessed or cost analyzed, I was thinking of a
4 good example of this when you were talking about that, and one
5 of the examples is Anthracite Ridge up the highway. I know
6 from a fact, hunting up there in the past, that that's, in my
7 opinion, a real sensitive area because of the lambing areas
8 that the sheep use in the spring, and fossils that could easily
9 be impacted by access, you know, excessive access to the
10 public.

11 Those are the reasons, the main reasons, that I
12 oppose this intertie. Be- -- the other thing I'd like to bring
13 up before I quit here is I still think writing letters to our
14 legislators is going to make a difference. I believe if you
15 take the time and sit down and write letters, maybe even a
16 blanket letter, to all the legislators, there's still a chance
17 we can stop this thing. It's just a matter of taking time and
18 then spilling some ink. And I urge you all to do that. Thank
19 you.

20 (Applause)

21 MS. McDANNOLD: My name is Dori McDannold; that's
22 M-c-D-a-n-n-o-l-d. You know, and -- as in Mac.

23 HEARING OFFICER: Oh, okay.

24 MS. McDANNOLD: That's okay. And D-o-r-i.

25 HEARING OFFICER: Dan-o-l-d.

1 this nation to look at the numbers and say, 'Yeah, in all
2 likelihood, that's not going to happen,' because that's what we
3 all know. Okay? And I would like to see that written and
4 validated because the things that we've heard from Petro Star
5 and their President have led us to believe that there's not any
6 weight behind those numbers.

7 I think I'll end there and just say that I oppose
8 this intertie, representing the Valley Alaska Center for the
9 Environment and the 120 of its members.

10 (Applause)

11 CHARLIE WANSOR

12 Good evening. I'm Charlie Wansor, W-a-n-s-o-r. I
13 live here in Sutton. I just have a couple of quick points to
14 make.

15 Has anyone taken into consideration what it's going
16 to cost to upgrade the existing lines between Copper Valley and
17 Valdez, which are deteriorated or soon will be? Also, the
18 lines between Sutton and Anchorage?

19 Eventually, Copper Valley is going to have to bring
20 their generating capabilities up to a point to where they can
21 supply backwards across this intertie. I don't begrudge them
22 the money, but I'd prefer to see it go in that direction. And
23 then further on down the road, when the federal government
24 really wants this intertie to grid this entire state together,
25 let them pay for it, not us. Thank you.

1 area. I've spent a lot of time hiking back in this area. The
2 State of Alaska Fish and Game spends a lot of time and money
3 and energy of the State money (sic) to manage that caribou
4 herd. And with increased access, you're just going to ask for
5 more problems. That's just one example. If you look at what
6 the State of Alaska pays to manage that caribou herd and then
7 multiply it by many of the other species that are out there,
8 you're going to have huge environmental costs.

9 I'd like to see R. W. Beck subcontract to somebody
10 else to add these environmental and social costs into this
11 document.....

12 (Applause)

13and that we, the citizens, and the State of Alaska should
14 not accept it unless those are in there. Okay? You can pay
15 another \$400,000 or whatever it will cost to get that, and it
16 will still amount to a mere pittance of the amount of money
17 that the environmental costs will amount to when you look at a
18 project such as this.

19 I also would like to see written somewhere that Petro
20 Star validate their numbers, their real numbers, for what their
21 estimated growth is going to be, because most citizens believe
22 that, one, we shouldn't be subsidizing a oil refinery and, two,
23 that those costs have been grossly overestimated.

24 So whether it needs to take a panel of experts or a
25 panel of economists from people across the state and across

1 A lot of people have talked about the underestimated
2 capital costs. We would certainly agree. The hourly labor
3 costs, the cost of right-of-way acquisitions, the cost per
4 mile, the static var compensator, all of this is pertinent also
5 to the general feasibility, the question of whether Petro
6 Star's demand will in fact increase as greatly as their one
7 letter estimates. A lot of people doubt that.

8 There certainly are concerns here about the impact on
9 your quality of life that this intertie will have, and it is
10 very true that many of you will have to live with that impact
11 every day of your lives. So it's far more important to you
12 than it is to many of the rest of us. But there are thousands
13 of Alaskans who drive the Glenn Highway every year. It's one
14 of the most beautiful places in Alaska; it's the first impres-
15 sion of Alaska for a lot of tourists who are coming in from the
16 east.

17 It's a fantastic recreation area, not just for people
18 who live near here but also for people in Anchorage, Palmer,
19 Wasilla, and much of the rest of the state. We're concerned
20 about those public recreation values, about the wildlife
21 values, the impacts from road construction on fisheries, and so
22 on.

23 And finally, although we have gotten away from this
24 in much of the country and in much of Alaska, it seems to me
25 that, whenever possible, those people who are going to receive

1 (Applause)

2 CLIFF EAMES

3 My name's Cliff Eames, E-a-m-e-s. And for truth in
4 advertising purposes, I also am with the Alaska Center for the
5 Environment. I work out of Anchorage, and I will try not to
6 take very long since Dori has already spoken for our organiza-
7 tion, but I would like to provide a perspective which a few
8 people have provided tonight.

9 But since most of you are from this area, I'd like to
10 attempt to represent people from other parts of the state,
11 including people like myself who live in Anchorage, and look at
12 this, as I think Chris suggested at the very beginning of the
13 meeting, in the context, for one, of the overall state budget
14 and last year's extraordinarily large capital budget, which I
15 think a lot of us would like to see the legislature chip away
16 at.

17 And we have an opportunity here to not only return,
18 in effect, the \$35 million appropriation but also not forgive
19 the \$76 million in interest which otherwise would be paid if
20 this were not an interest-free loan. Now, we don't yet pay
21 state income taxes, but we probably will sometime soon. And we
22 also have lots of ways that we can use our State monies,
23 regardless of where those monies came from, and I think there
24 are a lot better ways than on this intertie project, which is
25 so unpopular through a substantial portion of the valley.

1 the impact to the valley. And the reason I live here is for
2 the natural beauty and the ability to drive up the valley out
3 of Palmer, out of Sutton, and be in the Matanuska Valley. And
4 that -- those opportunities are going to be impacted by the
5 project, so I hope it doesn't happen.

6 (Applause)

7 NANCY BERTELS

8 I'm Nancy Bertels, B-e-r-t-e-l-s. Well, the feasi-
9 bility study's out, and irregardless (sic) of what it says,
10 Copper Valley is still trying to pull the wool over the eyes of
11 electrical consumers from Anchorage to Valdez.

12 The study is based on the massive increase in elec-
13 tricity that CVEA will need when, and if, Petro Star increases
14 their power needs at least four times. Petro Star has given no
15 definite indication that it intends to increase its demands by
16 this amount.

17 As a private enterprise, shouldn't Petro Star be
18 asked to generate their own power if they plan to demand huge
19 sources of power? The State of Alaska should not be handing
20 out no-interest loans for the exclusive benefit of one private
21 consumer with the fiscal crisis it is facing.

22 Census figures don't indicate that the population of
23 the Copper Valley will increase at a dramatic enough rate to
24 warrant CVEA's continued pursual (sic) of just an intertie to
25 provide cheap power rates. Both the Allison Lake project, as

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1 the major benefits from any particular project that has
2 stantial adverse impacts should be bearing most of those
3 impacts and.....

4 (Applause)

5not people either in this part of the state or in
6 Anchorage, Palmer, Wasilla area.

7 And for that reason, alternatives which are
8 be more feasible anyway -- either the Allison Lake pro
9 new, more efficient generators -- would locate those po
10 adverse impacts in the area where the benefits are going
11 received and not in an area where benefits are not going
12 received. Thank you.

13 (Applause)

14 ALEX HARRIS

15 My name is Alex Harris, H-a-r-r-i-s. And I
16 with a lot of the economic and philosophical arguments
17 people have given against the intertie, and I'm strongl
18 against it. And what the emotional kicker is for me,
19 reason why I'm really against it, is I start to think a
20 what it's going to be like to be up at Kings River or
21 the Chickaloon Valley or at Hicks Lake, or these place
22 care a lot about and have been visiting for years, and
23 big monstrosity there.

24 And I hope the State and the people don't was
25 money on the project, but the thing that really bother

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MR. TAPLEY: James Tapley.

HEARING OFFICER: T-a-p-l-e-y.

JAMES TAPLEY

You know, it's my understanding that this is the Railbelt Energy Fund. Well, I fail to see where the railbelt runs through here. I figured the Railbelt Energy Fund was for -- you know, for the railbelt.

(Laughter)

That's what I thought. Anything that runs along the railbelt is what that fund was for. And I fail to see where there's a railbelt that runs through Glennallen.

It's another inappropriate appropriation of funds, as far as I can see. You know. Thanks.

(Applause)

HEARING OFFICER: Anyone else?

(No audible response)

HEARING OFFICER: Okay. Well, the -- again, the public comment period for written comments runs through February 25th, and thanks for coming.

(Whereupon, the proceeding in the above matter was adjourned)

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PARTIAL TRANSCRIPT OF PROCEEDINGS

(Public Testimony Portion Only)

CHICKALOON, ALASKA

Friday, February 11, 1994

Proceedings recorded by electronic sound recording. Transcript produced by transcription service.

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1 CHICKALOON, ALASKA - FRIDAY, FEBRUARY 11, 1994

2
3 (Tape No. 1, Side 2)

4 SUE LIBENSON

5 It's L-i- b as in Boy e-n-s-o-n. And as I stated
6 earlier during the meeting, I'm -- I live in Anchorage, and am
7 very frustrated that I had to drive all the way here from
8 Anchorage to give testimony and think that you're really
9 overlooking that enormous population that uses the area. And
10 it's unbelievable to me the economics of the use of the area,
11 as opposed to just the use of the area for a power line, have
12 not been considered.

13 And I really don't think the feasibility study
14 reflects the overall feasibility of the project because there
15 are real economic issues at stake here that are not having to
16 do with producing power. Thank you.

17 HEARING OFFICER: Anybody?

18 MR. KEOGH: My name is Warren Keogh.

19 HEARING OFFICER: Could you spell the last name,
20 please?

21 MR. KEOGH: K-e-o-g-h.

22 HEARING OFFICER: Thanks.

23 MR. KEOGH: And I'd like a copy -- I'll give you a
24 copy of my comments. The address is on there.

25 HEARING OFFICER: Okay.

1 MR. KEOGH: P.O. Box.....

2 HEARING OFFICER: All right.

3 (Pause)

4 WARREN KEOGH

5 My name is Warren Keogh. I'm a resident and land
6 owner here in Chickaloon, and I'm speaking for myself and my
7 family, and I don't represent any organization. And I had some
8 difficulty getting a copy of the full report, which I haven't
9 had a chance to look at, except here -- just for a minute here
10 before the meeting started. So my comments are based only on
11 the Executive Summary.

12 I've attended previous public scoping meetings, or
13 informational meetings, in Chickaloon or Sutton regarding the
14 proposed Matanuska Valley intertie, and during the most recent
15 meeting in June, I tried to express my feelings and concerns
16 regarding the negative impacts of the possible construction of
17 the intertie through this valley and through this community.
18 And these concerns are ones of what the draft report would term
19 "quality of life" and "environmental" concerns.

20 And under the, quote, "Environmental Review" section
21 of the report, the concluding paragraph on page I-9 states:

22 "Potential effects on the community can be
23 difficult to measure, and also, quality of life
24 issues are based on subjective criteria and are
25 hard to quantify."

1 Now, it's been my impression, when I've raised these issues, or
2 other people here in the community have raised these issues in
3 the meetings that have been conducted by the State, that little
4 weight is given to these kinds of concerns. Either they --
5 either they're not understood, which I think has been
6 illustrated here tonight a little bit, or they're discounted
7 because they're not quantifiable, because you can't put a
8 dollar number value on it.

9 And there are two -- well, there are two reasons why
10 that is. The first is, and the report accurately states, that
11 it's not easy, monetarily, to quantify subjective values. And
12 the second is, is that not one of the active proponents, or not
13 one of the evaluators of this project resides here. And
14 they're -- it's difficult, or if not impossible, for you who
15 don't reside here to appreciate the magnitude of the positive
16 subjective values many Chickaloon people give this place. And
17 likewise, it's impossible to measure the magnitude of the
18 negative subjective values people ascribe to impacts of the
19 intertie construction through here.

20 So you -- what I'm trying to say is you cannot reside
21 in Valdez or Glennallen or Anchorage, I think, and really know
22 about this place and about the people who live here. And your
23 absence does not allow you to respect and to know and to care
24 for this place with the same feeling that I and others do. And
25 not only do you value it less, I think, you devalue this

1 valley, and you devalue this community with this lack of
2 respect. And it's my opinion that some of you have behaved
3 ignorantly and arrogantly by assuming that people here are weak
4 and acquiescent and uninformed.

5 And you assume that this -- that the land here has
6 greater worth with a power line than without it. You view this
7 part of the Matanuska Valley as just another place on the map
8 that the intertie will be routed through. And I view
9 Chickaloon as my home, and it's a place I care for greatly, and
10 it's a place where I assume the intertie will not be routed
11 through. So we're operating from different assumptions here.
12 Your -- all along, there's been this assumption that the
13 intertie's going to go through here. I've -- my assumption is
14 that it will not go through here.

15 Now, regarding the feasibility study, those funding
16 this economic feasibility study and those conducting the study
17 have arrived at inaccurately low cost estimates. The study is
18 flawed in four ways:

19 First, it appears that the untoward effects the
20 intertie construction would have on land use value, recreation
21 value, aesthetic value, and real land value are considered but
22 not entered into the cost estimations because they are
23 difficult to quantify. Since they are not easily quantifiable,
24 they are omitted from the cost estimation. This omission
25 renders the analysis incomplete, and this economic analysis

1 methodology is inadequate, it's inappropriate, and it may
2 indeed be invalid, and I think it is.

3 Second flaw is if one does assume this questionable
4 methodology has validity, one finds omissions here that create
5 underestimated intertie costs. An example of such omissions
6 occurred with the power line project in Minnesota in the late
7 1970s. There, initial cost estimates were inaccurate because
8 of inept planning and because there was a failure to perceive
9 the extent of local opposition to power line construction.
10 Initial cost projections in Minnesota -- the initial cost
11 projection was \$537 million, I believe, and unanticipated
12 expenses added \$703 million to the cost of the project, which
13 more than doubled the expected costs, the total costs.....

14 HEARING OFFICER: I'm sorry. Do you have a lot more
15 to read?

16 MR. KEOGH: I have one more.....

17 FEMALE VOICE: Give him.....

18 MR. KEOGH:four paragraphs.

19 FEMALE VOICE:three of my minutes.

20 HEARING OFFICER: All right. Go ahead.

21 BY MR. KEOGH (Resuming):

22 Okay. Among other omissions, the cost analysis for
23 the preferred route, Alternate D in the study, does not account
24 for costs secondary to the protracted legal action, acts of
25 civil disobedience, acts of vandalism, and acts of sabotage.

1 Such acts could occur and would certainly result in significant
2 cost overruns for transmission line construction: engineering
3 services, right-of-way acquisitions and permitting, construc-
4 tion management, owner costs, and contingency costs.

5 Third, projected energy requirements for CVEA
6 customer Petro star are highly suspect. The energy projections
7 are based on corporate statements alone, and it is my under-
8 standing that the owner of one of the two corporations control-
9 ling the Petro Star Refinery has a history of bankruptcy and
10 insolvency. And if such is the case, how much weight should be
11 given to future projections of a previously bankrupt, and
12 potentially bankrupt, owner? The credibility of speculative
13 corporate statements is extremely questionable, and these
14 estimates of energy requirements may be inflated, and they
15 certainly are tenuous.

16 Finally, the intertie power supply scenario on
17 Table I-5 on page I-15 of the Executive Summary is optimisti-
18 cally low. The expected maintenance, operation, and management
19 costs due to acts of vandalism and sabotage are likely greater
20 than CVEA expects and this report predicts. Again, the power
21 line through the -- rural Minnesota is illustrative. Post-
22 construction operations and maintenance were high due to the
23 ongoing actions of angry rural citizens. Rates of load growth
24 and fuel price escalation are only part of the equation for the
25 intertie scenario that's depicted in the table that represents

1 the cumulative present value of comparable system costs.

2 Thus, the -- I'll cut it off here, one more para-
3 graph.

4 The draft report of the proposed intertie through the
5 Matanuska Valley is flawed to the extent that I think it's
6 unacceptable: The methodology used is inappropriate. The cost
7 estimate for the development of the intertie is seriously
8 underestimated. The projected energy demands by Petro Star are
9 highly suspect. The feasibility level environmental analysis
10 is inadequate. And the costs of the proposed intertie, com-
11 pared to other resource alternatives, is inaccurately low.

12 When cost estimates for the intertie through the
13 Matanuska Valley are adjusted upward to reflect a more accurate
14 value, other energy scenarios become significantly more feasi-
15 ble and economically superior. This study inaccurately
16 describes the economic plausibility of the proposed intertie.
17 This ill-conceived and improbable project, with its flawed
18 economic feasibility study, is a disservice to the citizens of
19 Alaska, and especially those of us that live here.

20 (Applause)

21 ART EASH

22 My name is Art Eash. The last name's spelled
23 E-a-s-h. And I live in Anchorage, but I've held property up
24 here for some time. I've used the area for recreation for
25 almost 10 years.

1 My primary objection is a visceral one; like most
2 people, it's a visual impact that this project implies to one
3 of the areas that I consider the most beautiful I've laid eyes
4 on in the state. From our recreation cabin, the view will be
5 pretty well destroyed, from my perspective, and from that
6 angle, I'm completely dead set against the project.

7 But I'm a former economist and urban planner,
8 regional planner, that once evaluated projects like this and
9 attempted to push through marginally viable economic programs,
10 like I consider this to be, and feel that, from a professional
11 point of view, the flaws are numerous, and some of them need
12 analysis, most of which you've just heard about.

13 But one in particular is the fact that, as you've
14 already alluded to, the conservation elements of the plan
15 haven't been carefully enough analyzed. And I'd allude
16 especially to a really large project in Washington State that
17 reached the point of almost 60-percent completion before it was
18 realized that the program was so badly flawed as to stop the
19 program altogether. And I could see that eventually happening,
20 after the trees are cut and after the essential damage to the
21 visual aspects of the project are already done.

22 I think, ultimately, the last gentleman just
23 mentioned the cost overruns that I'd consider to be real likely
24 based on a number of factors. And I'd like to see the project
25 terminated before it reaches that point.

1 is "feasible" defined by a consulting firm? Or is "feasible"
2 defined by a community that's going to be impacted or bear the
3 brunt of a project?

4 I think that it's not only our responsibility as
5 citizens to be involved in defining what's feasible -- because
6 that determines what we're willing to pay for. I'm not willing
7 to pay a dime, right now, the way this project is envisioned.
8 But I'd probably be willing to pay up to several hundred
9 dollars on my electric bill yearly if the project were rede-
10 signed in such a way that it didn't impact my aesthetic values,
11 that it didn't impact my envi- -- the other environmental
12 considerations that have been outlined. And that has a major
13 bearing on what's feasible.

14 As you've already indicated, it's very difficult to
15 define high, medium, and low development scenarios for the
16 purpose of assigning a cost to a project. But I do feel that
17 it is vitally important to us, as not only residents of the
18 state but also people that are going to be the most impacted by
19 this proposed project, for you to at least make some effort to
20 place a dollar value on what it's going to cost us as residents
21 of the Matanuska Valley.

22 That's the only comments I have.

23 (Applause)

24 HEARING OFFICER: Anybody?

25 (Pause)

1 MR. BRAENDEL: My name is Karl Braendel.

2 HEARING OFFICER: The spelling on your last name?

3 MR. BRAENDEL: It's B-r-a-e-n-d-e-l. Karl with a K.

4 KARL BRAENDEL

5 I'm a resident and a land owner in Chickaloon. I'm a
6 big game guide, and I -- as I said earlier, I pay the State of
7 Alaska and the Moose Creek Chickaloon Native Association to
8 trespass across their lands.

9 This intertie would affect me directly in the area
10 between Kings River and Strelshla Mountain. In fact, where you
11 have one of -- your favorite line route down a small valley on
12 the back side of Strelshla Mountain goes right through a
13 heavily used area of Da- -- by Dall sheep. I've hunted right
14 in that little valley, and you can always see sheep there.

15 So, I mean, just the thoughts of this line going
16 through a lot of this area really upsets me, and it would be
17 damaging to my business because people don't want to see that.
18 They see all that stuff where they come from.

19 And the -- also, the line would go through quite a
20 large forest area between Kings River and Boulder Creek. That
21 line would be hewed right through forest all the way. And that
22 would provide access to motorized vehicles and just bring a lot
23 more people into the area, which I don't particularly like to
24 see. And also, it would be detrimental to my business.

25 You know, when a layman looks at these plans and how

1 they were put -- you know, how they're -- all the numbers are
2 sitting there and everything, and, you know, you can't really
3 understand it all because you're not a part of it, and so you
4 really have this idea in your mind that there may be a little
5 sleight of hand going on in this study. You know, because
6 there's so many places where just changing a little thing makes
7 the plan come out a lot differently.

8 And so you can't help that, and when I sit here and I
9 listen or I read the -- this bare-bones evaluation here, you
10 know, it doesn't really mean a lot to me because I can't fi- --
11 I don't really know how you came to these conclusions exactly.
12 And so, you know, all I can really do is look at little things,
13 I mean, some little thing, to see where the people are coming
14 from and stuff.

15 And one thing that I noticed is that in a meeting
16 here in Chickaloon last spring or early summer, a neighbor of
17 mine asked Clayton Hurless if Petro Star was a significant
18 factor in this -- the intertie being a viable -- to be viable
19 financially, whether Petro Star was important to that. And he
20 said no at that meeting. You said no, that it was not an
21 important factor. And yet this little report right here seems
22 to contradict that exactly. It seems to me like Petro Star is
23 exactly the one thing that holds this intertie -- the intertie
24 possibility together.

25 And moving along from that, and so when I see that,

1 when you say no and then it comes out that Petro Star does seem
2 to be the main reason for the intertie's viability, you know, I
3 begin to think, you know, maybe I can't trust you. You know?
4 Maybe you're not being forthright about everything. Maybe you
5 just want the intertie for whatever reason.

6 Then I come to conservation, which, as I've already
7 stated in the meeting, I do not believe conservation has been
8 adequately addressed in all these different scenarios. It was
9 addressed in Solomon Gulch, with Solomon Gulch and diesel
10 generation, but it wasn't addressed in the other ones.

11 And it seems to me like a honest effort at conserva-
12 tion, with some of the low electricity -- electronic things
13 that are becoming available today, it seems to me like conser-
14 vation is a huge possibility for having a positive effect on
15 which one of these projects might be the best project. And of
16 course, of all these scenarios, the only one that affects us is
17 the intertie.

18 And it's obvious to me that you're here to sell us on
19 the intertie, because any one of these other ones we're not a
20 factor in. We're just plain not a factor. Those would all be
21 done in the utility's own environment, not in our environment.
22 So it's -- you know, you get the feeling that the intertie is
23 it. There really isn't -- these other ones are just shadow
24 dancing there.

25 And of course -- and my last statement is the fact

1 that, you know, I guess the bottom line really is everything.
2 Whatever is cheapest, in dollars and cents, is what you're
3 going to go for. But, you know, I don't always buy the cheap-
4 est car, or I don't always buy the cheapest of anything. You
5 know, sometimes I'm willing to pay a little more for aesthetics
6 or for something that works a little better.

7 And to -- for me, it works better that the power
8 comes in the Copper River area; it works a lot better for me if
9 it comes there rather than it comes through my -- through here.
10 That's all I have to say.

11 (Applause)

12 GARY HARRISON

13 Hello. My name's Gary Harrison. I'm here again.
14 There was a couple of new things I'd like to add tonight that I
15 didn't say in some of the other ones.

16 And I don't think that this study takes into consi-
17 deration the fact that people are going to end up having to pay
18 for the upgrade of their lines when all of this power starts
19 coming through the old lines, not only on that end, but if this
20 is a true intertie and it's supposed to be able to ship power
21 back, even on this end.

22 The other thing is, is I was glad to hear that it's
23 only going to be a \$20 million break point on this intertie,
24 because I'm sure, with all of the people here that are against
25 this thing, and all of the little things that they've left out

1 of this, that when they start adding them all back up, that \$20
2 million shouldn't be that hard to reach, even if you adjust it
3 as much as it has been adjusted.

4 And I -- once again, I'd like to say that I'm totally
5 against it.

6 (Applause)

7 JOHN LeMAY

8 My name's John LeMay, L-e-M-a-y, Post Office Box 1230
9 in Chickaloon, and I'd like to have a copy of the minutes from
10 this proceeding.

11 I'd like to speak just for a minute on the figures in
12 the feasibility study projecting economic growth. I've worked
13 for a total of five years as a weatherization contractor in the
14 Copper River Valley, from Mentasta Village all the way down to
15 Valdez. I've worked in Copper Center, Gakona, Gulkana, Lower
16 Tonsina, Chitina. And what I've found in those communities is
17 a singularly bleak lifestyle; the economy is almost
18 nonexistent. When I look around at industry, there is none.
19 The people who'd come to me for jobs had absolutely no other
20 prospects.

21 And yet we're told in this study that a certain level
22 of economic development is going to come to pass. I haven't
23 seen any evidence of this. Perhaps if some of these figures
24 were really looked at, coming out of Petro Star, they'd be
25 found to be inflated and unrealistic.

1 Our neighbors in the Copper River Valley open their
2 arms to us and say, 'Help us to have lower electric rates.'
3 And at the same time, they live in an unorganized borough.
4 They don't pay the kind of taxes that we do. They don't take
5 responsibility for the schooling of their children on the same
6 formula that's applied in this area.

7 Yet what they want us to do is they want us to sacri-
8 fice what caused us to live and purchase our land and be
9 productive tax payers in this area. They also want us to
10 underwrite this intertie by the eventuality of higher electric
11 rates coming from our own co-op.

12 I'm very much against this. The -- and wearing
13 another hat, I'm also the current Chair of the Chickaloon
14 Community Council. I'd like to redirect attention to the fact
15 that the Chickaloon Community Council has gone on record with
16 the Mat-Su Borough by filing a resolution against the construc-
17 tion of this intertie within our planning area.

18 We are a seated Community Council. We have a compre-
19 hensive plan; we have a special land use district in place.
20 Interties fall under the heading of conditional use projects
21 within our community, and it'll be at that level that our
22 community attempts to stop the construction of this ill-planned
23 project in order to try to maintain the quality of life and the
24 integrity of not only our community but the community of
25 Sutton, the community of Glacier View, Sheep Mountain, and

1 Eureka Summit.

2 I find it ill-planned; I think that these numbers are
3 being forced, and I don't think they reflect reality.

4 (Applause)

5 AL LARSON

6 Al Larson. I'm a retired lineman; I've been 25 years
7 in the trade. I think that the cost that they placed on build-
8 ing a line from here to there is drastically understated.

9 I'm sure that the Board of Directors from Copper
10 Valley here know the price they paid for that line that goes
11 from Glennallen to Valdez. And they're going to running into a
12 similar situation, the same kind of terrain, between here and
13 there. And are those costs reflected in your price evaluation
14 in all the different -- where -- the way you calculated your
15 cost per mile?

16 The cost per mile of the Ber- -- what was that? --
17 Bernice Lake? Not Bernice Lake. Anyway, the last one they
18 just built down there was \$500,000 per mile, a half a million a
19 mile, and you're looking at 130 or 140 miles. It just doesn't
20 compute. It doesn't reflect the access roads should they use
21 the red route that they show, the cost of building roads and
22 then bringing the material in there so they can do the job.

23 These towers don't just sit on the ground; they have
24 to sit on pilings. They need to get a pile-driver in there to
25 put the pilings in place. They have to have these access

1 roads. It is definitely a direct cost. They're nowhere near
2 close. It would be more realistic, if they wanted cheap power,
3 to build something right close to their own neighborhood where
4 they don't have to impact the whole state.

5 Their water, or hydraulic -- or hydro, is the
6 cheapest available power. It's not a nonrenewable resource. I
7 think they should look that way. They're elected to their
8 Board, and I think that if they want to stay on that Board,
9 that they need to maintain a line on the rates their customers
10 are paying. And I've been told that it's going to be their
11 decision on proceeding with this, and I think they should take
12 a long look at where they want to be.

13 (Applause)

14 JENNY BAER

15 My name's Jenny Baer, B-a-e-r, and P.O. Box 245,
16 Sutton, so I can get a copy of that.

17 I appreciate the position the consultants and State
18 employees are in; you have my sympathies.

19 The main source of the feasibility of the intertie
20 stems to Petro Star Refinery, which will be the largest buyer
21 of the electricity from Copper Valley Electric. Power from the
22 intertie, if built, will come on line in 1998, at the earliest,
23 using Fiscal Year '93 dollars of \$45.9 million, at a low esti-
24 mate.

25 If Petro Star gets its fuel to refine from the

1 Alyeska Pipeline, which could stop produc- -- or pumping fuel
2 as soon as 2013, then power from the intertie would be bought
3 from Petro Star for 15 years only. The intertie itself will
4 take longer than that to be paid off, even being granted a 0-
5 percent loan.

6 I am not in favor of State dollars being spent on
7 Copper Valley Electric power line. My suggestion is that
8 Copper Valley Electric fully explore the Allison Lake project,
9 which would utilize the Solomon Lake Hydroelectric Plant that
10 is currently in operation.

11 I feel that each area, such as Copper Valley, should
12 produce their own power for safety and reliability factors. I
13 do not think that the dollars generated by companies -- recre-
14 ational companies have been fully defined as to the impact of
15 the power line -- the negative impact upon their dollars.

16 I feel that one power scenario is missing in this
17 whole scheme, and that is purchasing excess power from Alyeska.
18 That may or may not be [a] reliable power source, but I'll
19 leave that up to you to define that.

20 Legislators viewing the data from this report and the
21 reports preceding it will view only the Executive Summary and
22 not the public comment on the back of Volume II. I would like
23 you to reflect our statements in the Executive Summary.

24 Please do not allow an intertie to pollute the upper
25 Matanuska Valley. Thanks.

1 (Applause)

2 VICKY KINDSETH

3 My name is Vicky Kindseth, K-i-n-d-s-e-t-h, and it's
4 P.O. Box 1200, Chickaloon.

5 I live in this area with my family, my four children.
6 We chose this area because of its beautiful nature. I'm vehe-
7 mently opposed to the intertie, especially in lieu (sic) of the
8 feasibility study having no factored costs of environmental or
9 social impact.

10 We now live in an age of changing focus from economic
11 gain to conservation of priceless resources. This study has
12 been skewed to allow the power of money to speak stronger than
13 the strength of the communities and people directly affected by
14 it. There's little to no public comment included in the study.
15 What kind of government and political process can condone this
16 type of treatment of the people who live and work in the areas
17 involved? The ramifications of this treatment will cause
18 repercussions for decades to come. We cannot allow this inter-
19 tie to be built and fill the pockets of big business.

20 Please weigh heavily these public comments because we
21 are truly a force to be reckoned with.

22 (Applause - Inaudible comment)

23 CHUCK SPAULDING

24 My name's Chuck Spaulding. I live in Chickaloon,
25 P.O. Box 1129.

1 And needless to say, I don't need to reiterate why I
2 live here. I was involved in the Chickaloon land planning
3 process, and I think the fact that Chickaloon was the first
4 community in the Matanuska-Susitna Borough to actually imple-
5 ment a land plan says a lot about the people and the place that
6 it is.

7 Lifestyle-wise, I needed to find a business that
8 would support myself while living here, and 20 years ago, I was
9 involved in an aspect of tourism that was new in Alaska called
10 Adventure Tours. I started the first rafting business in
11 Alaska, and I looked for a location that had all the physical
12 characteristics that could get an industry like that off the
13 ground. People would come up to me and tell me, rafting,
14 rafting was an imbecilic thing to get involved in.

15 I found a location; it was 75 miles northeast of
16 Anchorage on the Matanuska River. It had all the physical
17 characteristics I needed, from Class I to Class IV whitewater,
18 it had capabilities for doing horseback trips, mountain climb-
19 ing, mountain biking, you name it. There was all these things
20 that were said in here. And what it didn't have, it didn't
21 have a specific destination that could be controlled by any of
22 the major tour companies.

23 A lot of time has passed; tourism has finally become
24 an acceptable industry in the state. In the last 10 years now,
25 adventure tourism has become the fastest growing segment of

1 tourism in Alaska.

2 And a number of my tours are going to be tremendously
3 adversely affected by this intertie, specifically, the Chicka-
4 loon River, the Matanuska River in several segments, specifi-
5 cally, just below Anthracite Ridge, and I'm totally against it
6 altogether. I just can't imagine it coming in place. And I
7 can't imagine that any of the other tour operators that we work
8 hand in hand with could possibly grow if this intertie was in
9 place.

10 (Applause)

11 MR. FEY: My name is Herb Fey, Post Office Box 1101,
12 Chickaloon.

13 HEARING OFFICER: How do you spell your last name?

14 MR. FEY: F-e-y.

15 HEARING OFFICER: 1101.

16 HERB FEY

17 I've been a lifelong resident of Alaska. I settled
18 in Chickaloon in 1974; I've been coming out here since the
19 1960s. I took a hell of an economic loss by settling out here;
20 I used to run a successful drywall business in Anchorage. By
21 coming out here, I had to give that up. I feel it was worth
22 it.

23 I don't want this intertie to go through. I feel
24 that the public utilities are saying, the same as the old-time
25 utilities, "The public be damned." Their money counts; we

1 don't.

2 That's what I have to say.

3 (Applause)

4 CHRIS ROSE

5 My name is Chris Rose. I live in Sutton. Try not to
6 reiterate all the things I said last night or the things I'm
7 going to say in my written comments, but there are a few things
8 that have come up tonight that I want to repeat. And I think
9 overall, the thing that's come up has been the social costs
10 that are involved, that are not being calculated in this meth-
11 odology that has been used in the feasibility study.

12 And various people have said that the ability exists
13 to put numbers on these things, and yet no numbers have been
14 put on the aesthetic values nor even the adverse impacts to the
15 tourism industry here, which I think would be a fairly easy
16 thing to put a number on. I think it's clear, from some of the
17 people who own tourism-based businesses who've already testi-
18 fied, that their businesses are going to be adversely affected.

19 And that doesn't necessarily mean their business is
20 going to go down, but what it does mean is the business isn't
21 going to grow. And this area is prime for tourism to grow. As
22 somebody has already mentioned, we're only an hour away from
23 half the state's population, and yet we have some of the most
24 pristine country that you can find, some of the prettiest
25 country anywhere.

1 And people who have traveled all around the state --
2 I've been around this state a little bit; I still think this
3 area here is some of the prettiest country in the whole state.
4 And we are, in this methodology, totally ignoring the value of
5 that place -- this place here. And just because we haven't
6 been able to put a dollar value on it doesn't really neces-
7 sarily mean that there's no -- there's not an adverse impact.

8 I mean, it's ludicrous not to put a value on the
9 adverse impacts to us the way you put a value on the positive
10 impacts to the Copper Valley consumers in this study. I mean,
11 it's all based on these values for the Copper Valley consumers,
12 when it's obvious that people make choices for other reasons.
13 People make choices to gravitate toward places, and to preserve
14 places, that are important to them.

15 Like I mentioned earlier, this place would be a
16 national park if it were anywhere in the Lower 48, and we
17 would -- this wouldn't even be an issue. This would be off
18 limits. But because it's State land that -- with fewer
19 restrictions, this is even an issue that can be talked about.
20 And I think it's crazy for us to be ignoring the value of this
21 place, especially related to the dollars that you could put on
22 it.

23 Tourism is the fastest growing industry in this
24 state, and it's the most likely industry to sustain this
25 Alaskan economy in the future -- it's not going to be the oil

1 industry. So the quality of life issue, I think, has just got
2 to be much more heavily embedded into the analysis.

3 Some intertie costs that I think are grossly underes-
4 timated, I mentioned some of them last night, including the
5 labor and the helicopter costs. And we all have heard of cost
6 overruns; I mean, I don't know many projects -- Bradley Lake
7 might be one -- where there haven't been cost overruns. And
8 Warren Keogh said earlier tonight that the power line he spoke
9 of in Minnesota in 1978 was more than double the cost because
10 of a lot of the civil disobedience that took place, that I know
11 is going to take place in this area too.

12 And those things -- not just civil disobedience, but
13 also litigation. I mean, there are various permits that are
14 going to be litigated. There are -- the whole issue of whether
15 or not this process has been front-loaded, contrary to the way
16 the statute reads, which says you've got to have a feasibility
17 study before appropriation, that's a liti- -- that's a issue
18 that's going to be litigated.

19 People's land values that are going to go down are
20 going to have a cause of action against whoever tries to put a
21 power line in their back yard. People with businesses whose
22 value go down are going to have a cause of action against this
23 power line.

24 One thing that hasn't been mentioned is that, I don't
25 care how many warning signs you put up on this right-of-way

1 under this power line, people are going to ride their snow
2 machines underneath it, and people are going to ride their
3 four-wheelers underneath it.

4 FEMALE SPEAKER: And their horses.

5 BY MR. ROSE (Continuing):

6 And their horses. And they're going to get exposed
7 to the megadose of electromagnetic fields, and those people are
8 going to be affected. You're trying to take away this whole
9 issue of EMF, which you've effectively done in a lot of ways by
10 routing this away from people, and yet people are going to use
11 that route. People are going to walk right underneath it
12 because it's cleared; it's going to be a grubbed 12-foot-wide
13 trail, and I guarantee you people are going to use it, and
14 they're going to be affected by those EMFs. So it doesn't
15 matter if you put it 600 feet from a structure; it's going to
16 be a effect that you better put into your analysis.

17 I think the process here has been totally inadequate.
18 And I know that the State has done the best job they can. I
19 know they don't have to give us this public hearing. But I
20 think it's real -- really evident that there's a quarter mil-
21 lion people 60 miles away who use this area and are impacted
22 greatly by it and haven't been given a chance to talk about it.

23 And furthermore, it's State money that's going to be
24 used for this project. So everybody from Ketchikan to Barrow
25 has a stake in this thing, and it should be a statewide issue.

1 It shouldn't be an issue where you can just, you know, have us,
2 people who are living along a 60-mile strip of the Glenn High-
3 way, the only people who know about it and the only people who
4 can talk loud about it. Because I guarantee you, everyone I
5 know who uses this area in Anchorage is against it. And a lot
6 of those people are represented here tonight.

7 The process is also flawed in that there's no evalu-
8 ation criteria whatsoever in the statute, and there's no regu-
9 lations that define how the person who's supposed to be making
10 this decision is going to choose. Is it low growth? Is it
11 moderate growth? Is it high growth? You could put all the
12 scenarios you want in the feasibility study; it's still going
13 to boil down to a administrator choosing which one it is.

14 And if you don't give that administrator any compe-
15 tent direction in the feasibility study, it's just worthless
16 paper because you are supposed to be studying the probabilities
17 as well as the feasibility. The probability is that the only
18 person or industry that's going to need this is Petro Star Oil
19 Refinery.

20 Copper Valley's population has grown by .9 percent in
21 the last 10 years; Valdez, 2.69 percent in the last 10 years.
22 If you look at the numbers of people and the businesses John
23 LeMay talked about that are nonexistent out there, there's no
24 other reason for this power line except Petro Star Oil
25 Refinery.

1 think that things are even going to get fishier. And I'm
2 totally against the project.

3 (Applause)

4 LINDA KETCHUM

5 My name is Linda Ketchum. I'm a Chickaloon resident.
6 I'd like to go on record as being totally opposed to the con-
7 cept of the intertie.

8 I agree with previous speakers that conservation
9 could have been incorporated into other scenarios. And the
10 exclusive emphasis on the dollar cost disturbs me, as I think
11 equal or greater weight should be given to the environmental
12 and social costs. It's high time you figured out how to quan-
13 tify these costs so they can be factored into this and any
14 future proposed construction projects.

15 Finally, I would like to see our concerns properly
16 reflected in the main body of the final version of this report.

17 (Applause)

18 ROBIN McLEAN

19 My name's Robin McLean, and I made a lot of comments
20 last night, and I only have three more suggestions to you on
21 how you can fix this for the final study.

22 I suggest that you look at your oil price estimates
23 and consider that the world -- a lot of -- I've heard on
24 national news programs that experts believe oil prices are
25 going to be substantially lower in the la- -- next 10 years

1 than they have been in the previous 10 years. And if you need
2 sources for that, then I will try to find them, but that is a
3 generally -- not a bizarre belief, as far as I understand. So
4 I hope to see that reflected in the draft -- or the final.

5 Then someone suggested tonight that there are
6 numerous methods that the State of Alaska uses to assess social
7 and environmental impacts, and I expect to see those reflected
8 in the final study, along with all your other scenarios. And
9 just bear with it; if you don't believe it, just do it. Just
10 follow the directions.

11 And then I agree with the some- -- one of the other
12 people commented earlier that they hope to see our opposition
13 to the intertie in the Executive Summary so that everybody can
14 see that who receives this Executive Summary.

15 And then finally, I just have to say that when I got
16 this, read this, feasibility study, I read it and I said,
17 'These people at Copper Valley are smart people. Why in the
18 world would they think that this is rational?' I mean, it's
19 clear that it's not a booming economy. I mean, Petro Star is a
20 victim of the lowering -- the lower price of oil. The --
21 there's less oil coming out of the North Slope. Why would
22 Copper Valley want this? I don't understand this. Why don't
23 they go after Allison Lake? The -- I mean, that was much more
24 rational to anyone who reads this.

25 And Mr. Ritchey actually gave me this idea last

1 night, and he said, 'Well, they don't have money for Allison
2 Lake. They have money for the intertie. And how are they
3 going to get money from the legislature now?' And that just
4 made me realize: This is because you guys have money for the
5 intertie, and you don't have money for Allison Lake.

6 And I just hope that you guys like try and just be
7 good people and go to the legislature and ask for what you
8 really need, not what -- for the money that you've already got
9 except for some stupid project. Be honorable about this and
10 read it and think of what you really need, and go ask the
11 legislature for that. Don't waste our money on something you
12 really don't need.

13 (Applause)

14 MS. BRAENDEL: My name is Donna Braendel.

15 HEARING OFFICER: B-e-r-.....

16 MS. BRAENDEL: B-r-a-e-n-d-e-l. And I think you
17 have the address already, but if you don't, I'll give it to
18 you.

19 HEARING OFFICER: No, I don't have it. I don't have
20 it.

21 MS. BRAENDEL: All right. P.O. Box 1148, Chickaloon,
22 Alaska.

23 DONNA BRAENDEL

24 It is my opinion, after reading the study, what I
25 have read and what I can understand, which really doesn't say

1 much, but I do feel that it's self-serving. It doesn't address
2 the conservation issues adequately, and it doesn't reflect
3 costs realistically, as far as I can see. There's a lot of
4 things that are left out of it.

5 After attending several of these meetings, I feel
6 that the view of the parties involved is cavalier and indiffer-
7 ent. As many times as we have voiced our concerns over our
8 quality of life, the impact on our health, and the wildlife and
9 the environment in general, the gentlemen who present this
10 information seem unable to perceive any value that cannot be
11 quantified by some monetary figure. Since the people who stand
12 to gain from this expenditure of our tax dollars will not pay
13 these nonquantifiable costs, they consider them negligible. It
14 is my feeling that such matters are not adequately addressed in
15 this study.

16 A corridor is a narrow space that has no eventful
17 features and whose main purpose is to get from one important
18 place to another important place. We are not a corridor.
19 People live here. Their livelihoods are based on the type of
20 place that it is because, for many years, it did not have the
21 amenities to offer us that would make it worth it, except for
22 the fact that it is the sort of place we can carry on the
23 livelihoods that we enjoy, we can give the kind of lives to our
24 children that we think are worthwhile.

25 And what you're proposing to do is going to change

1 all that. This is one of the most beautiful places in the
2 world. There are many such places like this. And a lot of
3 them are gone, and they're gone because of the attitude that
4 you seem to have about these places: If you can't put a mone-
5 tary value on what they have to offer, then you can shuffle it
6 aside because you can say, 'Well, it has value to you, but it
7 doesn't have value to Joe down the road. He cares more about
8 something else.'

9 Well, fine. But these places are going daily, and we
10 do not intend to see this one go also. That is all I have to
11 say.

12 (Applause)

13 DAVID HARRISON

14 My name is David Harrison. I'm the Attorney General
15 for the Chickaloon Village Traditional Government.

16 What I've seen of this project, it is a bogus
17 project, self-serving to MarkAir and the present Governor,
18 Walter Hickel, the largest polluter in Alaska, second only to
19 the military. This project does not take into consideration of
20 the cost of what the people in the communities that are
21 affected are going to have to pay for their health.

22 It does not take into consideration the costs of the
23 health of those animals and which we eat for our sustenance.
24 You can go to the store, you can go to Carr's in downtown
25 Anchorage, and buy your stuff. But this is my grocery store

1 out here, and you are going to devastate my food source. Not
2 only my food source, but the food source of Chickaloon Village
3 and the community of Chickaloon. This is unacceptable to us,
4 and the community, from what I have heard.

5 We have put you on notice that you have -- are in
6 violation of Chickaloon Village's environmental protection
7 ordinance, and when you proceed to court, the strictest envi-
8 ronmental standards are what's applicable. Chickaloon's
9 environmental protection ordinance is much and far more
10 stringent than the State of Alaska and is much and far more
11 stringent than the federal government's environmental protec-
12 tion ordinance because the Environmental Protection Agency is
13 an agency to allow pollution; it does not protect the environ-
14 ment.

15 The State of Alaska, in all its supposed wisdom, has
16 to put back several millions of dollars. Why don't they take
17 this money that they're going to put into this project, and why
18 haven't they put the money that they put into the feasibility
19 study, into the money that they have to pay back?

20 Thirdly, the State of Alaska is not a legal entity
21 because of the fact they were created illegally, without a vote
22 of the Alaska Native people, who are still the rightful owners
23 and caretakers of all of Alaska, with exception of what they
24 called "New Archangel," which is considered today as Sitka, and
25 a couple of ports on Kodiak Island and maybe one out on the

1 Aleutian chain. This is what the United States may have claim
2 to.

3 This project, from beginning to somewhere close to
4 half to three-quarters of the way, is within Chickaloon
5 Village's traditional jurisdictional area. We will be in the
6 way of this project. We will be on the line if it is to go
7 through. We will do everything in our means to stop this
8 project and to hold those people accountable for the devasta-
9 tion that they are attempting to do.

10 If this project goes through the courts and it is
11 found that they can go through, then there is a cost that you
12 have not figured into this either. We will tax this line. We
13 will tax it to the tune of a monetary amount that will pay for
14 the health care of the people that you have polluted. With the
15 amount of energy that is -- would flow through this line, there
16 is great cause for alarm, to the community, to the animals, and
17 the natural world.

18 The environment is the most important thing that is
19 facing people today, and here you are planning to continue the
20 pollution, to continue the acts -- the criminal acts -- of
21 genocide by the creations of conditions that are calculated to
22 bring about the physical destruction of the group in whole or
23 part. This is unacceptable, and you will be held accountable
24 for that crime.

25 You are on notice. You can go look up the crime of

1 genocide in your criminal procedures book, Title 18 of the
2 United States Code, §1091 through §1093, because these people
3 don't care about the health of this community, the communities
4 in which this line will run through. Nor do they care about
5 the health of my animals, as we have seen the Nelchina caribou
6 herd go from over 100,000 strong down to 40,000 because of the
7 pollution and environmental degradation that the State of
8 Alaska and the federal government allows to persist here.

9 (Tape Change - Tape No. 2, Side 4)

10 BY MR. HARRISON (Continuing):

11 They have paid you probably fairly well. How much
12 are you making today for going to these public hearings?

13 (Inaudible response)

14 It's overtime pay. It's not free because I'm having to waste
15 my time here trying to explain to you guys that this project is
16 not feasible.

17 With all of your scenarios, you have the lack of
18 respect for the people who you're trying to run over. The
19 State of Alaska has tried to run over Chickaloon my whole life.
20 You can remember what happened when Hobbs Industries tried to
21 haul coal out of Chickaloon. You will have another incident
22 similar to that if you try and build this project.

23 However, it will probably be much worse than that
24 because you see what's happened down in southern Mexico, with
25 Chiapas, and the unrest down there because of government irre-

1 sponsibility and lack of caringness (sic) about the health
2 and -- of the people. You are going to have a Chiapas in
3 Alaska if you continue to try and run this project over the
4 people. Thank you.

5 (Applause)

6 BILL ROOT

7 My name is Bill Root. I'm the owner of this estab-
8 lishment where the meeting is being held tonight. I'm a CPA,
9 and I have testified expert witness before the Public Utilities
10 Commission.

11 I'd like to bring up one item that hasn't been dis-
12 cussed before, and that is the potential profits that the
13 electric utilities can make as a result of this "free" State
14 money. That is, they are allowed a rate of return which must
15 be paid by the people who use their services. Approximately
16 12 percent is what's being paid right now, so if we put a \$48
17 million system in here, the utility companies will receive an
18 extra \$600,000 a year of profits to them for having done
19 nothing on their own.

20 I think that's something that needs to be looked at
21 and watched, and it's also part of the reason why the electric
22 utilities want to have this go into place.

23 I'm opposed to this project based on the way it is
24 established right now. I do have this business here which is
25 related to the tourist industry, and I would like to see that

1 protected. Thank you.

2 (Applause)

3 MR. WHALEY: My name's Geoff Whaley. I live in
4 Chickaloon, Alaska.

5 HEARING OFFICER: And the spelling?

6 MR. WHALEY: W-h-a-l-e-y. First name is G-e-o-f-f.

7 GEOFF WHALEY

8 I'm opposed to the intertie in any way, shape, or
9 form. I'm also opposed to this study going any further than it
10 is now because I feel that Copper Valley Electric Association
11 has totally bought off R. W. Beck to make it come out the way
12 they wanted it and, until there is an unbiased study done, that
13 the legislature should totally shelve this thing. If it isn't
14 shelved, I feel that the State Attorney General should start
15 looking into investigating the way this procedure was done.

16 (Applause)

17 HEARING OFFICER: Others -- anyone else?

18 (Pause)

19 MR. BUCHHOLZ: Edgar Blatchford -- my name is.....

20 HEARING OFFICER: Start with your name.

21 MR. BUCHHOLZ: Start with my name? Okay. My name is
22 Larry Buchholz. My address is Post Office Box 274, Sutton.....

23 HEARING OFFICER: I'm sorry.

24 MR. BUCHHOLZ:Alaska. B-u-c-h-h-o-l-z.

25 HEARING OFFICER: Okay. Go ahead.

1 MR. BUCHHOLZ: Post Office Box 274, Sutton, Alaska
2 99764.

3 LARRY BUCHHOLZ

4 Edgar Blatchford, my name is Larry Buchholz, and I
5 reside at Pinnacle Mountain Subdivision, a state lottery home-
6 site we won back in 1985 for which we continue to attempt to
7 get electricity into this State-sponsored subdivision. How-
8 ever, so much for small business -- or small users of elec-
9 tricity because I am not a business. However, I'm not here to
10 get emotional about my frustration, but it's an example.

11 I want to make a comment about the time period
12 comment and the fact that I did testify at Sutton, or babbled
13 on is more appropriate. Five minutes is a thing that is diffi-
14 cult for people to crowd all their feelings and understanding
15 into.

16 HEARING OFFICER: I'm not being real strict about it.

17 MR. BUCHHOLZ: I understand. And you're doing a fine
18 job.

19 BY MR. BUCHHOLZ (Continuing):

20 And I want to take this opportunity to tell you,
21 Commissioner Brad- -- that I'd like to thank Dick and John for
22 coming and doing a really great job. A State employee, I --
23 you're doing great work. I was one, and I acknowledge you.
24 And John, you're a great salesman; good job. Your boss ought
25 to give you a raise. The fact that you don't know what the oil

1 cost (laugh) is another thing, but that.....

2 Secondly, I'd like to thank and acknowledge all the
3 staff professionals, you know, who have come here from CVEA and
4 MEA because it's a tough duty. I'd like to thank Channel 2,
5 who did a really good job of providing news coverage, and the
6 Daily News and the News Miner for some of the stuff that
7 they've been doing and will continue to do.

8 And although we didn't have anybody here who repre-
9 sented Glennallen with a -- and Valdez that -- as we had in
10 Sutton, those people are to be acknowledged, too, because they
11 took a bit of a rap from us verbally. And it's hard to do,
12 because I'm sweating here telling you how hard it is to do.

13 The HAARP project, the sensitive nature of the HAARP
14 project, which is something that may impact on one of the dams,
15 is a big issue, something that nobody -- that we've kind of
16 just glossed over. The HAARP project may be built in spite of
17 the lack of this intertie. But we need to protest against that
18 project and not participate and not encourage it because it's
19 an evil project, okay? And if the feds are going to do it, let
20 them do it. Let them force us; let's not us, the State of
21 Alaska, do as we did and have done before. I could talk about
22 the Exxon Valdez. Well, you get my message.

23 Health and safety, the ecology, the environment, let
24 alone the economic issues, and then we get down to political
25 issues. We've assessed the economic issues, and that's what

1 the study reflects, and we've assigned no other value. What I
2 heard Dick explain as to what the funnel determines from all of
3 our testimony is that, if I heard correctly, the major issue is
4 the pristine wilderness disruption. That's values. That's --
5 that refers to values. What that is, is values.

6 Now, we've got economic values, which we are -- have
7 assessed, versus all the other values that we can think of.
8 And there's lots of them we've talked about.

9 I meant to take out my watch and look at the five
10 minutes because I'm real concerned that I could go on and on
11 and on, and all of us could. We all have our feelings about
12 this.

13 The -- how do they say it in technical terms? You
14 know, all the aforementioned incorporated in my five-minute
15 issue here, I don't want to take credit for it; I want you guys
16 to take credit for it. I want you to take credit for it by
17 including it. And although that's not your focus, that's not
18 what your intent is, that's not what you were hired to do,
19 that's what I'd like you to do.

20 I am opposed to the intertie. I am opposed to it for
21 all the reasons that have been enumerated here. And I am not
22 swayed by the economic arguments that it should support and
23 improve another area somewhere 130 miles slashed through the
24 wilderness to get to.

25 I'm just speechless because I can't -- I come to a

1 meeting like this, and I attempt to encapsulate my feelings
2 about what's been said and is being said, and I'm sure you're
3 all caught with the same problem. The minute I get an idea,
4 somebody says something else that I want to attach to, and
5 that's one of the major reasons why the unfairness of this
6 whole process deserves to be sued about (sic) and deserves to
7 be examined, because we're not represented.

8 And that, Commissioner Blatchford, is what I would
9 like you to do for us, is to consider us and to represent us
10 and to hear us. And I trust that John and Dick will do their
11 job and help to make that happen.

12 (Applause)

13 MR. BOYLE: My name's Bill Boyle.

14 HEARING OFFICER: B-o-y-l-e?

15 MR. BOYLE: Yeah. HCO3, Box 8300, Palmer 99645.

16 BILL BOYLE

17 My only statement on this intertie is that I'm
18 totally against it. I do believe that they have other alterna-
19 tives. I believe that there's enough fossil fuel in Valdez,
20 that -- where they'll be refining this fuel, that they could
21 take the hot water and whatnot and use it for steam and add a
22 little oil to it, or they could build a power plant and sell
23 you guys the oil to run the power plant, or there's a lot of
24 other options. I don't believe that this intertie is needed.

25 I believe that you could go to the State and get the

1 \$35 million and take it down to Valdez and build a 10-meg or a
2 12-meg power plant to do everything you want to do. Or I feel
3 you should go and tie into the new coal power plant that
4 they're going to build over in -- oh, now I want to think of
5 the town, and it won't come to me.

6 FEMALE SPEAKER: Healy?

7 BY MR. BOYLE (Continuing):

8 Healy, yeah. Tie in there. Go that way with it.
9 Leave us alone. Do something different. Do something right.
10 Get the hell out of here, Thank you.

11 (Applause)

12 MR. LARSON: My name is Joel Larson.

13 HEARING OFFICER: S-o-n?

14 MR. LARSON: O-n, yeah. Box 3891, Palmer.

15 (Inaudible comments)

16 JOEL LARSON

17 I'm opposed to this intertie. I'd like to say proba-
18 bly the same thing -- there was a lot of folks that said it
19 here tonight. And it's a bit intimidating to sit up here and
20 talk in front of a lot of people. I know I can feel my hands
21 (indiscernible).

22 But from my house, I sit on my back deck and I look
23 up at Castle Mountain. For me, my life will change. What I'll
24 be looking is those 80-foot towers.

25 You know, you got two proposed passages; one is about

1 a mile away from my place, and the other one's about a mile and
2 a half. And I know some of the other folks here, and I know
3 just about where everybody lives here, or I'd say 98 percent of
4 them anyway. And that -- what you got in your scenario, some
5 of these people are a lot closer than what I am.

6 And a lot of us come up -- like you said, come up
7 here and we live -- to raise our families, and it's true, we
8 give up something. Most of my work is in Anchorage, and I have
9 to drive back and forth. Now, when I moved out here, I
10 realized I'm going to have to put up with something: I'm going
11 to have to put up with the commute. Or I could live in
12 Anchorage, and with the hustle bustle of the traffic, which I
13 did for three years when I first came to Alaska. But I decided
14 to move out here because this was the kind of quiet, beautiful
15 way of life that I wanted, not only for myself but for my kids.

16 Now, earli- -- when I came here tonight, we dis-
17 cussed, before we turned on the recorder and said, 'Okay, this
18 is an official meeting,' I have asked you, I says, 'Is the
19 impact that you are predicting of that, did you pick up from us
20 people the fact that it's the beauty of the land, it's the
21 businesses of some of us people who live here, whether it's
22 trail riding, tourism, rafting, horseback riding, whatever it
23 is?'

24 I asked you, I says, 'Do you understand that this
25 aspect of the conversation is what we're dealing with? It

1 isn't the intertie; it isn't the certain one route here, the
2 other route there. That's not the -- that's not what concerns
3 us. It concerns us of our way of life; it's going to be
4 changed, not only for us but our children, if this intertie
5 comes through.' And you said to us, the way I predict, was,
6 'No, I didn't understand. I didn't believe -- understand
7 that.'

8 I believed it was the route that was picked out. So
9 tonight was, as far as I'm concerned, a great success, 'cause I
10 think at the end of this meeting, before we actually turned on
11 the tape recorder, it was brought to your attention that it
12 isn't the route, it's our way of life. And I, for one, will
13 have to say I'm sorry, and I am guilty of, when earlier we were
14 asked to, each one of us, sit down and write what it is about
15 living here that's so beautiful that you do not want it changed
16 and send it to the legislators or whatnot, and I didn't do it.
17 I didn't. I sat down with that pen and paper, and I just -- I
18 couldn't put it into words.

19 Sometimes you have something that's so dear to your
20 heart, and so beautiful -- and I've worked throughout, I'd say,
21 50 to 60 percent of Alaska. I'm a painter and a taper, and I
22 work a lot of Bush work. And I'll tell you, I've heard -- in
23 my opinion, the area between Palmer and 100-Mile, meaning 100-
24 Mile on the Glenn Highway, is some of the prettiest land proba-
25 bly in -- definitely in the United -- in Alaska and probably in

1 the United States.

2 Back in -- up until about 1978, this land that's
3 called Chickaloon, this area was called Paradise Valley. And
4 there's a reason for that: Paradise Valley, 'cause it was so
5 beautiful here. And that's what all of us people think and
6 feel in our hearts and our soul, that this is a beautiful place
7 to live.

8 And putting this intertie in is damaging not only the
9 land itself, putting -- as far as we're concerned, threatening
10 our lives and, like David Harrison said, the animals, which, I
11 look around the room here, and of the people that live here,
12 I'd say 100 percent of the people hunt here. And he's right
13 that we put, you know, food on our tables for our kids and for
14 ourselves. And all of this is to be jeopardized for other
15 people who have, you know, hundreds of other choices, as far as
16 minerals and mineral rights, to produce enough electricity for
17 themselves.

18 Now, there's one thing I don't understand and I can't
19 quite comprehend here tonight. And everybody tells me that
20 there's one company in Valdez that wants this electricity and
21 is a major (indiscernible). But yet you say in approximately
22 15 years, the outlook is that the pipeline is -- will be shut
23 down or come to a lower of a cease (sic) than what it is right
24 now. And wherever you were, or wherever you're at, and you
25 have a certain business that sustains (sic) or holds up the

1 money value for the people who live there, comes to a screech-
2 ing halt, the people leave.

3 So in the long outlook plan, why are we going to
4 devastate our land for a place, in the future, that's going to
5 come to a screeching halt, where there's a good chance the
6 people are going to decrease, and there's going to be less
7 demand for that intertie? It doesn't make sense. Thank you.

8 (Applause)

9 VERONICA SLAJER

10 Veronica Slajer, S as in Sam -l-a-j-e-r. I'm from
11 Anchorage, and I'm a life-long Alaskan; thought I'd throw that
12 in.

13 I've been doing kind of an overview of several of the
14 proposed interties around the state, and so I've kind of had an
15 opportunity to look at some of the other studies.

16 One of the things, if you were going to go back into
17 this study and, you know, expand on some sections, I would
18 recommend you expand on the permitting section. R. W. Beck
19 did, I believe, a better job on the Tye Swan Lake section --
20 on the permitting in parks, apparently, is because of the
21 routing, the choice of routing. I don't know if it -- you
22 weren't able to commit on what your preferred routing is, but
23 because there's so many sections of this -- all these ro- --
24 all the segments are controversial and will have a variety of
25 permits necessary. I think, that would be a good -- a definite

1 need there.

2 Let's see. What else did I want to mention?

3 Also, there needs to be a thorough review of the O&M
4 costs. As mentioned on every -- you know, whether it be
5 permits or the -- with the preferred route with the longer
6 spans, you're going to have other structural considerations
7 that may need to have a second look at it. We are actually in
8 the process of looking at it more thoroughly, so I'm unable to
9 comment at this time, but that's definitely a section that we
10 will probably be encouraging you to go back and look at.

11 Also, a question in my mind that I haven't had a
12 chance to talk to Dick about, or anybody else about, is how do
13 the other members of the Four Dam Pool, how are they going to
14 be affected by this, is the -- if there is truly a benefit in
15 the way of rates going down. Is the rate -- are they going to
16 be realized by the people of Copper Valley, or are they going
17 to be realized by the people -- the other members of the Four
18 Dam Pool? And that's probably an easy answer, but I don't
19 know. And it may be something this -- to slip into the
20 Executive Summary.

21 I think the recreation section could -- as we've
22 heard today, could be greatly expanded. It's about as big as
23 the permitting section, which is a couple (laugh) of para-
24 graphs. I think that's something you should look at. And then
25 also, within the environmental section, there's no reference of

1 EMFs there, although you've made reference to EMFs in the
2 consideration of route, meaning you decided to drop the route
3 back off the highway because of the concerns to people. Those
4 same concerns apply to animals, and those -- most of the
5 studies that have actually come out in the most recent, you
6 know, times have been on cows in the Midwest and those kinds of
7 things. So I guess the point is that EMFs affect animals, too.

8 And I guess that's my comments for this evening.

9 Thank you.

10 (Applause)

11 HEARING OFFICER: Anybody?

12 (No audible response)

13 HEARING OFFICER: Okay. Well, the written comment
14 period goes through February 25th. So thank you for coming.

15
16 (Whereupon, the proceeding in the above matter was
17 adjourned)

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C E R T I F I C A T I O N

STATE OF ALASKA)
) ss.
THIRD JUDICIAL DISTRICT)
_____)

I, **CINDY S. CARL**, do hereby certify:

(1) That the foregoing pages contain a full, true, and correct transcript of proceedings in the above-entitled matter, transcribed by me, or at my direction and supervision, to the best of my knowledge and ability.

(2) That I have been certified for transcript services by the United States Courts.

(3) That I was certified for transcript services by the Alaska Court System prior to January 1, 1993.

SIGNED AND CERTIFIED:

BY: *Cindy S. Carl*
Cindy S. Carl
Certified Court Reporter

DATE: 2/15/94

COPPER VALLEY INTERTIE FEASIBILITY STUDY

Appendix Q

PUBLIC COMMENT ON DRAFT REPORT

465-6790

Original Disposition:

Destroy

Return

Call for pickup

Ahtna, Inc.

From Representative Olbers

RECEIVED

MAR 11 1994

DIVISION OF ENERGY/DCR

GLENNALLEN OFFICE
PO BOX 649
GLENNALLEN, AK 99588
PHONE: (907) 822-3476
FAX: (907) 822-3495

ANCHORAGE OFFICE
408 W. FIREWEED LANE, NO. 101
ANCHORAGE, AK 99503
PHONE: (907) 274-7662
FAX: (907) 274-6614

March 3, 1993

RECEIVED

MAR 07 1993

To: The Alaska State Legislature
House and Senate Finance Committees:

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Re: Sutton-Glennallen Intertie

On behalf of the citizenry of the Copper Valley Region, especially the Ahtna people, it is with a sense of urgency that I write this letter in support of the Sutton-Glennallen Intertie.

We support the construction of the Intertie for the following reasons:
1) lower and more stable rates; and 2) increased economic development potential.

First, the proposed Intertie is a *long-term fix* to the prevalent energy problem in the Copper Valley Region. It could interconnect CVEA with the Railbelt Energy Grid and provide lower priced power to the Region while at the same time stable rates. The Intertie would also provide ample power to put CVEA's two diesel plants into emergency stand-by status, thus reducing the annual maintenance, repair, and operational costs. Placing the plants in emergency stand-by status would reduce and almost eliminate the burning of fossil fuels.


Second, it is no secret that we live in an economically depressed area. The Intertie would give us a jump-start to economic development. By lowering energy cost the citizens the money saved could be spent within the communities to spur the economy. Also, there is great potential for development of new business and industry in the area, and the Intertie would be a positive factor. In the past this has not

Alaska State Legislature
March 3, 1994
Page 2

been the case. When one learns of the high cost of power here, it has made good business sense to take one's business elsewhere.

The construction of the Intertie would demonstrate that the legislature understands the reality of a diverse Alaska, is aware of rural needs by having investigated the lifestyle of rural Alaskans, and is committed to meeting the needs of all Alaskans.

Sincerely,


Roy S. Ewan
President/CEO

RSE:dg

9074656790:# 2/ :

AHTNA, INC. GLN-

9-7-94 : 8:47 :

SENT BY :

ISSUE TO SHARING AND PROMOTE ISOLATE THE CENTRAL FROM ENTERS IN
fuels.

*From Representative
Olberg*

FROM: Mr. Clemet George Boucher
PO Box 258

Glennallen AK 99588 822-3684

CONSTITUENT

SUBJECT: ENERGY

MESSAGE: I REQUEST THAT THE FINANCE COMMITTEE TAKE A GOOD LOOK AT THE PEOPLE THAT THE INTERTIE WOULD HELP. WE HERE IN GLENNALLEN NEED THIS INTERTIE TO REDUCE THE COST OF ELECTICITY. MY ELECTRIC BILL AT HOME WAS \$400.00 THIS PAST MONTH, BECAUSE OF HEAT TAPE ON MY WATER WELL.

DISTRIBUTION 10

FROM: Mr. Kenneth Roberson
PO Box 375

Glennallen AK 99588 822-3363

CONSTITUENT

SUBJECT: ENERGY

MESSAGE: I STRONGLY URGE SUPPORT OF THE SUTTO-GLENNALLEN INTERTIE. PLEASE RECOGNIZE THAT A RELATIVELY SMALL GROUP IS OPPOSING A PROJECT THAT WILL BENEFIT NEARLY 6,000 PEOPLE. THE PROJECT ALSO DOES NOT PRECLUDE FUTURE DEVELOPMENT OF THE ALLISON LAKE PROJECT. IT ENHANCES THE POTENTIAL OF HYDROPOWER DEVELOPMENT DUE TO DISTRIBUTION POTENTIAL.

DISTRIBUTION 10

*From Representative
Olberg*

FROM: Mr. Jerry Tollman
PO Box 377

Glennallen AK 99588

822-3459

CONSTITUENT

SUBJECT: ENERGY

MESSAGE: PLEASE MAKE THE TIE-LINE FUNDING A PRIORITY. OUR AREA PAYS

THE HIGHESTELECTRIC RATES IN THE STATE. THERES NO RELIEF IN SIGHT
EXCEPT FOR THE TIE-LINE. PLEASE HELP INVEST IN OUR FUTURE.
DISTRIBUTION 60

Representative Harley Olberg
State Capitol, Room 110
Juneau, AK 99801

From Rep. Olberg

Dear Representative Olberg,

I just received my least favorite mail--my electrical bill from the Copper Valley Electric Association. It takes a very large chunk out of our pay check, often it poses a real challenge to make the ends meet. We pay among the highest unsubsidized rates in the state of Alaska.

I would like to put my support behind House Bills 50 & 51, Senate Bills 106 & 126, 124 & 125 for the intertie and the possible AEA Reorganization Plan. This would not only stabilize and possibly lower my electrical rates, but construction of this line could also produce jobs. Electricity is such a basic need, please support these bills.

I recently heard that radio station KCHU from Valdez is seeking \$20,000 from the state to bring in KCHU to the Copper River Valley. We already have a local radio station which offers local news, Caribou Clatters and much community involvement including local fund-raising drives. We also have access to the public radio station, KUAC, out of Fairbanks which broadcast a number of the standard public radio programs. I DO NOT support state funding--especially such a large amount-- to expand coverage of KCHU. We are already getting adequate radio with local am radio as well as public radio station, KUAC. To put \$20,000 down so that, not one, but two public radio stations could repeat "All Things Considered" and other public radio programs throughout the day would be a irresponsible use of funds. I speak for several in saying we have adequate radio access and please, use the discretionary funds for necessary items such as an ambulance which is badly needed here in the Copper River Valley. I'll enclose the newspaper article regarding KCHU possible expansion in here and some of the community feeling.

Thank you for your time!

Heather Bash

FROM: Ms. Shana Roberta Anderson
PO Box 1956
Valdez AK 99686 835-4281

From: Representative
OLberg

CONSTITUENT

SUBJECT: ENERGY
MESSAGE: I AM IN SUPPORT OF THE INTERTIE.
DISTRIBUTION 20

FROM: Ms. Janese Marie Chrystal
PO Box 427
Valdez AK 99686 835-2192

From: Representative
OLberg

CONSTITUENT

SUBJECT: ENERGY
MESSAGE: I ENCOURAGE YOU TO SUPPORT THE INTERTIE.
DISTRIBUTION 20

FROM: Ms. Evelyn Bunch
PO Box 31

Glennallen AK 99588 822-3221

CONSTITUENT

SUBJECT: ENERGY

MESSAGE: PLEASE SUPPORT C.V.E.A.'S INTERTIE PROJECT. THE INTERTIE
IS OUR ONLY CHANGE AT REASONABLE POSER RATES IN THE FUTURE.

FROM: Mr. Jon P. Erwin
PO Box 2081

Valdez AK 99686 835-4560

CONSTITUENT

SUBJECT: ENERGY

MESSAGE: I SUPPORT THE INTERTIE.
DISTRIBUTION 20

From: Representative
OLberg

From: Representative
OLberg

3/11/94
3:38:57

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

RECEIVED

POMS100
LHSCKIM
WASTEBASKET

From: Mr. Ken
PO Box 8

Hughes

APR 04 1994

Gakona

AK 99586

Tel: 822-3058

DIVISION OF ENERGY
RECEIVED

MAR 18 1994

Bill# Title:
Subject ENERGY

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Message: NOT RELATED TO SPECIFIC LEGISLATION
ECONOMIC DEVELOPMENT IN THE COPPER VALLEY IS VERY MUCH DEPENDENT ON
LOW COST ENERGY. THE SUTTON TO GLENNALLEN INTERTIE IS THE ONLY WAY OF
ACCOMPLISHING THIS. PLEASE SUPPORT THE SUTTON/GLENNALLEN INTERTIE.

03/17/94
08:43:46

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

POMS100
LHSCKIM
WASTEBASKET

From: Mrs. Barbara
SR Box 225

Charley

Gakona

AK 99586

Tel: 822-3058

Bill# NON CONSTITUENT
Title:
Subject ENERGY

Message: NOT RELATED TO SPECIFIC LEGISLATION
POWER COST EQUALIZATION IS VERY IMPORTANT TO RURAL COMMUNITIES. IF
THIS IS LOWERED MOST FAMILIES WILL NOT BE ABLE TO AFFORD ELECTRICITY. ANY
CUTS IN THIS AREA WILL AFFECT ALL RURAL COMMUNITIES.

03/17/94
08:43:20

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

POMS100
LHSCKIM
WASTEBASKET

From: Mr. Warren
PO Box 211

Ulrich

Gakona

AK 99586

Tel: 822-3071

Bill# NON CONSTITUENT
Title:
Subject ENERGY

Message: NOT RELATED TO SPECIFIC LEGISLATION
I AM IN SUPPORT OF THE GLENNALLEN/SUTTON INTERTIE. THE FUNDS FOR THIS
PROJECT SHOULD BE KEPT FOR THAT PURPOSE.

From: Representative
OLberg

03/17/94
08:38:32

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

POMS10C
LHSCKIM
WASTEBASKET

From: Mrs. Julie Sine
PO Box 266

Gakona

AK 99586

Tel: 822-3542

NON CONSTITUENT

Bill# Title:
Subject ENERGY

NOT RELATED TO SPECIFIC LEGISLATION

Message: I SUPPORT THE INTERTIE BETWEEN SUTTON AND GLENNALLEN. DO NOT CUT THE FUNDING FOR THIS PROJECT. WE WOULD LIKE MORE STABLE COSTS FOR ELECTRICITY.

03/17/94
08:45:29

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

POMS10C
LHSCKIM
WASTEBASKET

From: Mr. Larry Sine
HC01 Box 1681

Glennallen

AK 99588

Tel: 822-3542

CONSTITUENT

Bill# Title:
Subject ENERGY

NOT RELATED TO SPECIFIC LEGISLATION

Message: PLEASE SUPPORT THE INTERTIE BETWEEN GLENNALLEN AND SUTTON, AND DO NOT CUT THE FUNDING. WE WANT A MORE STABLE COST FOR ELECTRICITY.

03/17/94
08:40:08

PUBLIC OPINION MESSAGE SYSTEM
MEMBER OFFICE OLB Olberg

POMS10C
LHSCKIM
WASTEBASKET

From: MR. Robert A. Frisbie
PO Box 635

Mile .5 Tok Cut-Off
Glennallen

AK 99588

Tel: 822-3062

NON CONSTITUENT

Bill# Title:
Subject ENERGY

NOT RELATED TO SPECIFIC LEGISLATION

Message: I WOULD APPRECIATE YOUR SUPPORT OF THE SUTTON-GLENNALLEN ELECTRICAL INTERTIE. WE IN THE COPPER RIVER BASIN NEED THIS INTERTIE TO STABILIZE OUR ELECTRICAL RATES AND AVAILABILITY. THANK YOU.

From: Representative
Olberg

FROM THE DESK OF

VALDEZ CHIROPRACTIC CENTER
LELAND P. OLKJER, D. C.
THE ROYAL CENTER, SUITE 221
P. O. BOX 368
VALDEZ, ALASKA 99686

TELEPHONE 907 - 835-2334

3-7-94

Dear Commissioner Blotzfeld,
I would like for you to know
that I would appreciate your
support for the Sutton - Skwalle
initiative,

I am the owner of several
businesses in Valdez. One being
the only laundromat in Valdez.
we get many comments on why
it costs more to do laundry here
than anywhere else.

Thank you for your
consideration in supporting
this important project and
keeping it on track.

Sincerely,

Leland P. Olkjer

MAR 11 1994

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

March 11, 1994

Mr. Herv Hensley, Director
DCRA, Division of Energy
333 W. 4th Avenue, Suite #220
Anchorage, AK. 99501-2341

RECEIVED

MAR 14 1994

DIVISION OF ENERGY/DCRA

RE: Intertie

Dear Mr. Hensley:

I am writing to you on behalf of the Intertie proposal. As a current member of Copper Valley Electric Association (CVEA), I strongly believe funds should be allocated for this project.

Three major benefits for the Valdez and Cooper Basin/Glennallen residents are:

1. Stability in rates or future rate reductions.

One of the major complaints from myself and other members of CVEA is, "The rates are too high." CVEA rates have remained the same since 1985. My major concern is with the deterioration of the diesel plants, our rates will inevitably increase. With the intertie there is hope for the rates to remain stable or possibly allow for rate reductions in the future.

2. Economic Growth

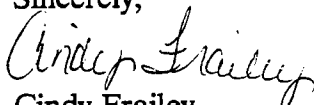
New growth would allow competition between the business's. At this time we only have one or two options for most things, therefore we are forced to pay high prices for other commodities. This growth would also allow more jobs to be produced, therefore, decreasing unemployment and helping the economy.

3. Safety & Health

Alaska is the last frontier left in the world. I personally feel we should do everything possible to preserve our state and wildlife. The intertie would allow CVEA not to rely mainly on diesel generation which in turn would allow a reduction of exhaust emissions.

Thank you for the consideration of reading my letter.

Sincerely,


Cindy Frailey

Herv Hensley, Director
DCRA, Division of Energy
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

RECEIVED
MAR 14 1994
DIVISION OF ENERGY/DCRA

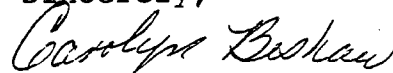
Dear Herv Hensley,

March 11, 1994

I am very up set with the high price that my husband and I have to pay for the use of electric power, and still raise a family of six children still all in school. Its \$200.00 plus every month. If the power goes any higher we are talking about one of two things, cutting off the power, or just moving out of the Copper Basin. We don't want to do either.

I ask you to please look in favor of the intertie, this will not only stablilize our rates, but might even lower them. At this point in time its hard for our local businesses to stay alive, and its almost out of the question that any new businesses even look at the Copper Basin for a future. Please, for the future of the Copper Basin, and for the good of Alaska, that we can all keep moving forward, I again ask you to look in favor of this interie.

Sincerely,



Carolyn Beshaw
P.O. Box 586
Glennallen, Ak.
99588

RECEIVED

MAR 11 1994



COPPER VALLEY TELEPHONE
COOPERATIVE INC

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

BOX 337, VALDEZ, ALASKA 99686

907-835-2231

FAX 907-835-2387

March 8, 1994

Edgar Blatchford, Commissioner
Department Community & Regional Affairs
Community Building, Room 217
P.O. Box 112100
Juneau, Alaska 99811-2000

Dear Commissioner Blatchford:

Copper Valley Telephone Cooperative, Inc., is a non-profit, member owned cooperative providing communications services throughout a large portion of South-Central Alaska. In addition to our primary switching centers, the nature of this area requires us to provision many small, remote buildings in which we house electronic equipment requiring AC power to operate. We have a constant first question we ask when engineering and planning facilities--what is the availability and dependability of AC power and what is the present and future cost of that power?

This dependence translates into charges for electrical services from Copper Valley Electric Cooperative in excess of \$90,000 per year--and growing!! Since we operate on a non-profit basis, any increase in those costs ultimately appears on our customers' bills. We have more than enough expensive obstacles to overcome in order to accomplish our goals, and strongly support any project which can help us keep the lid on our operating expenses as we intend to remain in business here for many years to come.

The Sutton-Glennallen Intertie Project has the potential to stabilize rates--a direct benefit for our customers, most of whom live and work in CVEA's service area. It has the potential to encourage economic development--a direct benefit for our customers. And it addresses future need for many years--again, a direct benefit for our customers. We can only see positive returns through this project, returns which directly affect the pocketbooks of our 4000 customers through our operations alone.

As a utility, too often we find the expressed demands of a few override the unexpressed desire of the majority, especially where public works types of projects are concerned. I believe the benefits inherent in the Intertie far outweigh the alternatives, especially from a long term perspective.

Sincerely yours,

Scott L. Smith
General Manager

5 March, 1994
MP 109½ Glenn Hwy.
HC 3 Box 8484C
Palmer, Ak. 99645

Dear Commissioner Blatchford,
We are writing in support of the Sutton to Glennallen
Transmission Line Project and would like your support as well.

We get our power from CVEA and pay the highest electric rates
around (nearly .19¢ KWH). We need this intertie to help stabilize
our rates, to replace the dinosaur generators that create our
power, to help clean up our air and reduce the noise pollution
(from the generators), as well as reduce the burning of fossil
fuels.

We realize the folks west of Caribou Creek (Chickaloon, Sutton,
etc.), are not in support of this, but we feel that is because
they have their constant power and could care less about the
customers of CVEA or the future of the Copper Valley Electrical
Assn.

We look for your support on this Electrical Intertie.

Sincerely,

Mary P. Howarth-Hernandez
Michael Hernandez

Mary P. Howarth-Hernandez
Michael D. Hernandez

DISPATCHED

MAR 10 1994

COMMUNITY & REGIONAL AFFAIR

RECEIVED

MAR 9 1994

DIVISION OF ENERGY/DCRA 3-7-94

Dear Herr

Power Flows Both Ways

The Intertie power line between Sutton & Glenallen is NOT about C.V.E.A.'s need to supply future load demands of The Peter Star Co. alone. It is, however, about the ENTIRE future load demands of C.V.E.A. & just as important, it is about the FUTURE growth & development of quality living for all Alaskans. I believe Alaska will grow & develop despite the thoughts & comments of some residents of the Sutton area, who think that the power line will destroy their Alaskan way of life. Hogsback, this area already has power line right-of-ways & I might add these same residents are enjoying every second of every day the electrical resource from the "grid"!

The Sutton - Glenallen line is a solution for the future load demands for C.V.E.A. & it greatly improves the power infrastructure for the State of Alaska. In Alaska the most economical method to generate power is to UTILIZE existing hydro & natural gas supplied power plants. This line would do exactly that.

The Solomon Gulch dam at Valdez can supply power over & above C.V.E.A.'s total expected load for approx. 90 to 100 days a year. The hydro dam log books show that this time frame is when the water resource is flowing over the dam, thus lost generation. The line would allow C.V.E.A. to capture this natural resource & generate at full capacity & therefore, cheaper hydro power would "flow" back into the "grid", which, will aid the
maximize of Alaska. Sincerely, Barnhart
R. A. 1 0 1 1. 0 1

RECEIVED

MAR 09 1994

COMMISSIONER OF THE
COMMUNITY & REGIONAL AFFAIRS

March 7, 1994
Reference to
Transmission line from
Sutton, to the copper River Basin.

Nick Zerbinos
P O BOX 371
Glennallen, ak 99588
Tel 907 822 3461

Gentlemen:

As you are aware, Many people are on the bandwagon, who are able to find many faults with this new proposal project for the interty between the two areas.

What do I see in all of this, nothing that is not new, there has been the same propaganda spread about so many other projects in this state, WHY?? for personal reasons, or something to do, that they do not really understand??

How many people remember the huge static that was raised about the oil discovery in this state, and its transmission lines, also on the huge gasline, from the KENIA peninsula to the Anchorage belt, and into the Matsu valley. Has all this hurt the state, in any way, Definately not, but it was all a contribution towards the advancement of the growth, and the prosperity that we do now enjoy, yes there was some faults in the process, but these errors are to be expected, and we must look at the overall picture, and see the end results for the betterment of the people and the ability to go forward into the future needs of this great state. Some say that the proposal of a dam is the most logical proposal for energy in the copper river basin, including Valdez, and some say that the main reason for this, is due to one little refinery in VALDEZ, how wrong they can be, that is only one of reasons, are they not looking at other avenues of growth that will occur??

I remember when the SOLOMON GULTCH project was initiated, with the studies made at that time, were they correct in their estimates of the future?, it seems that they were off base on their calculations, the dynamos installed, and the amount of water used to operate the generation system were obselete in a very short time, and we had to continue to use the diesel power generation system at a great cost, without the rates being lowered. With the construction of a dam, we would be guaranteed only only 15 MGW of power, with no additional power in reserve. Again, we would have to depend on diesel generation for a backup. Does that make sense?? Definately not, Who can say for sure what will the amount of electricity will be needed in 127 years??

With the interty system, we would have in our hands, a system that would provide us with a surplus of power, that would be able to handle a larger growth in this area for a longer period of time. It does not make any sense, to turn around every ten or twelve years, and fight for funds to expand more energy into the same area, with that type of surveys, leads to foolish spending of funds that could be used for other worthy projects.

I wonder, how many people who do these studies, ever look at what the cost overruns are on these dam projects?, If my memory is still functioning, The Solomon project, ended costing three times as much as the cost estimate of those that did the survey. With the construction of the transmission line, there would be a fixed cost, with not any appreciable cost overruns. The end factor, being that with the interty, we would have a larger amount of energy on hand that we would not have with the proposed dam construction.

I beg of you to take these points in serious consideration for your final decision on this project.

Thank you
Nick Zerbinos

Nick Zerbinos

Edgar

I AM WRITTING THIS note
to support the proposed Sutton
to GLEN ALLEN TRANSMISSION LINE

THANKS

Jose R. Sutton Jr.

RECEIVED

MAR 10 7 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Jose R. Sutton Jr.
135 E. AUKLET
PALMER, AK

99645

Herv Hensley, Director
DCRA, Division of Energy
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

RECEIVED

MAR 16 1994

DIVISION OF ENERGY/DCRA

Dear Herv Hensley,

March 10, 1994

I am writing as to the SUTTON TO GLENNALLEN TRANSMISSION LINE PROJECT. As a family of eight, living in the Copper Basin we find it very hard some months to come up with the \$200.00 plus for our power bill. I would like to see anything that would bring a stop to the rising cost per KW., and to give us all a little added insurance. I am referring to the old Dinosaurs we now use to generate power for the Cooper Basin. These generators are very old, and cost a lot to run, plus the repairs, which are all passed on to us in our monthly bills.

If something doesn't happen to lower, or at least stabilize our power rates, I'll have to drop our power, or move.

I ask you to please look in favor of the intertie, this will not only stabilize our rates, but might even lower them. At this point in time its hard for our local businesses to stay alive, and its almost out of the question that any new businesses even look at the Copper Basin for a future. Please, for the future of the Copper Basin, and for the good of Alaska, that we can all keep moving forward, I again ask you to look in favor of this intertie.

Sincerely,



Ronald Beshaw
P.O. Box 586
Glennallen, Ak.
99588

RECEIVED

MAR 22 1994

DIVISION OF ENERGY/DCRA

Herb Hensley, DICK

I know you appreciate the value of a nation -
to general interest. Any power source that
can be shared, in event of a shortage, makes
absolute good sense.

I hope you are supporting this project, it is
a good ~~of~~ deal for all of us.

Thank you

Larry ~~genton~~

PO Box 2296

Valdez AK 99686



Municipality of Anchorage
Tom Fink, Mayor



Municipal Light & Power

1200 East First Avenue
Anchorage, Alaska 99501-1685
(907) 279-7671, Telecopiers: (907) 263-5204, 277-9272

March 25, 1994

BY FAX

Herv Hensley, Director
Division of Energy, DCRA
333 W. Fourth Avenue
Suite 220
Anchorage, AK 99501-2341

RECEIVED

MAR 30 1994

DIVISION OF ENERGY/DCRA

Dear Director Hensley:

I am writing to you to give my opinions on the proposed Copper Valley intertie and Alaskan interties in general. For some reason all significant Alaskan interties have had difficult starts and had to overcome many obstacles to get underway. There are likely many reasons for this but one constant pattern is what I will call the "Big Deal Syndrome". For some reason consultants are prone to try to make the project into the biggest deal possible. Possibly this is any attempt to justify higher fees.

The first time I ran across this was when the present Alaska intertie was being studied for feasibility and some of the initial studies indicated it was not technically feasible because the phase angle change over the length of the line was too great for stability. Investigation indicated the phase angle shift was acceptable in the line proper but the problem was in the two 138 Kv to 230 kV transformers at either end of the line. By operating the line at 138 kV and eliminating the two transformers the line was found technically feasible. Incidentally, the study which indicated non-feasibility was the official state study and the study which indicated technical feasibility at the lower voltage (by virtue of eliminating the two transformer impedances) was an independent study sponsored by the Chamber of Commerce Energy Subcommittee. For some reason this same theme keeps going on and on like a broken record.

The key to this first problem was that the consultant insisted on only looking at lines of 230 kV and above because otherwise it would not have been such a "Big Deal". After all, there was the real danger that at 138kV it could have been built by ordinary utility engineers. Of course at that time the State had lots of money and we were able to pick a voltage that worked and still build for 345kV. Nevertheless, the basic problem started in attempting to make the tieline a "Bigger Deal" than necessary.

Now coming closer to the present time we have repeated the same mistakes with the north and south railbelt tielines. The State studied them at 230kV and possibly higher again maximizing the size and cost. They also studied the existing lines pushed to the absolute limit with stability enhancements but that of course did not even address the firm power requirement so this does not refute the "Big Deal Syndrome" which also in the case of the north south interties resulted in an initial finding of economic non-feasibility. The utilities, after much effort and cost, produced a scaled down 138 kV version which was economically feasible.

Putting Energy Into Anchorage

Herv Hensley, Director
Division of Energy, DCRA
March 25, 1994
Page Two

There was one other factor in both past experiences. Motivation. With the original Alaska intertie the initial studies were done by a firm which had no particular motivation to produce an economical or workable design. The study done by the Chamber was done at the urging of myself and Bob Huffman who was then the General Manager of Golden Valley Electric Association. The new engineering was done by Bob Rutherford who, of course, wanted to see improved electric systems in Alaska. It was done by people who wanted to see the project succeed.

Coming now to the Copper Valley transmission line from Sutton to Glennallen we are seeing, unfortunately, some of the downside of the "Big Deal Syndrome". Big steel structures which will make the project a big job with big design fees. Now this is nice to utility people if they can afford them but look around Anchorage. The 115kV and 138 kV lines which carry more power than the Copper Valley intertie will thirty years from now are built of wood most frequently on single pole structures. They are also designed by ordinary utility engineers and built with regular utility line crews. I assure you they work just fine. No, I am not saying there are not some places on this line route where stronger construction is needed but there is a lot where it is not.

Not only does the "Big Deal Syndrome" increase the cost and lower the economic feasibility it also alarms the public. Nobody wants a great big transmission intertie in their backyard or if they can get away with it in their valley. Now when it comes to your neighborhood transmission line supplying your own community I think both you and I know that it will go beyond Sutton before too long and one will likely start west from Glennallen before too many years but people won't mind that. In fact, most of them will never know there needs to be no difference between that line and the Sutton-Glennallen intertie.

Finally, I want to get back to motivation because this is where the problem lies. R.W. Beck wanted a big study and they maximized the size and strength of the line. Perhaps if initial cost was no object they might be right. However, I know of no electric utility in Alaska that is so well off financially that they can do their own work that way. We must live with the reality that the lowest life cycle cost may not be, in fact, usually is not, the economically feasible place to start when one must conform to real world economics. I truly feel this project is not being designed and analyzed by people motivated to try to make it work at an economical cost.

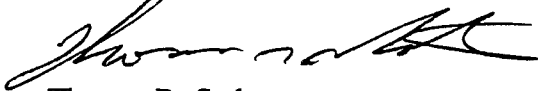
Another aspect of this project is how does one plan in the face of uncertainty. I understand based on a certain perverted logic the Allison Lake alternative might be considered the most feasible (though certainly not by any Copper Valley customer) alternative under a moderate growth alternative but not under higher growths. In this type of situation it seems most reasonable to select the alternative which works with a wider range of possible futures even though it might be slightly suboptimal under some conditions. Of course if we would just decide to build a less costly line the dilemma would evaporate.

Herv Hensley, Director
Division of Energy, DCRA
March 25, 1994
Page Three

I urge that the Copper Valley intertie be found economically feasible because I am certain that it is if reasonable restraint is used in design and construction and open and competitive procurement is adhered to.

Before closing I want to discuss another intertie which apparently was not a success but where the concept warrants further investigation. That is single wire transmission which in theory should greatly enhance the economics of interconnecting small towns and villages. Possibly too many things were tried at one time. I know innovative structures were used along with this innovative transmission concept. There is also the possibility of single wire DC transmission or two wire, either DC or AC if the earth return problems are insurmountable.

Very truly yours,



Thomas R. Stahr
General Manager

Alaska State Legislature

SENATOR
BERT SHARP
DISTRICT P
CHAIRMAN
TRANSPORTATION COMMITTEE
MEMBER
FINANCE COMMITTEE
LEGISLATIVE BUDGET & AUDIT COMMITTEE
HEALTH & SOCIAL SERVICES



FAIRBANKS
DENALI BANK BUILDING
119 N. CUSHMAN, SUITE 201
FAIRBANKS, ALASKA 99701
(907) 452-7885/7886

SESSION ADDRESS
STATE CAPITOL, ROOM 514
JUNEAU, ALASKA 99801-1182
(907) 465-3004/4921

Senate

RECEIVED

APR 04 1994

DIVISION OF ENERGY/DCRA

Herv
DICK

March 30, 1994

Mr. Herv Hensley, Director
Division of Energy
Department of Community & Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Mr. Hensley:

I have reviewed, in detail, both the Beck draft feasibility study and the CVEA data and information in their Comments Package.

It is very apparent the load and power cost forecast contained in the CVEA Packet tracks past actual historical data and more accurately projects that data into a more realistic forecast based on proven methodology.

The facts that the tie-line offers over 500 percent more firm base load energy at a lower cost than the non-firm alternate to the Copper River and Valdez area is overwhelming justification for the highest feasibility rating for the tie-line.

I have over 30 years of experience in Alaska being involved in long range load projections, power feasibility analysis and financial planning.

One thing always came true in every forecast, Alaska's population will grow, it's economic base will expand and the demand for reliable competitive electric power will increase along historical trendlines.



REPRESENTING
GOLDEN HEART
OF ALASKA

Mr. Herv Hensley, Director, Division of Energy
Department of Community & Regional Affairs
March 30, 1994
Page 2

I urge that you look at the long term benefits for the most people as you move your feasibility study to its conclusion. The economic viability of this vast area depends on your making the right decision.

Sincerely,

A handwritten signature in black ink, appearing to be 'Bert Sharp', with a long horizontal stroke extending to the right.

Senator Bert Sharp

/mjw

RECEIVED
MAR 21 1994
R.W. BECK & ASSOCIATES
SEATTLE, WA

March 18, 1994

State of Alaska
Department of Community and Regional Affairs
Box 112100
Juneau, Alaska 99811-2100

Attention: Mr. Edgar Blatchford, Commissioner

Re: Sutton - Glennallen Intertie funding.

Dear Commissioner Blatchford:

Being a resident in the Copper Valley and a large consumer of power from Copper Valley Electric Association, I find it necessary that I write in support of the above noted intertie.

During the last 10 years we have been operating a roadside business with some of the highest unsubsidised electric rates in the State of Alaska. There is no doubt that these rates have stunted the growth of our business as well as the businesses across our district. During our tenure here we have paid in excess of \$100,000 to CVEA for our electrical power. If we had been in Anchorage, during that same time, consuming the same amount of power would have cost us less than \$35,000. For a small business like ours that differential is very important in planning our future.

Now we have an opportunity to do something really positive about the problem. The legislature has allowed us sufficient funds to finally bring in the railbelt power from Chugach Electric (or another vendor) and place cost efficient power at our door far into the next century.

Of course, any time there is a major issue on the table there are detractors. This case is no different. We find the detractors to be a small, but vocal group of dissidents, living outside of our electric service area in the community of Sutton,

They seem to be willing to do and say whatever is necessary to discourage the completion of this intertie, even if it means that they distort the facts, distribute mis-information and deviate from the truth. I, for one, find this unfortunate.

There are about five areas upon which our neighbors from Sutton base their argument.

1. The intertie is not as good an alternative for additional power in the Copper Valley as Allison Lake scenario.
2. The only reason CVEA wants this project is that it will help provide low cost power to Petro Star, Inc. of Valdez.
3. The dollars used for this project are costing the state money and could be better placed in a savings account for a rainy day.
4. The cost of the intertie is underestimated by the study by many millions of dollars because it does not include the construction of something called a Static VAR Compensator.
5. The intertie will cross native land in Chickaloon and adversely effect the tourist businesses along the Glenn Highway.

To rebut some of this mis-information, it is important to address each of these points from the view of the members of the Copper Valley Electric Association.

First: With regards to the intertie not being the best of the scenarios offered; the R. W. Beck study is to this point guilty of omission of many urgent facts.

- Alyeska owns the water rights to Allison Lake and uses them for providing water to the Alyeska Pipeline Terminus for fire suppression and cooling purposes. There is no indication that they are willing to abrogate those rights to anyone.
- There is grave concern by the Valdez Fisheries Development Association (Solomon Gulch Fish Hatchery) that any use of Allison Lake water requiring the over flow to enter Solomon Lake will increase the turbidity of the hatchery water to a level that will be detrimental to the over 200 million salmon fry produced by this important commercial and sport fishing spawning grounds.
- Direct costs of generating power at Allison Lake are not spelled out in the draft report. Missing is the cost of additional power generation from Solomon Gulch Dam by the Allison Lake tunnel. This comes to, in excess of, \$800,000 a year and would have to be paid by CVEA members as the other members of the Four Dam Pool would receive absolutely no benefit from this power. That, in itself, puts the Allison Lake project millions of dollars higher than the intertie costs when amortized over 50 years.

Second: CVEA only wants the intertie to increase their capacity so Petro Star, Inc. can increase its production.

- We have been seeking ways to lower the power costs in our service area for all of the eleven years I have lived in this valley. Petro Star is only a few years old and whereas they are a major consumer of our power they are only one of many businesses needing power.
- The Copper Valley is on the cusp of an explosion in tourism. With serious overcrowding at Denali, we are the best solution to the problem of where to put our 1,000,000+ visitors each year (and that number is increasing at the rate of over 10% a year). With this growth will come the paving of the Denali Highway, better highways into the Wrangell-St. Elias National Park, a road to Cordova, and increased business opportunities in Prince William Sound. All of these events will positively effect the business climate in our area. That means a greater need for additional power. With the stabilization of electric rates (and, just possibly, a reduction) other businesses will be able to enter our communities and that, too, will place a greater demand on the power needs.
- Just imagine, what a service it would be to both communities if CVEA could find a way to provide power to Cordova. That community ran out of power a couple of weeks ago. They are in serious trouble. Maybe we can be part of their solution.
- By completing this leg in the grid we are just one step closer to providing low cost power to all of Alaska. Not only should we be completing this intertie, we should be looking for ways to expand this system on to Tok, Delta, Slana, McCarthy-Kennicott and points beyond.

Third: The dollars earmarked for the intertie will be better used if placed in a savings account to earn interest for a rainy day.

- All I can say is, with the politicians from across the state looking for every dollar, it would be political naiveté to believe this is a real solution to any problem. If these dollars are not used for the good of our communities, they will be used somewhere else and probably for something far less useful for Alaska.

Fourth: The cost of the intertie is underestimated by several millions of dollars because of the omission of the Static VAR Compensator.

- The equipment they mention is a device that is necessary after the amount of power being sent to Valdez reaches a certain level. That level is determined by many factors and may be necessary at some point in the future. At best guess, it will not be necessary until we are transmitting something over 16 to 18 megawatts. That will not occur until sometime

after the turn of the century. Since it is not part of the actual construction of the intertie it is not wise to include it in the cost of the intertie.

Fifth: The effect of the intertie crossing native land and being a detriment to the tourist industry in the Sutton-Chickaloon area.

- To placate the native population at Chickaloon the line design being considered is a path that will bypass the land selected by the Chickaloon Native Village. Thus, this problem is negated.
- In order to be as unobtrusive as possible to the Glenn Highway traveler and the residents of Sutton, the line will follow a corridor 2 to 6 1/2 miles off the Glenn Highway. With the exception of a couple of very short sections, it will be virtually invisible to the highway. The vast majority of the Alaska tourists will never know the line exists at all.

Of course there are other smaller points of contention coming from the rank and file of the loyal opposition but I think you can see from the above that their concerns are a result of reaching for a way to stop the project for personal and biased reasons rather than trying to find a way to make Alaska work for Alaskans.

We desperately need this system at the earliest possible time and I am certain that if we miss this window of opportunity it will be many years before we will have another chance to reduce our energy costs, if ever.

I implore you to think carefully of the impact of your decision on the populations and business communities of Valdez, Glennallen, Copper Center, Gakona, Gulkana, Tonsina, Tolsona, Tazlina, Chitna, Mendeltna, Nelchina, Eureka, Sheep Mountain and Glacier View, as well as the future prospects of Slana, Chistochina, HAARP, Cordova, McCarthy-Kennicott and all the other small communities within our service areas. Thousands of us are in need and can be the beneficiaries of this intertie.

With your support, we can look forward to the future with confidence that this part of the state will become as viable a community as the Mat-Su Valley, and Anchorage Bowl.

Sincerely,

L. Alan LeMaster, President
Gakona Junction Village, Inc.

cc: ✓ R. W. Beck and Associates, Inc. - Mr. John Heberling, Executive Engineer
Alaska Energy Authority - Mr. Richard Emerman, Senior Economist
Copper Valley Electric Association - Mr. Clayton Hurless, General Manager
file

RECEIVED

MAR 8 1994

DIVISION OF ENERGY/UCRA

Nick Zarbinos
P O BOX 371
Glennallen, ak. 99588
Tel 907 822 3451

March 7, 1994
Reference to
Transmission line from
Sutton, to the copper River Basin.

Gentlemen:

As you are aware, Many people are on the bandwagon, who are able to find many faults with this new proposal project for the interty between the two areas.

What do I see in all of this, nothing that is not new, there has been the same propoganda spread about so many other projects in this state, WHY?? for personal reasons, or something to do, that they do not really understand??

How many people remember the huge static that was raised about the oil discovery in this state, and its transmission lines, also on the huge gasline, from the KENIA peninsula to the Anchorage belt, and into the Matsu valley. Has all this hurt the state, in any way, Definetely not, but it was all a contribution towards the advancement of the growth, and the prosperity that we do now enjoy, yes there was some faults in the process, but these errors are to be expected, and we must look at the overall picture, and see the end results for the betterment of the people and the ability to go forward into the future needs of this great state. Some say that the proposal of a dam is the most logical proposal for energy in the copper river basin, including Valdez, and some say that the main reason for this, is due to one little refinery in VALDEZ, how wrong they can be, that is only one of reasons, are they not looking at other avenues of growth that will occur??

I remember when the SOLOMON GULCH project was initiated, with the studies made at that time, were they correct in their estimates of the future?, it seems that they were off base on their calculations, the dynamos installed, and the amount of water used to operate the generation system were obsolete in a very short time, and we had to continue to use the diesel power generation system at a great cost, without the rates being lowered. With the construction of a dam, we would be guaranteed only only 15 ~~MGW~~ MGW of power, with no additional power in reserve. Again, we would have to depend on diesel generation for a backup. Does that make sense?? Definetely not, Who can say for sure what will the amount of electricity will be needed in ~~ten~~ years??

With the interty system, we would have in our hands, a system that would provide us with a surplus of power, that would be able to handle a larger growth in this area for a longer period of time. It does not make any sense, to turn around every ten or twelve years, and fight for funds, to expand more energy into the same area, with that type of surveys, leads to foolish spending of funds that could be used for other worthy projects.

I wonder, how many people who do these studies, ever look at what the cost overruns are on these dam projects?, If my memory is still functioning, The Solomon project, ended costing three times as much as the cost estimate of those that did the survey. With the construction of the transmission line, there would be a fixed cost, with not any appreciable cost overruns. the end factor, being that with the interty, we would have a larger amount of energy on hand that we would not have with the proposed dam construction.

I beg of you to take these points in serious consideration for your final decision on this project.

Thank you
Nick Zarbinos
Nick Zarbinos

RECEIVED

MAR 9 1994

DIVISION OF ENERGY/DCRA

5 March, 1994
MP 109½ Glenn Hwy.
HC 3 Box 8484C
Palmer, Ak. 99645

Dear Herv Hensley,

We are writing in support of the Sutton to Glennallen Transmission Line Project and would like your support as well.

We get our power from CVEA and pay the highest electric rates around (nearly .19¢ KWH). We need this intertie to help stabilize our rates, to replace the dinosaur generators that create our power, to help clean up our air and reduce the noise pollution (from the generators), as well as reduce the burning of fossil fuels.

We realize the folks west of Caribou Creek (Chickaloon, Sutton, etc.), are not in support of this, but we feel that is because they have their constant power and could care less about the customers of CVEA or the future of the Copper Valley Electrical Assn.

We look for your support on this Electrical Intertie.

Sincerely,

Mary P. Howarth-Hernandez

Michael Hernandez

Mary P. Howarth-Hernandez
Michael D. Hernandez



COPPER VALLEY TELEPHONE
COOPERATIVE INC

RECEIVED

MAR 11 1994

DIVISION OF ENERGY/DCRA

BOX 337, VALDEZ, ALASKA 99686

907-835-2231

FAX 907-835-2387

March 8, 1994

Herv Hensley, Director
DCRA, Division of Energy
333 W. 4th Avenue
Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Hensley:

Copper Valley Telephone Cooperative, Inc., is a non-profit, member owned cooperative providing communications services throughout a large portion of South-Central Alaska. In addition to our primary switching centers, the nature of this area requires us to provision many small, remote buildings in which we house electronic equipment requiring AC power to operate. We have a constant first question we ask when engineering and planning facilities--what is the availability and dependability of AC power and what is the present and future cost of that power?

This dependence translates into charges for electrical services from Copper Valley Electric Cooperative in excess of \$90,000 per year--and growing!! Since we operate on a non-profit basis, any increase in those costs ultimately appears on our customers' bills. We have more than enough expensive obstacles to overcome in order to accomplish our goals, and strongly support any project which can help us keep the lid on our operating expenses as we intend to remain in business here for many years to come.

The Sutton-Glennallen Intertie Project has the potential to stabilize rates--a direct benefit for our customers, most of whom live and work in CVEA's service area. It has the potential to encourage economic development--a direct benefit for our customers. And it addresses future need for many years--again, a direct benefit for our customers. We can only see positive returns through this project, returns which directly affect the pocketbooks of our 4000 customers through our operations alone.

As a utility, too often we find the expressed demands of a few override the unexpressed desire of the majority, especially where public works types of projects are concerned. I believe the benefits inherent in the Intertie far outweigh the alternatives, especially from a long term perspective.

Sincerely yours,

Scott L. Smith
General Manager

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MAR 11 1994

FACSIMILE TRANSMISSION NOTE

DIVISION OF ENERGY/DCRA

DATE: NO. OF PAGES : 1 OUR FAX # (907) 835-5666
ATTN: Commissioner Blatchford FAX # (907) 465-2948
RE: Sutton/Glennallen Intertie

No city is an island, entire of itself; every city is a piece of the state, a part of the main; if Valdez is without reasonable electricity, Alaska is the less... any city's stagnation diminishes us, because we are involved in the state's economy; and therefore if the Sutton/Glennallen tie-line shorts out, don't send to know for whom the bell tolls; it tolls for Valdez and Alaska.

- with apologies to John Donne,

John L. Cerutti
David K. Lee
Bonnie J. Stripe
Dorothy K. Schweigert

Mar. 10, 1994

How Hensley, Director
DCRA, Div. of Energy

For your info, this is a copy of our
Sutton/Glennallen Intertie FAX to
Commissioner Blatchford.
John L. Cerutti
PO Box 871
Valdez, AK 99686
(907) 835-2548

FYI - EDGAR

Hankley, I wonder if they will publish
this. I doubt they will

March 2, 1994

Clayton →

RECEIVED

MAR 14 1994

To The Editor,

DIVISION OF ENERGY/DCRA

Peter Goodman has written two articles on the Glennallen intertie. Both were negative. Both were so poorly organized that I had trouble reading them. Both demonstrated a profound ignorance of the physical realities of power generation. His editorial stance parading as hard news is clearly motivated by his position as the Daily News reporter for the Matanuska Valley. The intertie isn't popular in the Valley.

Anchorage bowl residents already have cheap power and, even though it would cost them nothing, many see no reason to offer the same benefits to others. I manage KCHU, Valdez a regional public radio station and electrical charges are a big problem for us. We can't afford what we pay now. How will we accommodate the large increases that are a certainty if the tie line is not built? Some local businesses already pay more for electricity than their mortgage. KCHU is one of them.

The bottom line for Mr. Goodman is, of course, circulation; news for hire. News for money. News with the factual content selected to tell customers exactly what they want to hear. The Daily News used to be a paper that every Alaskan could be proud of. At this point, if there were an alternative, I would cancel my subscription. I am sick of the profit motive that has permeated every corner of the organization. The work of Goodman and others like him is offensive to any journalist with an ounce of integrity.

James Winchester
Box 1553
Valdez, Alaska 99686
907-835-4665

From: Representative
Olberg

RECEIVED

MAR 09 1994

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

RECEIVED

MAR 14 1994

DIVISION OF ENERGY/DCRA

From: Representative Olberg

FROM: Mr. Rex F. Hollman
PO Box 2114

Valdez AK 99686

835-4950

CONSTITUENT

SUBJECT: ENERGY
MESSAGE: PLEASE SUPPORT THE SUTTON TO GLENNALLEN INTERTIE.
DISTRIBUTION 60

FEB 28 1994

COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

DIVISION OF ENERGY/DCRA



Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

February 23, 1994

Robert E. Harris
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

SUBJECT: Comments on Beck Study and Public Meetings

Dear Robert:

Enclosed are Copper Valley Electric's written comments which we would like incorporated into the public comment section of the final feasibility study.

Two sets of comments are provided for your review.

1. Comments specifically addressing a comparison of the intertie and Allison Lake alternatives.
2. Comments on the draft study, as well as, comments in response to comments made at the last round of public meetings.

If additional information is required as to disposition of these items, please call me.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Clayton Hurless', written in black ink.

Clayton Hurless
General Manager

Enclosure

c:\wpdocs\cdh\94-029.nh



COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

February 18, 1994

COMPARATIVE INFORMATION

SUTTON-GLENNALLEN INTERTIE TO ALLISON LAKE PROJECT

COMMENTS BY: CLAYTON HURL¹ESS, GENERAL MANAGER

PREFACE:

Certain interest groups who oppose the construction of the Sutton to Glennallen intertie line seem to have decided the Allison Lake Project should be the preferred alternative future power supply of Copper Valley Electric Association (CVEA). They have apparently based their opinion on the comparative Net Present Values that are presented in Table 1-2 on page 1-15 of the Executive Summary of the Sutton to Glennallen Intertie draft feasibility study recently released by the Division of Energy, Department of Community & Regional Affairs (DE-DCRA). Their rush to make a selection that would eliminate the need to build the intertie needs to be put in it's proper perspective for those who are interested in the factual aspects of the debate over the need for and economic justification of constructing a 138KV transmission line to connect the CVEA system to the Railbelt Utilities System (RUS).

CVEA's Board of Directors and Staff have been actively involved for a number of years in searching for an alternative power supply to replace the aging and costly diesel generation presently being used to supplement the power available from the State owned Solomon Gulch Hydro (SGH) plant. In October of 1993 CVEA compiled and published a booklet titled "History and Status of Power Generation Resources", that reviews the different power supply options that have been studied in the past. The Allison Lake project was one of the projects studied and rejected because it did not meet a single criteria that had been established for a future power supply resource.

If the reader chooses to reject the above fact, another significant consideration must be taken into account. A major unavoidable cost of the Allison Lake project has been omitted from the feasibility economic analysis. The omitted cost is attributable to the one-half of the energy production that is credited to the Allison Lake project that would be produced by the Solomon Gulch turbines and would bear a current cost of 6.4 cents kWh. Adding this charge to the annual operating cost of Allison Lake changes the cumulative Net Present Value of Allison Lake in the medium-low load case to \$77,399,000, an increase of \$11,000,000 from the draft feasibility study and \$10,000,000 more than the

SERVING MEMBER-OWNERS IN THE COPPER RIVER BASIN AND VALDEZ

intertie

If both of the above arguments are rejected, and it is accepted the draft feasibility study is correct by not assigning a cost to the Allison Lake Project for power produced at Solomon Gulch, there is still not a compelling case to build Allison Lake in lieu of the intertie. In the high and medium high load cases, the intertie is clearly the least cost alternative. In the medium low load case which seems to have captured the imagination of the interties opponents, Allison Lake is only marginally less expensive; \$1.2 million over the 50 year period, than the intertie. For a utility such as CVEA to select the Allison Lake alternative instead of the intertie based on the small difference in the NPV over the 50 year period would be an inexcusable, short sighted mistake considering that Allison Lake would add only 3 MW of capacity, at a cost of \$11 million per MW and approximately 27,000 MWH of energy to CVEA's power supply. To plan to the most conservative load growth estimate would completely abort CVEA's original goal of identifying and building a power supply resource that would provide the greatest degree of flexibility in meeting the uncertainty of the future without having to resort back to a short term emergency planning spectrum that inevitably leads to high cost solutions.

CVEA'S FUTURE POWER SUPPLY SELECTION CRITERIA

In mid 1992 CVEA developed a list of required characteristics for the assessment of future power supply alternatives. The following are the four most important criteria or characteristics that were developed to serve as a planning guide in the effort to identify the best future power supply option.

1. The project should be able to efficiently provide generation adequate to supplement the output of the SGH and totally displace the diesel generation.
2. It should have the ability to serve the total system load in the event of an emergency shut down of the Solomon Gulch plant.
3. Priority would be given to a project that could serve CVEA's projected long term load growth and thereby alleviate the need for periodic construction of new generation.
4. Projects would be evaluated on their potential ability to provide for rate reduction and/or stabilization for CVEA's member owners.

SUTTON-GLENNALLEN INTERTIE VS ALLISON LAKE PROJECT

The following information is presented on a point by point basis to provide the reader with a discussion of the characteristics of both proposed projects and should dispel the notion that Allison Lake is really a viable project to achieve the goals CVEA has established for the selection of a future power supply option.

1. PROJECTS ABILITY TO PROVIDE ADEQUATE GENERATION TO DISPLACE DIESELS

R. W. Beck has estimated that in the medium-low load case, CVEA's total supplemental energy requirements will approximate 37,000 MWH in 1998 and will increase to 59,000 MWH in 2017. This does not consider any substantial load growth of the Petro Star Refinery load or any of the more speculative projects such as the U. S. Governments High Active Auroral Research Project (HAARP).

As stated above Allison Lake is estimated to produce approximately 27,000 MWH of energy annually and would add a total of 3 MW of capacity to CVEA's generation capability. The existing diesel plants would have to be maintained to supplement output of Solomon Gulch and Allison Lake beginning in the first year of operation.

The Intertie could deliver 15-18 MW of capacity and approximately 100,000 MWH of energy at 65% Load Factor (LF) without the addition of any voltage support equipment (Static Var System, SVS). With the addition of an adequate sized SVS the intertie would deliver 40 MW of capacity and approximately 225,000 MWH of energy annually. The intertie would provide for retirement of the diesels into an emergency standby status.

2. PROVIDE ABILITY TO SERVE ENTIRE SYSTEM IN THE EVENT OF AN EMERGENCY SOLOMON GULCH SHUTDOWN.

Allison Lake would not be operable if the Solomon Gulch project was forced into an emergency shutdown because both the primary and secondary generation from Allison Lake would be dependent on the Solomon Gulch electrical facilities being operable.

The Intertie is totally independent of Solomon Gulch with the exception of minimal voltage support which could be supplied by CVEA's 2.8 MW turbine that is immediately available in the event of an emergency. In the medium low load case the intertie could serve CVEA's total system requirement through 2017 without additional SVS. In the medium high load case it could serve the total system requirements, with the addition of the 2.8 MW turbine, through the same period without SVS support. If loads should grow in accordance with the high load case the addition of SVS would be required but that eventuality would not effect the economic viability of the intertie because of the added revenue that would be available from the additional sales and a load of the magnitude that required the addition of a SVS would likely be required to make a substantial contribution to the cost of SVS prior to becoming connected to CVEA's system.

3. CAPABILITY TO SERVE LONG TERM LOAD GROWTH WITHOUT PERIODIC CONSTRUCTION OF NEW GENERATION

In the medium low load case the draft study estimates that CVEA will require 39,100

MWH of supplemental energy in the year 2000 when Allison Lake would come on line. In the medium high load case the requirement increases to 47,600 MWH. Allison Lake would have a total combined generating capability of 27,000 MWH which would mean a shortfall of 12,100 MWH in the medium low load case and a 20,600 MWH in the medium high load case in it's first year of operation.

In contrast to Allison Lake, the Intertie could be brought on line in 1998 and would serve CVEA's expected supplemental requirements, in all load growth cases, well beyond the 50 year study period.

The bottom line to this point is clear. The Intertie is an essentially permanent fix to CVEA's future power supply requirements. Allison Lake is not even a bandaid because it would require a disproportionately high investment in a project that would not meet CVEA's supplemental requirements in it's first year of operation and would seriously impune CVEA's ability to finance another major project.

4. PROJECTS ABILITY TO REDUCE OR AT A MINIMUM STABLIZE CVEA'S RETAIL RATES.

Allison Lake would cause CVEA's already extremely high rates to increase. It does not provide for the diesels to be retired into emergency standby status. If the aging diesel plants are required to be maintained into the future, it is a given the cost will increase substantially. Allison Lake would not provide for a second power source for the Copper Basin District in the event of a failure of the existing Valdez to Glennallen transmission line which would require the Glennallen diesel plant to be maintained in hot standby during the avalanche period when the transmission line is vulnerable to failure.

Based on early discussions with potential power suppliers in the Railbelt, CVEA believes it will be able to reduce rates to its consumers with the advent of the intertie. The magnitude of the decrease is still somewhat nebulous and will remain so until a final power supply agreement is reached. It is not unreasonable to estimate that a meaningful reduction can be achieved.

In addition to the expected favorable impact on rates, the intertie will provide a completely independent power source for CVEA's system. In the event of an emergency shutdown of the Solomon Gulch Hydro the intertie could provide for the total system requirements for a number of years into the future. In the event of transmission line failure between Valdez and Glennallen, it would provide a power source for the Copper Basin District. Solomon Gulch would provide for the Valdez Districts requirement initially and in the event of an extended outage could be supplemented with the Valdez diesel plant to keep the entire system operational until the line could be repaired.

SUMMARY

Based on any rational planning basis, there is no reason the Allison Lake project would be constructed instead of the Intertie. It would be absurd to entertain the idea of

investing \$30 plus million in a 3 MW project that wouldn't meet the utilities supplemental requirements in it's first year of operation as compared to investing \$46 million in a 40 MW project that would provide for CVEA's supplemental or full system requirements into the foreseeable future.

Allison Lake would not fulfill a single criteria established by CVEA for consideration of a future power supply option.

The Intertie Project would fulfill every criteria and surpass some of the criteria. The evidence is verifiable and conclusive. There is no reason for an extended debate of the relative merits of the two projects because even a casual analysis will clearly identify the Intertie as the right decision for Copper Valley Electric Association's member owners.

COPPER VALLEY ELECTRIC ASSOCIATION

**COMMENTS ON RW BECK
AND
DIVISION OF ENERGY**

FEASIBILITY STUDY

OF

COPPER VALLEY INTERTIE

FEBRUARY 23, 1994

COPPER VALLEY ELECTRIC ASSOCIATION
COMMENTS ON RW BECK DRAFT
COPPER VALLEY INTERTIE
FEBRUARY 23, 1994

SECTION II-INTRODUCTION

1. The last sentence on page II-1 is misleading.

This sentence implies that Petro Star caused the need for the T-line and accelerated CVEA planning efforts. This is inconsistent with what CVEA has been doing. CVEA has been actively engaged in the planning process for many years on many different projects.

SECTION IV-FEASIBILITY DESIGN-TRANSMISSION LINE

1. The first sentence in the third paragraph of IV.A.3 mentions a backfeed situation to Sutton in a negative connotation.

Additional system evaluation will show that it is possible to provide a reliable back up to Sutton. It may require a reactor or splitting the required line reactance between PS11 and Sutton. Significant public comment was received as to the lack of benefits to MEA consumers. The ability to backfeed to O'Neill substation would be a benefit to MEA.

2. Section IV.D.3 on conductor selection should summarize how the chosen conductor was selected.

There are advantages to using other conductors that have not been adequately identified. As an example, T2 conductor could be used to eliminate vibration and galloping mitigation costs associated with higher tensions and longer spans.

SECTION V-FEASIBILITY DESIGN-SUBSTATIONS

1. The O'Neill substation as described in Section V.B could be modified to reduce price with no sacrifice in reliability.

The proposed circuit breaker could be replaced with a series 2000 circuit switcher. It has ample interrupting rating and has been used successfully in the MEA system. As it is essentially a live tank breaker, the required CT's could be located in the transformer bushings. Open station service transformers are not needed. The SCADA RTU costs are very excessive based upon MEA and CVEA experience. The use of reactors at both the Sutton and PS11 stations may allow backfeeding of power to the Sutton area.

2. The PS11 substation as described in section V.C could be modified to reduce price with no sacrifice in reliability.

Open beam A-frame structures could be used and are less expensive than tubular designs. The SCADA RTU costs are very excessive based upon CVEA and MEA experience. The use of reactors at both the Sutton and PS11 stations may allow backfeeding of power to the Sutton area.

SECTION VIII-ELECTRIC LOAD FORECAST

1. Assumptions for employment in Valdez and the Copper River Basin are not consistent with historical trends.

The 1992-1993 projections of the compound annual growth rate for Valdez population in the High, Mid, and Low cases are 2.53%, 1.47%, and -.096% respectively. The 1980-1992 actual rate was 2.9%, and the rate for the period 1989-1992 was 10.1%. Projected values do not trend with historical. Much of the Valdez population is driven by the Alyeska terminal. We have discussed terminal population with Bill Newbold, Alyeska Terminal Manager, and he states that employment at the terminal is not tied to oil flow but is task driven. He expects that ongoing maintenance activities will continue to stabilize or even expand Valdez employment. Valdez employment should also be supported by the Hard Piping Vapor Extraction System scheduled for installation within the next three to five years at the terminal. Continued growth of fish processing industries will continue to support and expand Valdez employment.

The 1992-2013 projections of the compound annual growth rate for the Copper River Basin population in the High, Mid and Low cases are 1.2%, .90%, and .54% respectively. The 1980-1992 actual rate is .3%, and the rate for the period 1989-1992 is 2.5%. Continued economic development of the Copper River Basin is due to the efforts of the Greater Copper Valley Chamber of Commerce and the Copper Valley Economic Development Council. Tourism will continue to expand with the new \$17 million Wrangell St. Elias National Park visitor's center to be constructed by the National Park Service in Copper Center.

2. The recent announcement of the Record of Decision for the HAARP project has not been included in the study.

CVEA just recently received notice from the HAARP project requesting CVEA service to the HAARP facility. CVEA is currently studying the ability to serve the power required for testing over the T-line and is presently negotiating with HAARP to provide three-phase 24.9 kv service for "shutdown" and "standby" power. Shutdown energy needs are expected to be 400 kw for 7,260 hours per year, and standby needs are expected to be 1255 kw for 800 hours per year. These values should be incorporated into the load projections for the Low, Mid, and High cases.

3. Costs for new diesel generation in Table IX-6 may be understated.

Based upon CVEA experience with proposals from Caterpillar and Wartsilla, costs for new generation should be at least \$1,000 per kw. We are unable to determine where building costs are added to the Beck model. Battery costs are too low. Switch gear costs are too low. There are no allowances for generation step-up transformers. Delivery costs are too low. Where are costs for additional fuel storage, switching improvements, and modifications to existing facilities?

4. Discussion on permitting process for the coal plant may be misleading.

Stating the permitting process for the coal plant could be simplified may be in error. The State of Alaska is currently promulgating new air quality regulations which will complicate the permitting process.

SECTION X-ECONOMIC ANALYSIS

1. 50-Year Zero-Interest Loan

The resource model outputs and, accordingly, the present value of the intertie alternative presented in the study do not reflect the 50-year, zero-interest, \$35,000,000 loan provided for by the Alaska legislature. We believe that the economic analysis, specifically Table X-3, should include an additional intertie case which reflects the loan. Additionally, a resource model output should be included in Volume I, Appendix J.

2. Allison Lake Cost of Power

The economic analysis ignores costs similar to all scenarios such a fixed costs on existing diesels and Solomon Gulch purchased power expense.

The Allison Lake economic analysis also ignores the fact that approximately 1/2 of the energy produced by Allison Lake will be generated via existing Solomon Gulch turbines. CVEA is under long-term contract with the Four Dam Pool and State of Alaska to purchase all available energy which Solomon Gulch can produce. The current rate for power produced at Solomon Gulch is 6.4¢ per kwh. Any reduction in the cost of Solomon Gulch produced power would require unanimous approval of all six Four Dam Pool members. Given CVEA has been a net beneficiary of the Four Dam Pool arrangement since its inception, it is highly unlikely other members would pass on an opportunity to mitigate that fact.

The State has taken the position that Allison Lake energy produced via Solomon turbines results in no cost to the State and, accordingly, has a zero economic impact. This argument is basic form over substance rhetoric. The impact to CVEA's consumers who will pay the going rate for Solomon produced Allison Lake energy is \$872,000 per year. Clearly the result of this omission causes a material distortion of the results presented in Table X-3 of the study.

A resource model output which correctly reflects contracted for purchases of Allison Lake energy out of Solomon Gulch turbines should be included in Appendix J of Volume I of the study. Table X-3 should be revised as well.

3. Present Value Impact of Zero-Interest Loan and Allison Lake Power Cost

RW Beck has prepared resource model outputs for the two aforementioned omissions from the study. The results of these runs are summarized on the attached Schedule 1. Several resource model outputs prepared by RW Beck are attached as supporting schedules to Schedule 1.

4. Table X-5 Estimated Cost of Power

This table is misrepresentative and misleading.

- a. *This table assumes the zero-interest state loan is available to Allison Lake, Silver Lake, and the Coal Project. It is our understanding that this financing is available only to the intertie option and to present information such as is presented in Table X-5 is an obvious distortion of the facts.*
- b. *The cost of power analysis which underlies Table X-5 appears to ignore inflation (nominal \$) when calculating the capital cost of future diesel expansion.*
- c. *Table X-5 should be corrected to eliminate the zero-interest loan for all alternatives but the intertie, should eliminate the scenario of not paying for Allison Lake energy produced by Solomon, and any impact from comment 4.b above should be corrected in the diesel numbers.*

5. Inflation Free Analysis

The inflation free analysis creates an economic disadvantage when comparing the intertie to other alternatives. This disadvantage is because future capital costs such as for incremental diesel units are not inflated to correspond with increases in general inflation. Accordingly, projects such as the intertie, whose capital costs are front-end loaded, suffer when compared to projects with capital costs that are spread out in the future.

6. Page X-16-Supplemental Financing

The interest rate used for supplemental financing of 8.5% is unrealistic for alternatives which CVEA may choose to pursue. CVEA could likely obtain project financing for the intertie on diesels in the 6.5-7.5% interest rate range, either from the Rural Electrification Administration or the Cooperative Finance Corporation.

7. Project costs for Allison do not include any mitigation costs for impacts to fish and wildlife.

There could be significant effects on the Valdez Fisheries salmon rearing program by changing the water quality in the Solomon reservoir. Allison Lake has much more silt than does Solomon.

8. The Allison study mentioned that the lake may need to be dredged; however, the estimated costs do not include any dredging.

9. Diesel fuel efficiencies need to be reduced due to the loss of efficiency because of the timing adjustments required to control emissions.

RESPONSE TO COMMENTS OFFERED AT PUBLIC MEETINGS

1. Static Var Compensator

The installation of the static var compensator should not be included in the study. Opponents of the intertie have taken the approach that this is needed. Their basis is a desire to increase the project costs and present value to reduce the economics associated with the T-line. It is perfectly clear that proponents of the intertie have not read the complete analysis performed by PTI.

This analysis states that the steady state transfer level of the intertie is 24 mw under "system intact" conditions. The intertie transfer limits are only reduced during problems on the Railbelt electrical system. During these contingencies, the line transfer limits are approximately 14 mw. The outage conditions which cause this situation are of short duration and frequency. One of the outage conditions occur when a 115 kv breaker at Teeland opens. This occurs possibly once per year for a duration of four to six hours. This is a 99% availability. The other outage condition occurs when the Point Mackenzie to Teeland 230 kv line is out of service. This occurs once every three years with a duration of four to six hours.

CVEA will be maintaining diesel generation as a backup for these and other contingencies, and the installation of an SVS to avoid transfer limitations is not needed. In the event a large load were to connect to the CVEA system, additional compensation systems may be needed; however, the significant increase in load would more than offset the costs of additional compensation.

Including an expensive SVS system to remedy Railbelt system weaknesses is not justifiable. This is especially true since the contingencies pose no significant impacts to CVEA.

2. Right-of-Way Acquisition Costs

Considerable public comment was received that right-of-way acquisition costs included in the study are understated. Care should be taken by Beck to ensure costs of obtaining rights-of-way are reasonably provided for in the study.

3. Petro Star Load

- a. *Many participants in the public meetings have formed the opinion that Petro Star loads in the medium-low and medium-high load forecast scenarios are inflated and unrealistic. In May 1992, Petro Star contracted with CVEA to provide all of their electric requirements for a period of five years. The contract provides for a five mw connected load with an initial estimated running load of 2,500 kw. Facilities at Petro Star are presently adequate to service a five mw load.*

Since refinery start-up in January 1993, Petro Star has steadily increased electrical usage and is currently approaching demand of two mw. Over the next few months, Petro Star is expected to achieve their initial estimated running load of 2,500 kw.

We understand the Division of Energy has recently contracted with an oil industry professional to assess and lend credence to Beck's assumptions reflected in the draft study. We believe the Petro Star loads as reflected in the study are reasonable and defensible, and that they will be upheld by third party review.

- b. *Several persons testified that the only reason this project was being built was to provide cheaper electric power to Petro Star. These kind of statements are politically motivated and serve only to demonstrate the ignorance of the persons making them. CVEA has been searching for power supply resources since the 1970's. In addition to these projects addressed by the study, CVEA has, over the last seven years, pursued interconnection to Alyeska Terminal, developed a least cost plan, considered raising the height of the Solomon Gulch dam and spillway, studied merging with Golden Valley Electric Association, discussed mutual cooperation with Chugach and MEA, and has evaluated separating the Copper Basin and Valdez districts into two utilities. All of the aforementioned studies have had a dual aim: 1) reduce or stabilize rates, and 2) obtain needed generation resources.*

The Beck study projects the energy requirement of CVEA over and above the hydro to be nearly 27,000 mwh in 1994. That energy is currently provided by old, inefficient diesel generation, which even with proper maintenance will not run forever. Clearly the intertie project is not about Petro Star, it is about obtaining a reliable power supply for CVEA's other 2,906 consumers. Yes, Petro Star enhances the economics of the project, but if you are at all optimistic about the future of this part of Alaska, this project is needed with or without Petro Star.

4. CVEA is assumed to have influenced the study.

Several statements were made which accused CVEA of influencing the study to the point of impairing Beck's independence. While such comments are inflammatory and popular with the detractors of the project, they are utter nonsense.

CVEA contracted with the Alaska Energy Authority (now the Division of Energy) to conduct this feasibility study in accordance with Alaska requirements for such studies. The project has been under the control of Richard Emerman, Senior Economist at AEA. Mr. Emerman has controlled how the study was conducted and what information would be included in and excluded from the study. All communications between CVEA and RW Beck which resulted in suggested or promised revisions to the document by Beck were subject to Mr. Emerman's acceptance and approval.

CVEA did meet and exchange information with Beck throughout the preparation of the document. While critics view this as undue influence, CVEA views it as a necessary element of the process to ensure the preparation of an accurate and meaningful document. After all, the Sutton to Glennallen intertie is about CVEA, CVEA's service territory, and CVEA's electric system.

5. Conservation

Comments were made about whether conservation options should be included in combination with other power supply alternatives. The comment has some merit, but after inclusion of conservation with all other options, the impacts to the economic analysis would likely be immaterial.

6. CVEA has not researched alternatives.

As discussed previously under the Petro Star comment, CVEA has devoted considerable effort into researching power supply alternatives dating back to the 1970's.

SUMMARY OF ECONOMIC ANALYSIS
 CUMULATIVE PRESENT VALUE OF COMPARABLE SYSTEM COSTS
 (\$000)

	All Diesel	Intertie	Allison Lake	Silver Lake	Coal Facility	Conservation
High Case Scenario						
Per Draft Study	\$125,711	\$94,660	\$114,700	\$116,763	\$129,399	N/A
Accounting for 6.4¢ Power at Solomon Gulch	\$125,711	\$94,660	\$125,903	\$116,763	\$129,399	N/A
Accounting for 0 interest on \$35 million loan	\$125,711	\$77,250	\$125,903	\$116,763	\$129,399	N/A
Medium High Case Scenario						
Per Draft Study	\$96,616	\$79,076	\$87,059	\$88,450	\$101,361	\$95,847
Accounting for 6.4¢ Power at Solomon Gulch	\$96,616	\$79,076	\$98,264	\$88,450	\$101,361	\$95,847
Accounting for 0 interest on \$35 million loan	\$96,616	\$61,665	\$98,264	\$88,450	\$101,361	\$95,847
Medium Low Case Scenario						
Per Draft Study	\$75,584	\$67,440	\$66,194	\$70,055	\$84,176	\$75,006
Accounting for 6.4¢ Power at Solomon Gulch	\$75,584	\$67,440	\$77,399	\$70,055	\$84,176	\$75,006
Accounting for 0 interest on \$35 million loan	\$75,584	\$50,029	\$77,399	\$70,055	\$84,176	\$75,006
Low Case Scenario						
Per Draft Study	\$37,566	\$47,785	\$41,394	\$60,619	\$59,783	N/A
Accounting for 6.4¢ Power at Solomon Gulch	\$37,566	\$47,785	\$52,597	\$60,619	\$59,783	N/A
Accounting for 0 interest on \$35 million loan	\$37,566	\$30,375	\$52,597	\$60,619	\$59,783	N/A

**R.W. BECK
AND ASSOCIATES**

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WS-1559-HA1-AJ

January 28, 1994

Mr. Clayton Hurless
General Manager
Copper Valley Electric Association, Inc.
P.O. Box 45
Ciennallen, Alaska 99588-0045

Additional Economic Analysis Runs

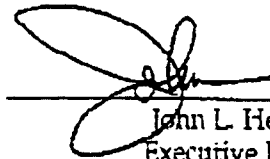
Dear Clayton:

As you requested, I ran two different scenarios of the economic analysis. The first scenario added a 6.4 cent/KWh charge to the 13,621 MWh expected to be generated at the Solomon Gulch powerhouse as a result of construction of the Allison Lake project. This totals \$872,000 per year in 1993 dollars and is shown on the attached tables as an increase in the O&M line for the Allison Lake Project. The second additional scenario effectively modeled the application of the \$35 million State Loan to the costs of the Intertie. In order to remain consistent with the analytical modeling procedures included in our model, this was accomplished by reducing the capital cost of the Intertie to \$10,931,000 and adding a \$700,000 per year loan payment in each year of the analysis. Both scenarios were run for the medium-high and medium-low load growth cases.

I also checked the calculation procedure used in the model and found that the remaining 30 year period costs are actually held constant and the present value is calculated using this constant payment. If you can't replicate the numbers on the printouts let me know because the data you need should be available to you with the information in the report. We used an inflation free discount rate of 5% in the analysis. I ran through this analysis rather quickly this afternoon so please look it over and make sure it conforms with your thoughts on the matter. As always, call me at (206) 727-4418 (or 206-881-6198 over the weekend) if you have any questions

Very truly yours,

R. W. BECK AND ASSOCIATES



John L. Heberling
Executive Engineer

JLH:
c

Post-It™ brand fax transmittal memo 7671		# of pages >
To CLAYTON HURLESS	From J. HEBERLING	
Co. CVEA	Co. RWBECK	
Dept.	Phone #	
Fax # 907-822-5586	Fax #	

Allison Lake w/Sol Gulch Cost
High Load; Med Fuel
Ex Diesel Retire OH

Alaska Energy Authority - Copper Valley Intertie Feasibility Study
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)

DRAFT

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,370	\$1,577	\$1,934	\$2,118	\$2,203	\$2,370	\$2,683	\$1,510	\$1,821	\$2,129	\$2,436	\$2,742
Variable O&M	776	876	1,045	911	805	556	668	295	386	472	549	610
Existing Diesel O&M Adjustment	0	0	0	0	0	0	0	0	0	0	0	0
Additional Building and Equipment	0	0	0	0	0	0	0	0	0	0	0	0
New Diesel Fixed O&M	0	0	0	26	26	26	26	26	26	26	26	26
New Diesel Capital Costs	0	0	0	141	283	566	566	566	566	566	566	566
Total Diesel Costs	\$2,146	\$2,454	\$2,979	\$3,196	\$3,317	\$3,517	\$3,943	\$2,396	\$2,799	\$3,192	\$3,576	\$3,943
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intertie Cost												
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0
Economy Energy	0	0	0	0	0	0	0	0	0	0	0	0
Total Intertie Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allison Lake												
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	0	0	0	0	0	0	0	1,156	1,156	1,156	1,156	1,156
Total Other Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
Total Cost of Power	\$2,146	\$2,454	\$2,979	\$3,196	\$3,317	\$3,517	\$3,943	\$5,318	\$5,721	\$6,114	\$6,498	\$6,865
Sale of Surplus Solomon Gulch Energy												
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue(Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$2,146	\$2,454	\$2,979	\$3,196	\$3,317	\$3,517	\$3,943	\$5,318	\$5,721	\$6,114	\$6,498	\$6,865

Present Value in 1993 dollars (Discounted @5%)
Cumulative (1993 - 2017)
30 Year (2018 - 2047) with no additional growth
Total Net Present Value

\$81,190 (in thousands)
44,713 (in thousands)
\$125,903 (in thousands)

31-Jan-94

R.W. Beck and Associates

Result:Page 5

Allison Lake w/Sol Gulch Cost
High Load; Med Fuel
Ex Diesel Retire OH

Alaska Energy Authority - Copper Valley Intertie Feasibility Study
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)

DRAFT

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$3,191	\$3,233	\$3,871	\$4,015	\$3,941	\$3,787	\$3,957	\$4,135	\$4,321	\$4,517	\$4,725	\$4,941	\$5,171
Variable O&M	605	672	685	698	673	636	653	671	689	715	749	783	831
Existing Diesel O&M Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Building and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
New Diesel Fixed O&M	52	77	77	77	77	77	77	77	77	77	77	77	77
New Diesel Capital Costs	707	849	849	849	849	849	849	849	849	849	849	849	849
Total Diesel Costs	\$4,555	\$5,331	\$5,482	\$5,640	\$5,540	\$5,349	\$5,536	\$5,732	\$5,936	\$6,159	\$6,400	\$6,650	\$6,928
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intertie Cost													
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0
Economy Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Intertie Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156
Total Other Costs	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
Total Cost of Power	\$7,477	\$8,252	\$8,404	\$8,562	\$8,462	\$8,271	\$8,458	\$8,654	\$8,858	\$9,080	\$9,322	\$9,571	\$9,850
Sale of Surplus Solomon Gulch Energy													
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue(Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$7,477	\$8,252	\$8,404	\$8,562	\$8,462	\$8,271	\$8,458	\$8,654	\$8,858	\$9,080	\$9,322	\$9,571	\$9,850

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31-Jan-94

R.W. Beck and Associates

Result: Page 6

Allison Lake w/Sol Gulch Cost
 Low Load; Med Fuel
 Ex Diesel Retire OH

Alaska Energy Authority -- Copper Valley Intertie Feasibility Study
 Economic Analysis (Constant 1993 Dollars -- All Costs in Thousands of Dollars)

DRAFT

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,314	\$1,415	\$1,709	\$1,747	\$1,629	\$1,612	\$1,640	\$132	\$134	\$131	\$124	\$118
Variable O&M	746	807	935	939	683	661	660	25	25	24	22	21
Existing Diesel O&M Adjustment	0	0	0	0	0	0	0	(146)	(146)	(146)	(146)	(146)
Additional Building and Equipment	0	0	0	0	0	0	0	0	0	0	0	0
New Diesel Fixed O&M	0	0	0	0	26	26	26	26	26	26	26	26
New Diesel Capital Costs	0	0	0	0	141	141	141	141	141	141	141	141
Total Diesel Costs	\$2,061	\$2,252	\$2,643	\$2,685	\$2,479	\$2,441	\$2,467	\$179	\$181	\$176	\$169	\$160
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intertie Cost												
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0
Emergency Energy	0	0	0	0	0	0	0	0	0	0	0	0
Total Intertie Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allison Lake												
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	0	0	0	0	0	0	0	1,156	1,156	1,156	1,156	1,156
Total Other Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
Total Cost of Power	\$2,061	\$2,252	\$2,643	\$2,685	\$2,479	\$2,441	\$2,467	\$3,101	\$3,102	\$3,098	\$3,090	\$3,082
Sale of Surplus Solomon Gulch Energy												
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue (Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$2,061	\$2,252	\$2,643	\$2,685	\$2,479	\$2,441	\$2,467	\$3,101	\$3,102	\$3,098	\$3,090	\$3,082

Present Value in 1993 dollars (Discounted @5%)
 Cumulative (1993 - 2017)
 30 Year (2018 - 2017) with no additional growth
 Total Net Present Value

\$39,235 (in thousands)
 13,362 (in thousands)
 \$52,597 (in thousands)

31-Jan-94

R.W. Beck and Associates

Result: Page 5

Allison Lake w/Sol Gulch Cost
 Low Load; Med Fuel
 Ex Diesel Retire Off

Alaska Energy Authority -- Copper Valley Intertie Feasibility Study
 Economic Analysis (Constant 1993 Dollars -- All Costs in Thousands of Dollars)

DRAFT

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$110	\$103	\$95	\$87	\$79	\$63	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	19	18	16	14	13	10	0	0	0	0	0	0	0
Existing Diesel O&M Adjustment	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)	(146)
Additional Building and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
New Diesel Fixed O&M	26	26	26	26	26	26	26	26	26	26	26	26	26
New Diesel Capital Costs	141	141	141	141	141	141	141	141	141	141	141	141	141
Total Diesel Costs	\$151	\$142	\$133	\$123	\$114	\$95	\$22	\$22	\$22	\$22	\$22	\$22	\$22
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intertie Cost													
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0
Economy Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Intertie Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156
Total Other Costs	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
Total Cost of Power	\$3,073	\$3,064	\$3,054	\$3,045	\$3,036	\$3,017	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944
Sale of Surplus Solomon Gulch Energy													
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue(Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$3,073	\$3,064	\$3,054	\$3,045	\$3,036	\$3,017	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944	\$2,944

Inertie - Net of State Loan
 High Load; Mod Fuel
 Ex Diesel Retire OII

Alaska Energy Authority - Copper Valley Intertie Feasibility Study
 Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)

DRAFT

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,370	\$1,577	\$1,934	\$2,239	\$2,585	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	776	876	1,045	1,145	1,250	0	0	0	0	0	0	0
Existing Diesel O&M Adjustment	0	0	0	0	0	0	0	0	0	0	0	0
Additional Building and Equipment	0	0	0	0	0	(560)	(560)	(560)	(560)	(560)	(560)	(560)
New Diesel Fixed O&M	0	0	0	0	0	0	0	0	0	33	33	33
New Diesel Capital Costs	0	0	0	0	0	0	0	0	0	26	26	26
Total Diesel Costs	\$2,146	\$2,454	\$2,979	\$3,384	\$3,835	(\$560)	(\$560)	(\$560)	(\$560)	141	141	141
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$360)	(\$360)	(\$360)
Intertie Cost												
Annual Carrying Charge	--	--	--	--	--	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299
Annual O&M Costs	--	--	--	--	--	207	207	207	207	282	207	207
Economy Energy	0	0	0	0	0	1,295	1,456	1,623	1,798	1,971	2,147	2,331
Total Intertie Costs	\$0	\$0	\$0	\$0	\$0	\$2,800	\$2,961	\$3,129	\$3,303	\$3,551	\$3,653	\$3,836
Other												
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost of Power	\$2,146	\$2,454	\$2,979	\$3,384	\$3,835	\$2,240	\$2,401	\$2,569	\$2,743	\$3,191	\$3,292	\$3,476
Sale of Surplus Solomon Gulch Energy												
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue(Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$2,146	\$2,454	\$2,979	\$3,384	\$3,835	\$2,240	\$2,401	\$2,569	\$2,743	\$3,191	\$3,292	\$3,476

Present Value in 1993 dollars (Discounted @5%)
 Cumulative (1993 - 2017)
 30 Year (2018 - 2047) with no additional growth
 Total Net Present Value

\$51,001 (in thousands)
 26,249 (in thousands)
 \$77,250 (in thousands)

31-Jan-94

R.W. Beck and Associates

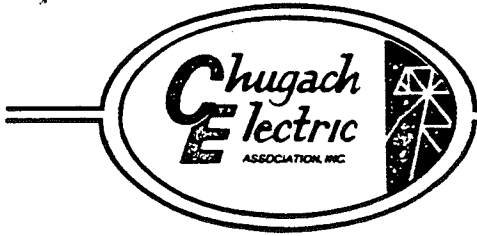
Result: Page 5

DRAFT

Alaska Energy Authority -- Copper Valley Intertie Feasibility Study
 Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)

Intertie - Net of State Loan
 High Load; Med Fuel
 Ex Diesel Retire OH

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Diesel O&M Adjustment	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)	(560)
Additional Building and Equipment	33	33	33	33	33	33	33	33	33	33	33	33	33
New Diesel Fixed O&M	52	52	52	52	52	52	52	52	52	52	52	52	52
New Diesel Capital Costs	283	283	283	283	283	283	283	283	283	77	77	77	77
Total Diesel Costs	(\$193)	(\$193)	(\$193)	(\$193)	(\$193)	(\$193)	(\$193)	(\$193)	(\$193)	(\$26)	(\$26)	(\$26)	(\$26)
Total Conservation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intertie Cost													
Annual Carrying Charge	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299
Annual O&M Costs	207	207	282	221	221	221	221	346	240	240	240	240	269
Economy Energy	2,902	3,254	3,351	3,451	3,416	3,334	3,451	3,572	3,698	3,827	3,960	4,098	4,240
Total Intertie Costs	\$4,407	\$4,760	\$4,931	\$4,971	\$4,936	\$4,854	\$4,971	\$5,217	\$5,237	\$5,366	\$5,499	\$5,637	\$5,808
Other													
Annual Carrying Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual O&M Costs	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost of Power	\$4,214	\$4,567	\$4,738	\$4,778	\$4,743	\$4,661	\$4,778	\$5,024	\$5,044	\$5,340	\$5,474	\$5,611	\$5,782
Sale of Surplus Solomon Gulch Energy													
Surplus Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenues from Sale	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Heat Net Revenue(Coal Case)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cost of Power	\$4,214	\$4,567	\$4,738	\$4,778	\$4,743	\$4,661	\$4,778	\$5,024	\$5,044	\$5,340	\$5,474	\$5,611	\$5,782



CHUGACH ELECTRIC ASSOCIATION, INC.

DAVID L. HIGHERS
General Manager

February 25, 1994

RECEIVED
FEB 25 1994
DIVISION OF ENERGY/DCRA

Mr. Robert Harris
State of Alaska
Division of Energy
Department of Community & Regional Affairs
333 West Fourth Avenue
Anchorage, Alaska 99501-2311

Subject: *CVEA Intertie Feasibility Study*

Dear Mr. Harris:

Attached is a copy of a letter I recently sent to Mr. Clayton Hurless regarding the draft CVEA Intertie Feasibility Study. The letter reports on our review of the draft and includes materials my staff has prepared on railbelt interconnection feasibility considerations.

I request that the attached be considered the formal comments of Chugach on the draft Feasibility Study and that our comments be incorporated in the final report.

Sincerely,

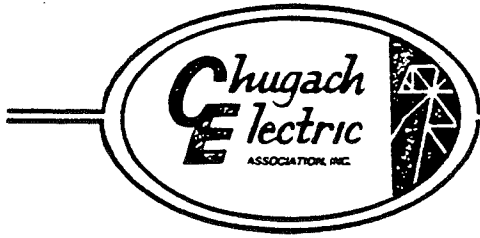
David L. Highers
General Manager

Attachment

cc: Mr. Clayton Hurless w/o Attachment
Mr. Herv Hensley w/Attachment

4460.TAL:TS

bcc: Gene Bjornstad
Dan Bloomer
Dave Burlingame
John Cooley
Mike Cunningham
Don Edwards
Rick Freymiller
Joe Griffith
Carol Johnson
File, CRF, RF



CHUGACH ELECTRIC ASSOCIATION, INC.

DAVID L. HIGHERS
General Manager

February 24, 1994

Mr. Clayton Hurless
Copper Valley Electric Association, Inc.
P.O. Box 45
Glennallen, Alaska 99588-0045

Subject: *CVEA Intertie Feasibility Study*

Dear Clayton:

Previous analysis by Chugach indicated that construction of the intertie along with a power sales arrangement between Chugach and CVEA was economically beneficial to the consumers of both utilities. As a result, I have had my staff review the Draft Report of the Feasibility Study-CVEA Intertie dated January 1994 by R. W. Beck. As you know, the study was not done with the aim of answering the question of what is the best alternative for the CVEA consumers but was instead aimed at the welfare of the State as a whole.

The R. W. Beck study itself does not reach any conclusion but merely reports the economic outcome for several different views of the future. Contrary to the conclusions that may be implied from press reports, the study supports a conclusion that construction of the intertie is the best solution for CVEA.

Table I-5 *Summary of Economic Analysis Results* on page I-15 of the report shows the cumulative present value of comparable system costs for seven different scenarios. The key difference among the scenarios is the assumptions about load growth. As is typical with load forecasts, there are estimates of high, medium and low load growth. The R. W. Beck load forecast is lower, even, than CVEA's original forecast.

The future will probably not match any of the scenarios listed so one must look at the expected results under different scenarios. The attached graph shows the cumulative net present value for three alternatives for the seven scenarios listed in the R. W. Beck report. The intertie is the least cost option for five of the scenarios while the all-diesel scenario is the least cost option for only low load growth and Allison Lake is the least cost option only for medium-low load growth. The intertie alternative is clearly the most robust solution since it is the least cost option for more scenarios.

Assigning a 60% probability to the medium or base forecast, 10% to the high forecast, and 30% to the low forecast, the intertie alternative is clearly the least cost option as shown in the following table.

Expected Cumulative Net Present Value
 (typical probabilities)

		<u>All Diesel</u>	<u>Intertie</u>	<u>Allison Lake</u>
High Load Growth	10.0%	\$125,711	\$94,660	\$114,700
Medium-High Load Growth	30.0%			
High Fuel Price	6.0%	\$104,599	\$83,543	\$91,954
Medium Fuel Price	18.0%	\$96,616	\$79,086	\$87,059
Low Fuel Price	6.0%	\$81,539	\$70,616	\$77,801
Medium-Low Load Growth	30.0%	\$75,584	\$67,440	\$66,194
<u>Low Load Growth</u>	<u>30.0%</u>	<u>\$37,566</u>	<u>\$47,785</u>	<u>\$41,394</u>
Expected Value	100.0%	\$75,075	\$67,519	\$69,602

Even changing the probabilities to reflect the pessimism of low load growth, the intertie is still an equivalent option on an expected value basis as shown in the following table. Chugach would note that this is a very extreme approach. One has to assign more than 50% probability to the low growth forecast before the intertie ceases to be the least cost alternative.

Expected Cumulative Net Present Value
 (pessimistic probabilities)

		<u>All Diesel</u>	<u>Intertie</u>	<u>Allison Lake</u>
High Load Growth	10.0%	\$125,711	\$94,660	\$114,700
Medium-High Load Growth	20.0%			
High Fuel Price	4.0%	\$104,599	\$83,543	\$91,954
Medium Fuel Price	12.0%	\$96,616	\$79,086	\$87,059
Low Fuel Price	4.0%	\$81,539	\$70,616	\$77,801
Medium-Low Load Growth	20.0%	\$75,584	\$67,440	\$66,194
<u>Low Load Growth</u>	<u>50.0%</u>	<u>\$37,566</u>	<u>\$47,785</u>	<u>\$41,394</u>
Expected Value	100.0%	\$65,510	\$62,503	\$62,643

Even without modification the economic analysis in the R. W. Beck study shows that the intertie option has the least expected cost to the State and therefore is a feasible project. Adding economic benefits not considered in the R. W. Beck study such as sales revenues to the railbelt and reduced

finance costs (no interest loan) to CVEA consumers makes even more economic sense for the intertie alternative.

Also attached is a copy of *CVEA and Railbelt Interconnection Feasibility Considerations* paper that my staff had prepared and was previously forwarded to you by Mr. Lovas.

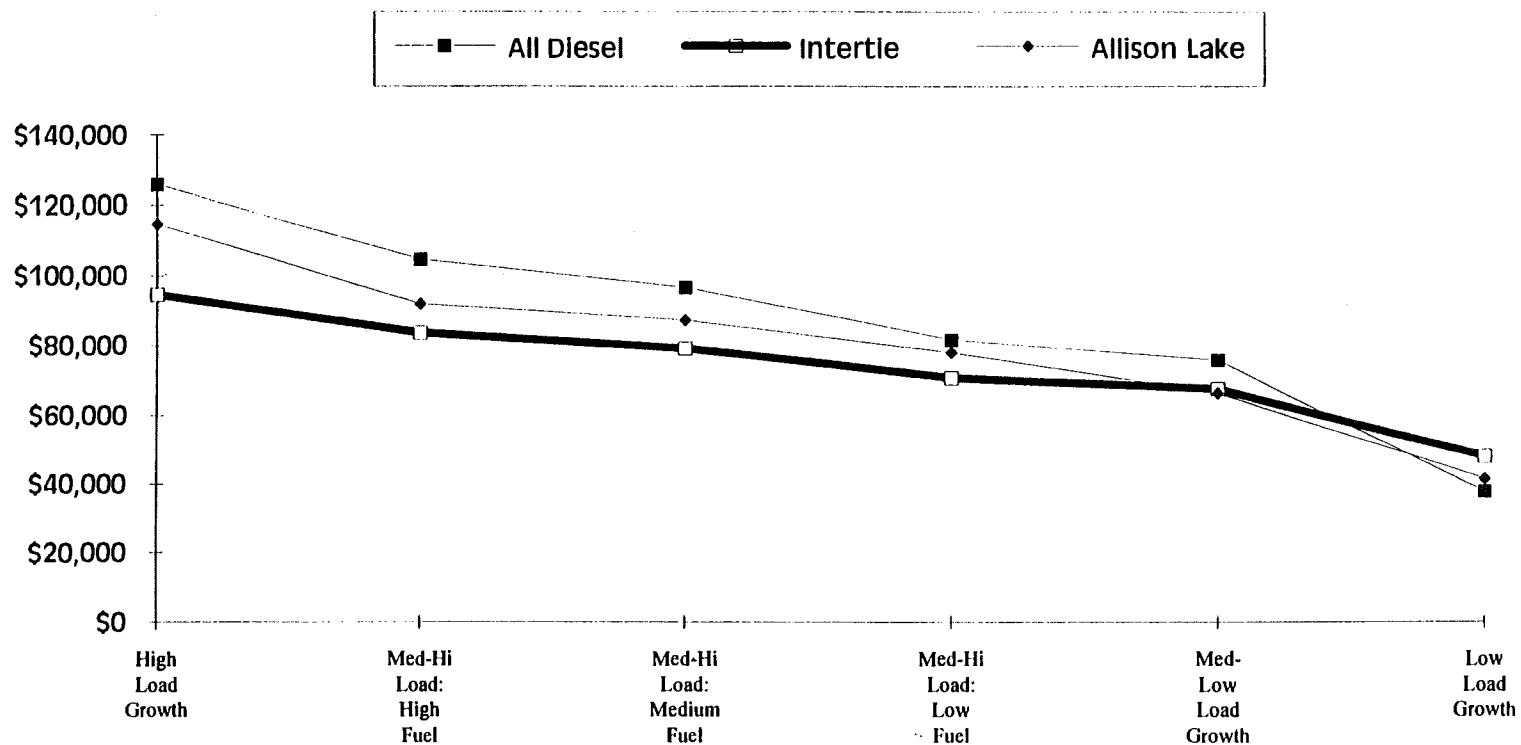
Please let me know if I can be of further assistance.

Sincerely,



David L. Highers
General Manager

Expected Cumulative Net Present Value (thousands of dollars)



**COPPER VALLEY ELECTRIC ASSOCIATION, INC.
AND
RAILBELT INTERCONNECTION FEASIBILITY CONSIDERATIONS**

The feasibility analysis of interconnecting the Copper Valley area including Valdez with the Railbelt should be viewed as the integration of two systems and not just a power supply option for Copper Valley. Two systems are usually integrated because there are economic benefits for each system. i.e. it is more economical to operate as a whole than as two parts. The exact form of the resulting whole (two utilities joined by a transmission line, a power pool, or a merged entity) is not of primary importance, although different organizational forms can capture varying levels of benefits.

The feasibility should be viewed more on the order of the analysis done to support the construction of the Alaska Intertie between Anchorage and Fairbanks. In that case, the relative ratio of installed capacity was on the order of two to one (with significant savings in power costs following interconnection). In the case of connecting Copper Valley with the Railbelt, the relative magnitude is on the order of ten to one. The benefits should be the same, although not of the same magnitude. The two major categories of benefits are Economy Interchange Benefits and Reserve Sharing Benefits.

Economic Interchange Benefits:

As was the case with the Alaska Intertie, the generation cost differences between Copper Valley and the Railbelt are significant. A sharing of the generation savings from exchange is common. Copper Valley consumers would see lower power costs due both to lower operating costs of existing Railbelt generation as compared to diesel generation and the ability to tap the unused capacity in the Railbelt as compared to constructing additional generation. The combined system can accommodate larger generating units therefore achieving economies of scale that would not be available to Copper Valley. Railbelt consumers would also see lower power costs because the fixed costs of installed generation would be spread over a larger consumer base. The economic benefits of power sales from the Railbelt to Copper Valley may be quantified for both groups of consumers.

Hydro-thermal coordination is another component of economic interchange benefits. Currently, Copper Valley is not able to fully utilize the output of Solomon Gulch and the Railbelt is not able to fully utilize the waste heat capability of its combined cycle units. The interconnection would allow full utilization of Solomon Gulch and improved utilization of the combined cycle units in the Railbelt.

Reserve and Capacity Sharing Benefits:

Again as was the case with the Alaska Intertie, each area has sufficient reserves for the present, but interconnection will allow an overall reduction in the reserves. Copper Valley should also see an improvement in reliability as transmission lines are more reliable than generators. (The probability of an outage in an area is less with several generating units operating at other end of a transmission line than a single generator operating in the area.) Certain areas, such as Glennallen and Sutton, will have two sources of power rather than being fed via radial transmission lines and will experience enhanced reliability.

In addition to pure reserve sharing, the interconnection would increase the siting options for new generation resources required by the interconnected systems. New hydro resources which may be attractive for future development are Allison Lake, Silver Lake, Tsina River, Tiekel River, or even pipeline oil flow down Thompson Pass into the Alyeska Marine Terminal. Short-term capacity deferrals may be available from interconnected operation of the two systems. Also, existing Alyeska Marine Terminal generation capacity may become available for utility use to allow deferral of new or replacement generation capacity. Fuel sources as well are a consideration in the generation siting equation. This interconnection may open up new sources of fuel to the Railbelt such as the Trans-Alaska oil pipeline, the proposed gas pipeline, or from future development of the Copper River gas field.

Economic Development Benefits:

The introduction of adequate, economical electrical power in the Copper Valley area should stimulate development and improve the economy of the State. Increasing the consumer base upon which the costs of the line are spread will improve the benefit to cost ratio. Overall it will improve the utilization of electrical facilities throughout the Railbelt. With the interconnection, certain power users in the Copper Valley area may purchase their electrical needs rather than self generate. Examples could be the Alyeska Marine Terminal and pipeline pump stations. Addition of these customers to the Railbelt system will serve to reduce the electrical power costs to everyone.

Gakona Junction Village



January 28, 1994

State of Alaska
Department of Community and Regional Affairs
Division of Energy
333 West Fourth Avenue, Suite 220
Anchorage, AK 99501-2341

RECEIVED

FEB 03 1994

DIVISION OF ENERGY/DCRA

Attention: Mr. Robert E. Harris, Director

Re: Comment: Copper Valley Electric Intertie Feasibility Study - Draft Report.

Dear Mr. Harris:

Thank you for copying me on the above draft report. After reviewing the information I was encouraged by the obvious fact that we in the local REA are following the correct path to the solution of our problem.

I will only comment on a couple of points in the report.

Route:

For several weeks we have been reading in the Anchorage Daily News about the concerns of the people along the Glenn Highway regarding the location of the line. They are concerned about the "magnetic fields", visual obstructions, crossing of private and native land holdings, and environmental disruptions during the construction and operation of the line.

I now appears that all of these concerns have been taken into account in Scenario D. As noted on Maps 1 through 8 the line leaves the Sutton Substation and immediately moves north 2 1/2 to as much as 5+ miles away from the highway and the populated areas. With little exception the line will be out of the line of sight and certainly far enough away from the populous to not be intrusive. Additionally, this route takes the line off all private lands and with very little exception no incursion on native lands is evident. Of course the environmental impact during construction will be a factor but in the final analysis, with proper controls by the EPA, DEC, BLM, DNR and other agencies, can easily be held to a minimum.

After all factors are considered I fully support the construction along the proposed Route D as recommended in the draft report.

Economic Analysis:

With a close scrutiny of the information in this section it becomes clear that the Intertie is the most cost effective system we can develop. Additionally, it will provide us with all our foreseeable needs from now into the future. Any other system will require upgrading from time to time or will, at best, only supply a portion of our needs now and into the near term.

I am encouraged by the systematic and through work done by the folks at R. W. Beck and applaud their efforts. I encourage you to make your final decision at the earliest possible moment so we can begin to do the work that will lead to a more cost effective and stable source of energy in the years to come.

Sincerely,



Alan LeMaster, President
Gakona Junction Village, Inc.

cc: file

Orig: Dick Em.
cc: Robert

Phone: (907) 822-3664

P.O. Box 222

Gakona, Alaska 99586



KCHU

Terminal Radio, Inc.

P.O. Box 467 • Valdez, Alaska 99686 • (907) 835-4665 • FAX 835-2847

Director, Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

RECEIVED

FEB 14 1994

DIVISION OF ENERGY/DCRA

February 8, 1994

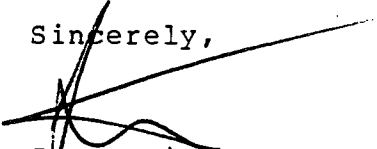
To Whom It May Concern,

KCHU is the public radio station for Prince William Sound and the Copper River Valley. Electrical costs are a major portion of our annual budget. We spend more than almost every other radio station in the state. Power costs are a crippling burden for most businesses in this region.

I had an opportunity to review the recently published legislative study of the Glennallen intertie project and was shocked at the negative recommendations. There are several large computational errors in the work. But quite aside from those, I am offended that this extremely flawed review has been passed off as fact.

Electrical interconnection with the rail belt is of primary importance to the economic well being of this region. The intertie needs to be built now. No more expensive and specious studies. No more excuses. Build it. We need it. I will assure you that if construction is impeded or halted because of this \$400,000 fiction, those responsible will have some answering to do in Valdez and the Copper Basin.

Sincerely,


James Winchester
General Manager

770-AM
VALDEZ

88.1-FM
CORDOVA

88.3-FM
WHITTIER

88.1-FM
CHENEGA

FEB. 16, 1994

RICH EMERMAN
DIV.. OF ENERGY
DEPT OF COMMUNITY AFFAIRS
333 W. 4TH SUITE 200
ANCHORAGE, AK 99501

RECEIVED

FEB 18 1994

DIVISION OF ENERGY/DCRA

DEAR MR EMERMAN;
I WISH THIS LETTER TO BE ENTERED INTO THE RECORD FOR PUBLIC
TESTIMONY ON THE SUTTON TO GLENNALLEN INTERTIE.

I ATTENDED THE MEETING HELD AT THE CARIBOU CAFE FEB. 9TH.
I AM CHOOSING THIS METHOD OF TESTIMONY AS INVITED. DUE TO
THE LARGE CONTINGENT OF CHICKALOON-SUTTON RESIDENTS AT THAT
MEETING, I FELT THIS FORUM WOULD MORE LIKELY TO BE HEARD
OVER THE CLAMOR THAN SPOKEN (OR SHOUTED) TESTIMONY AT THE
MEETING.

FIRST: I AM THE OWNER OF A SMALL BUSINESS IN KENNY LAKE.
WE HAVE A GENERAL STORE, GAS, FEED AND A SMALL LAUNDRYMAT.
MY ELECTRIC BILL FOR LAST MONTH WAS OVER \$1200.00. IT WILL
BE HIGHER NOW, AS THE FIRST BILLS FOR THE LAUNDRY HAVE NOT
YET COME IN.

SECOND: I HAVE CONSERVED AS MUCH AS I CAN AND STAY IN
BUSINESS. I SHUT DOWN ALL NON-ESSENTIAL ELECTRIC ITEMS .
MY OUTDOOR LIGHTING IS MINIMAL BORDERING ON UNSAFE IN THE
WINTER.

ON MY WAY TO THE INTERTIE MEETING I DID SOME SHOPPING IN
GLENNALLEN. I COULDN'T FIND THE DRIVEWAYS IN GLENNALLEN
LEADING TO BUSINESSES, NO OUTDOOR LIGHTING, THEY CAN'T
AFFORD IT. THE ONLY WAY YOU KNOW WHERE A BUSINESS MIGHT BE
IS A DIM SIGN IN THE WINDOWS. GLENNALLEN IS A COLD, GRIM
DARK TOWN IN THE WINTER. DEPRESSING AND UNSAFE TO DRIVERS
OR WALKERS. NO ONE CAN AFFORD WHAT THEY PAY FOR
ELECTRICITY NOW, MUCH LESS OUTDOOR LIGHTS.

THIRD. NO MATTER WHAT PROJECT IS PROPOSED SOMEONE WILL
OBJECT LOUDLY. INTERTIE: IT'S NOT PRETTY. SUTTON RESIDENTS
DON'T NEED IT. THEY HAVE CHEAP RATES AND ARE UNWILLING TO
SHARE THEIR GOOD FORTUNE. MOST UNNEIGHBORLY.
HYDRO: THE ENVIRONMENTALIST ARE NOT GOING TO LIKE HEARING
THE CONSTRUCTION METHODS TO BRING WATER FROM ALLISON TO
SOLOMON GULCH. COAL OR DIESEL: NOBODY LIKES THAT ONE.
AIR QUALITY, FOSSIL FUELS, ALL CONTROVERSTIAL SUBJECTS.
CONSERVATION: I THINK THAT'S ADDRESSED IN THE OPEN
STATEMENT HERE. NOT A CURRENT PROPOSAL BUT THE KLUTINA
HYDRO DIVERSION THING: WAIT TILL THE SPORTFISHERMAN,
SUBSISTENCE USERS, TOUR BOAT OPERATORS AND THE STATE HEAR
ABOUT THAT ONE, THERE ARE KING AND RED SALMON SPAWNING
THROUGH THERE.

NOT HAVING A CRYSTAL BALL, I CANNOT TELL WHICH OF THE LOAD SCENARIOS ARE LIKELY TO HAPPEN, BUT MY BEST GUESS HUNCH IS THAT THE INTERTIE IS MOST LIKELY TO FILL OUR NEEDS. I AM IN FAVOR OF THE INTERTIE FOR THE FOLLOWING REASONS; WE NEED TO STABILIZE OUR RATES OR THIS AREA WILL NOT GROW AND BE SELF SUPPORTING AS THE STATE WOULD LIKE ALL UNORGANIZED AREAS TO BE, AND THAT WE WANT TO BE. IT IS AS ENVIRONMENTALLY RESPONSIBLE AS ANY OF THE OPTIONS. IT RELIES ON GOOD QUALITY AND QUANTITY FUEL SOURCES. IT TIES US ECONOMICALLY POLITICALLY AND SOCIALLY INTO THE LARGE RAILBELT AREA, UNITING INSTEAD OF DIVIDING. WE MUST DO SOMETHING, CVEA'S AGING GENERATORS MUST BE REPLACED OR ANOTHER SOURCE FOUND. ELECTRIC RATES IN THE YEAR 2010 ARE PROJECTED AT .35 CENTS PER KWH.

SINCERELY

SUSAN WININGHAM
HC 60 BOX 230
COPPER CENTER, AK 99573

2/25/94

RECEIVED
FEB 25 1994
DIVISION OF ENERGY/DCRA

Mr. Herv Hensley
Department of Community and Regional Affairs
Division of Energy
PO Box 190899
Anchorage, Alaska 99519

Dear Mr. Hensley:

I am writing in support of the CVEA intertie project, I believe this project has the best chance of success to help lower the power rates for the CVEA power area.

I have seen articles in various publications that the intertie system is just to benefit the Petro-Star refinery is ludicrous, the planning for the intertie has been on the agenda for CVEA long before the Petro-Star was even discussed.

I am involved in the commerical and sport fish business and we have always felt that a cold storage facility would allow secondary processing of seafood, but unfortunately the high cost of power has always been the demise of that type of project.

I would also like to comment about the complaints voiced by the residents of Chickaloon, my step-grandfather/grandmother lived in that area for many years. They owned the King Mountain gas station from 1962 to 1976 and they still have family in that area.

My grandfather/grandmother who are pasted away were always a firm supporter of development for our State, being a business man he knew that progress needed to be made to allow a future for his children/grandchildern.

Grandfather lived in the Chicklooon area after he sold the station until his death and he would be upset if he knew that his neighbors were making a big deal out of running a few power lines thru basically no where.

He was firm believer in working for a living and he considered most of his neighbors in the Chicklooon area to be welfare cases and deadbeats.

I hope that the concerns of the Chickaloon people are addressed but they shouldn't be able to hold up a project that will benefit the entire State of Alaska.

Thank you.

Tim Lopez
Valdez.

RECEIVED

FEB 25 1994

DIVISION OF ENERGY/DCRA

February 25, 1994

Mr. Herv Hensley
Department of Community and Regional Affairs
Division of Energy
P.O. Box 190869
Anchorage, Alaska 99519

Sent by FAX to : 269-4520

Dear Mr. Hensley:

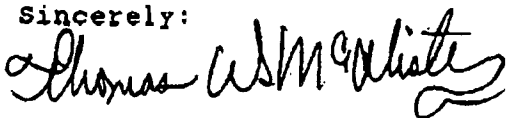
I am writing in regards to the Copper Valley Electric Associations proposed intertie from Mat-Su Valley to Glennallen.

The citizens in Glennallen and Valdez pay one of the highest electrical rates in the State of Alaska. Not only does this place a burden on the residents but it stifles economical development in these communities.

There have been many different proposals to attempt to stabilize or lower electric rates, however the R.W. Beck study clearly points out that the intertie option is superior to other options.

Your assistance in making the intertie a reality will be greatly appreciated by the citizens in the above mentioned communities and the citizens living along the upper Glen and lower Richardson highways.

Sincerely:



Thomas W. McAlister
P.O. Box 814
Valdez, Alaska 99686

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

February 19, 1994

Dick Emmerman,
Division of Energy

This letter is regards to the Sutton-Glennallen intertie.
My family of 5 live in the Glacier View Community at mile 109.5 Glenn Highway.

We received commercial electricity from Copper Valley Electric in the summer of 1992. We had been using wind, solar and diesel for the 10 years previous to that. Our family is grateful for having the convenience of commercial power.

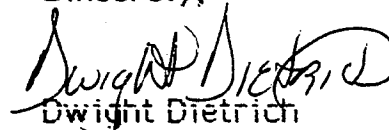
I trust that Copper Valley Electric will conduct themselves in the same professional manner in which they did while working towards the funding and construction of the Sheep Mountain Phase II project.

I was originally concerned about the intertie being routed along the Glenn Highway and in the community corridors. I now support route D, which does remove the line from the highway and community corridors.

Another point I want to make is, the people who are opposed to this transmission line and are receiving electricity from Matanuska Electric Association, are using a transmission line which runs through their neighbors property in the Matanuska Valley. I am asking no more than what these MEA consumers did when the O'Neill Tap transmission line was constructed to Sutton.

By linking major electric producers like Buluga Bay, Bradley Lake, Municipal Light and Power and other electricity producing plants VIA the Sutton-Glennallen intertie, this would be a great asset to Copper Valley Electric and it's consumers. This project potentially could save 2.5 million gallons of diesel fuel per year!

Sincerely,



Dwight Dietrich
HC03 Box 8484
Palmer, Ak 99645

EAGLE'S REST

R.V. PARK



1-800-553-7275 (PARK)
(907) 835-2373 • FAX (907) 835-5267
P.O. Box 610 • Valdez, Alaska 99686

February 25, 1994

Mr. Edger Blatchford, Commissioner
Department of Community and Regional Affairs
P.O. Box 112100
Juneau, Alaska 99811

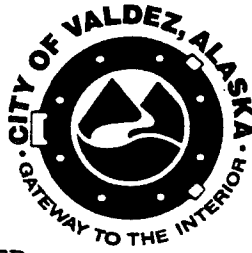
Dear Mr. Blatchford,

Nothing like waiting until the last minute, but this letter is to let you know of our support for the *Sutton - Glennallen Intertiel*. We feel it is very important for further development not only in the Valdez area but the others also. Thank-you for taking the time to let us express our thoughts.

Sincerely,

A handwritten signature in cursive script that reads "Laura L. Saxe". The signature is written in black ink on a white background.

Laura L. Saxe
Eagle's Rest RV Park
Secretary- Treasurer



OFFICE OF THE CITY MANAGER
February 10, 1994

RECEIVED

FEB 14 1994

DIVISION OF ENERGY/DCRA

Mr. Dick Emerman
Department of Community and Regional Affairs
Division of Energy
P.O. Box 190869
Anchorage, Alaska 99519

Dear Mr. Emerman:

The City has reviewed the draft report of the Copper Valley Intertie Feasibility Study. The City of Valdez supports all efforts to find the cheapest and best source of electrical energy for Copper Valley Electric Association (CVEA). The Feasibility Study shows that the intertie will provide the cheapest power with the least environmental impact. The Study has done a good job of addressing and mitigating all the creditable objections to the intertie.

The City has a few technical comments on the study. The Allison Lake project, Silver Lake Project, and the Conservation Project will leave CVEA without a long term solution. These projects will require supplemental diesel at completion or soon after they come on line. This will leave CVEA without a good long term solution to satisfy future demands or address its problems with aging diesel generators.

The fact that Allison Lake, Silver Lake, the Coal Facility, and Conservation all assume additional diesel plant to be up and running needs to be stated in the Executive Summary of the report. This fact can be ascertained by studying the charts in appendix J, but it is not stated in a readily available portion of the study.

The portion of the study dealing with the concerns over the Electric and Magnetic Field is very good. Keeping the intertie 600 feet from all occupied structures is a very conservative method of reducing or eliminating risks in an area where the risk is unknown and uncertain. This is far more than has ever been done to address this concern in the past.

The alignment of the intertie has done an excellent job of addressing concerns over the unsightliness of the line. The preferred alternative is set back far enough from the highway so it should not be objectionable.

Letter to Mr. Dick Emerman
February 10, 1994

Page 2

The table as shown on X-17 should be expanded to include both the high case and low case. With these improvements, the table should be included in the Executive Summary. I believe this presentation of the data is comprehensible by most people.

The Alaska Legislature has said the loan for the intertie cannot be used for any other project. The study shows the Intertie is the most cost effective method of supplying power to CVEA. The City Of Valdez supports construction of the intertie.

If you have any further questions or comments, please do not hesitate to contact me.

Sincerely,

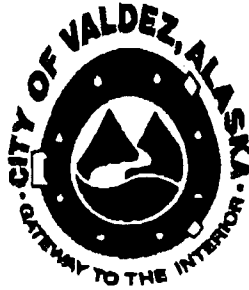
CITY OF VALDEZ



Doug Griffin
City Manager

BW/mam

cc: Mayor John Harris
Valdez City Council Members
Dave Dengel, Assistant City Manager
(Community Development Director)
Bill Wilcox, City Engineer



RECEIVED

FEB 25 1994

DIVISION OF ENERGY/DCRA

OFFICE OF THE CITY MANAGER
February 25, 1994

Mr. Herv Hensley
Department of Community and Regional Affairs
Division of Energy
P.O. Box 190869
Anchorage, Alaska 99519

Sent by FAX to : 269-4520

Dear Mr. ^{for} Hensley:

I am writing to supplement earlier comments I have forwarded to Mr. Dick Emerman by letter dated February 10, 1994.

The City of Valdez remains fully committed to the best alternative to stabilize and hopefully lower electrical rates for our residents, businesses, and government agencies. Using the most reasonable assumptions for future growth in the R. W. Beck study the intertie option is clearly superior to other options.

I believe the focus on the intertie only serving possible expansion of the PetroStar Valdez Refinery is overblown, in large part to reports in the Anchorage Daily News. PetroStar may benefit from lower rates but so would the average homeowner, small business owner, and the City of Valdez which spends about \$1 million annually on electricity to pump water, light buildings and streets, and compact solid waste. The thought that the intertie is only for PetroStar is ridiculous.

I am even more concerned about future economic development opportunities that will never materialize because our electricity rates make us uncompetitive with other locations. The Alaska Pork Project presently being studied by Globe Meats of Denmark in conjunction with the Alaska Division of Economic Development (Chris Gates, Director) has the potential of creating 500 jobs and bringing a new year-round industry to Alaska. Valdez is proposing an option to locate the entire operation in the Valdez-Copper River Basin and our biggest problem is our cost of power. Other opportunities to diversify and expand our economic base in this part of Alaska will be lost unless we do something about the high cost of power.

Mr. Herv Hensley
Department of Community and Regional Affairs
February 25, 1994
Page 2

I will be happy to answer any further questions you may have regarding the City of Valdez position. Thank you for this opportunity to comment.

Sincerely,



Doug Griffin
City Manager

cc: Mayor John Harris
Valdez City Councilmembers
Commissioner Edgar Blatchford, Dept. of Community and Regional
Affairs

**VALDEZ FISHERIES
DEVELOPMENT ASSOCIATION INC.**

P.O. Box 125
Valdez, Alaska 99686
Phone 835-4874 Fax 835-4831

RECEIVED

FEB 25 1994



February 18, 1994

DIVISION OF ENERGY/DCRA

Mr. Dick Emerman
State of Alaska
Dept. of Community & Regional Affairs
333 W. 4th Ave. Suite 220
Anchorage, Ak 99501-2341

Dear Mr. Emerman:

Valdez Fisheries Development Association Inc. (Solomon Gulch Hatchery) is located in Valdez, Alaska. We are a private non-profit aquaculture association located across Dayville Road from the Solomon Gulch Hydroelectric plant.

Valdez Fisheries wishes to express our concerns about the proposed Allison Lake tunnel project as an alternative to the Glennallen Intertie project. The following list expresses these concerns:

1. The major water supply to the Solomon Gulch Hatchery comes from the tailrace of the hydroelectric plant. With the exception of approximately two month (August and September) the water coming from Solomon Lake is clean. It meets the requirements for the incubation and rearing of both eggs and fry. It is very important to the survival of these eggs and fry that the water be clean and free of as much silt as possible. By allowing Allison Lake water to flow into Solomon Lake, the water in Solomon Lake will be in a constant turmoil and the silt will not be allowed to settle out. Therefore, severe incubation and rearing conditions will occur year round. This condition will place our eggs and fry in jeopardy and lessen their chances for survival. This in turn will create a severe economical problem for Valdez Fisheries.

2. The water in Solomon Lake has been determined to be void of any fish species or aquatic organisms which may carry a disease that could be devastating to Solomon Gulch Hatchery. The waters of Allison Lake have not been tested for the existence of any disease carrying fish or organisms.

3. Allison Lake is fed by many snowfields and several glaciers which dump a tremendous amount of silt into the lake. It has been observed on numerous occasions by hikers, pilots and employees of Alyeska that Allison Lake is a very heavily silted lake. By feeding Allison Lake water into Solomon Lake, the silt load would be greatly increased. Individually, Solomon Lake is adequate for the propagation of Pacific salmon, however, with the addition of Allison Lake water it now becomes marginal at best.

4. The silt in Solomon and Allison Lakes is a glacier flour that
*DEDICATED TO THE UTILIZATION, CONSERVATION,
AND REHABILITATION OF ALASKA'S FISHERY RESOURCE
WITHIN THE 200-MILE LIMIT*

is less than five microns in size. The small size of the silt makes it very difficult and expensive to filter out. By allowing the silt to settle to the bottom, the water supply to the turbines and Solomon Gulch hatchery is relatively clean.

5. It would seem to me that any increase in the silt level of the water fed to the turbines of the hydroelectric facility would also greatly increase the wear and tare on the turbine blades which would decrease the longevity of the turbines.

Valdez Fisheries Development Association opposes the use of Allison Lake water to supplement Solomon Lake water. Please feel free to contact VFDA at (907) 835-4874 if you have any questions and thank you for allowing us to comment.

Respectfully,



Dave Cobb
Business Manager

The objective of this analysis is to calculate the estimated cost of power which will ultimately be paid by the consumers rather than calculating a cost from the perspective of the State for purposes of comparing study alternatives. Accordingly, certain costs omitted from Beck's analysis, such as labor and Solomon Gulch cost of Allison power, have been added to scenarios where appropriate. In addition to the aforementioned omissions, several of Beck's basic assumptions have been adjusted based on our utility experience and expectations of future requirements of the various scenarios. These assumptions are stated on attached exhibits to the report. Finally, the costs, where appropriate, have been inflated using an average rate of inflation of 2.75%.

The following table compares the CVEA analysis to Table X-5 from the Beck study.

		CENTS PER KWH				
		BECK	CVEA		BECK	CVEA
YEAR		2000	2000		2010	2010
MEDIUM HIGH						
	Diesel	12.6	14.2		18.5	14.5
	Allison Lake	18.8	20.6		19.9	17.2
	Intertie (nonfirm)		10.2			7.9
	Intertie (firm)	10.2	7.3		12.6	6.5
MEDIUM LOW						
	Diesel	12.9	16.1		19.6	17.4
	Allison Lake	20.6	24.0		19.6	21.6
	Intertie (nonfirm)		11.6			9.8
	Intertie (firm)	11.2	7.7		13.3	6.7

As you can readily see, the cost of power as calculated by Beck and CVEA differ dramatically. In our opinion, our analysis provides a much truer estimated cost of power which will ultimately be paid for by our members. We request that Beck examine our assumptions and make appropriate modifications to Table X-5 to reflect, as accurately as possible, power cost based on sound assumptions. We also request this entire document, less the cover letter, be included in the public comments section of the final study.

Comments on RW Beck Study

March 22, 1994

Page 3

Load Forecast General Comment

Much has been said about the inflated load forecast upon which the feasibility study is based. It is our opinion that the medium high load forecast is the most realistic of the four scenarios presented for a number of reasons:

1. It tracks closely with CVEA's internally prepared Power Requirement Study.
2. The forecast fails to account for any new large loads which have shown historical growth and others that may materialize in the future.
3. The forecast assumes no increase in energy requirements relative to maintenance requirements at the Alyeska terminal facility.

In short, there has been considerable public comment focusing on Petro Star as driving the intertie case when, in fact, the study is so conservative as to growth in other sectors of CVEA's service area, on balance the overall medium high case is, in our opinion, reasonable.

As for having a general pessimistic outlook for this part of the world, I would like to draw your attention to Exhibits B2 and B3, which graphically illustrate growth on CVEA's system in our 35-year history.

We urge Beck to remain steadfast in the criticism received relative to the overall medium high load forecast as being a forecast which is defensible, reasonable, and supportable.

We would be pleased to respond to any questions you may have about the foregoing or the attached analysis, and we stand willing to provide any additional information necessary to support our analysis.

Sincerely,



Clayton Hurless
General Manager

COPPER VALLEY ELECTRIC ASSOCIATION

SPECIFIC COMMENT AS TO TABLE X-5
ESTIMATED COST OF POWER
AND
LOAD FORECAST ASSUMPTIONS
INCLUDED IN THE RW BECK DRAFT
COPPER VALLEY INTERTIE STUDY
DATED JANUARY, 1994

March 22, 1994

COPPER VALLEY ELECTRIC

Schedule of Attachments

	Exhibit Page #
Summary of Scenarios	A1
Medium High Load/Medium Fuel	
Diesel Expansion Case	A2.1 - A2.4
Allison Lake	A3.1 - A3.4
Sutton to Glennallen Intertie	A4
Non-Integrated	
Integrated into Railbelt	
Medium Low Load/Medium Fuel	
Diesel Expansion Case	A5.1 - A5.4
Allison Lake	A6.1 - A6.4
Sutton to Glennallen Intertie	A7
Non-Integrated	
Integrated into Railbelt	
Diesel Expansion Case Assumptions	A8
Allison Lake Case Assumptions	A9
Intertie Assumptions	A10
Sutton to Glennallen Intertie Amortization Schedule	A11
Allison Lake Amortization Schedule	A12
Diesel Unit Cost Assumptions	A13
Diesel Unit Amortization Schedules	A14.1 - A14.5
Table of Load Forecast Results	B1
Graphs Illustrating Growth	B2.1 - B2.2

SUTTON TO GLENNALLEN 138 KV INTERTIE--POWER COST ANALYSIS--NON-INTEGRATED CAPACITY LEASE OR ECONOMY VS INTEGRATED FIRM																						
2	JANUARY 21, 1994	REVISED 3/21/94																				
3	ASSUMPTIONS																					
4	INFLATION ADJUSTED	102.75%	ANN. PAY.																			
5	50 YEAR, ZERO INT. LOAN	\$35.0 MILLION	\$700,000																			
6	35 YEAR, 8.00% LOAN	\$17.1 MILLION	\$1,183,207																			
7	TOTAL COST OF LINE	\$52.1 MILLION	\$1,883,207																			
8	POWER COST CL/NF 1998# (KWH)*	0.035 CAPACITY LEASE OR ECONOMY ENERGY--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
9	POWER COST FIRM 1998# (KWH)**	10.058 INTEGRATED INTO RAILBELT SYSTEM --INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
10	YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
11	CASE 1A--CAPACITY LEASE OR NON-FIRM--MEDIUM LOW LOAD-- (NOT INTEGRATED)																					
12	INFL. RATE																					
13	SUPPLEMENTAL KWH REQ.	36,909,000	37,543,000	38,188,000	38,838,000	39,493,000	40,262,000	40,900,000	41,509,000	42,118,000	42,729,000	43,347,000	43,972,000	44,605,000	45,246,000	45,895,000	46,553,000	47,207,000	47,865,000	48,529,000	49,197,000	
14	DEPRECIATION	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	
15	ANNUAL INTEREST	\$1,029,285	\$1,020,029	\$1,010,238	\$999,860	\$989,859	\$977,198	\$964,838	\$951,738	\$937,848	\$923,128	\$907,521	\$890,980	\$873,448	\$854,881	\$835,160	\$814,277	\$792,142	\$768,878	\$743,808	\$727,442	
16	SUBTOTAL DEBT SERVICE	0%	\$2,072,353	\$2,063,117	\$2,053,328	\$2,042,948	\$2,031,947	\$2,020,288	\$2,007,928	\$1,994,824	\$1,980,938	\$1,968,214	\$1,950,609	\$1,934,068	\$1,916,534	\$1,897,949	\$1,878,248	\$1,857,365	\$1,835,230	\$1,811,766	\$1,786,894	
17	DEBT SERVICE COST KWH		0.0581	0.0550	0.0538	0.0525	0.0513	0.0502	0.0491	0.0481	0.0470	0.0460	0.0450	0.0440	0.0430	0.0419	0.0409	0.0399	0.0389	0.0379	0.0368	
18	LINE O&M EXPENSE	2.75%	\$263,412	\$270,858	\$278,099	\$285,747	\$293,805	\$301,879	\$309,975	\$318,499	\$327,258	\$336,258	\$345,505	\$355,008	\$364,769	\$374,800	\$385,107	\$395,697	\$406,579	\$417,760	\$429,248	
19	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,328	\$269,544	\$276,958	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
20	DIESEL PLANT O&M	2.75%	\$114,537	\$117,878	\$120,913	\$124,238	\$127,854	\$131,185	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
21	SUBTOTAL LINE OP. COST		\$2,879,346	\$2,886,802	\$2,894,183	\$2,901,408	\$2,908,514	\$2,915,489	\$2,922,218	\$2,928,757	\$2,935,052	\$2,941,088	\$2,946,772	\$2,952,125	\$2,957,088	\$2,961,618	\$2,965,868	\$2,969,849	\$2,973,568	\$2,977,031	\$2,980,248	
22	LINE OP. COST KWH		0.0728	0.0718	0.0705	0.0694	0.0683	0.0674	0.0668	0.0657	0.0649	0.0642	0.0634	0.0628	0.0618	0.0610	0.0603	0.0595	0.0587	0.0580	0.0572	
23	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$118,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$66,000	\$61,000	\$57,000	\$53,000	\$49,000	\$45,000	\$41,000	
24	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
25	SUB-TOTAL COST LESS P.C.		\$3,070,346	\$3,067,802	\$3,066,183	\$3,064,408	\$3,063,514	\$3,064,459	\$3,064,218	\$3,064,757	\$3,064,052	\$3,063,088	\$2,821,772	\$2,822,125	\$2,783,088	\$2,779,818	\$2,768,668	\$2,769,189	\$2,772,129	\$2,774,430	\$2,776,031	
26	COST, LESS POWER COST KWH		0.0832	0.0817	0.0803	0.0788	0.0773	0.0761	0.0749	0.0738	0.0727	0.0708	0.0651	0.0642	0.0624	0.0614	0.0603	0.0595	0.0587	0.0580	0.0572	
27	POWER COST	2.75%	\$1,291,815	\$1,350,140	\$1,373,336	\$1,398,869	\$1,425,518	\$1,448,841	\$1,470,866	\$1,492,787	\$1,514,669	\$1,538,842	\$1,558,868	\$1,581,343	\$1,604,107	\$1,627,159	\$1,650,499	\$1,674,162	\$1,697,882	\$1,721,345	\$1,745,224	
28	TOTAL COST OF POWER		\$4,362,181	\$4,417,942	\$4,439,499	\$4,463,277	\$4,488,738	\$4,513,100	\$4,535,082	\$4,557,525	\$4,578,721	\$4,552,710	\$4,380,838	\$4,403,489	\$4,387,195	\$4,408,778	\$4,419,167	\$4,443,352	\$4,489,811	\$4,495,775	\$4,521,256	\$4,556,116
29	COST OF POWER KWH		0.1182	0.1177	0.1163	0.1147	0.1213	0.1120	0.1109	0.1098	0.1087	0.1085	0.1011	0.1001	0.0984	0.0974	0.0963	0.0954	0.0947	0.0939	0.0932	
30	CASE 2A-- FIRM--MEDIUM LOW LOAD--(INTEGRATED)																					
31	INFL. RATE																					
32	COST OF SUPP. POWER	2.75%	\$2,088,904	\$2,160,224	\$2,197,338	\$2,238,191	\$2,280,828	\$2,317,826	\$2,353,388	\$2,388,428	\$2,423,470	\$2,458,827	\$2,494,188	\$2,530,149	\$2,566,572	\$2,603,455	\$2,640,798	\$2,678,660	\$2,717,291	\$2,754,152	\$2,792,359	\$2,830,795
33	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,328	\$269,544	\$276,958	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
34	DIESEL PLANT O&M	2.75%	\$114,527	\$117,878	\$120,913	\$124,238	\$127,854	\$131,185	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
35	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$118,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$66,000	\$61,000	\$57,000	\$53,000	\$49,000	\$45,000	\$41,000	
36	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
37	TOTAL POWER COST		\$2,801,485	\$2,894,254	\$2,932,075	\$2,973,904	\$3,018,791	\$3,069,320	\$3,099,701	\$3,139,862	\$3,179,328	\$3,172,224	\$3,019,845	\$3,063,200	\$3,068,357	\$3,110,324	\$3,146,112	\$3,194,787	\$3,246,611	\$3,299,056	\$3,352,248	\$3,406,082
38	TOTAL COST KWH		0.0759	0.0771	0.0768	0.0765	0.0762	0.0760	0.0758	0.0756	0.0755	0.0742	0.0697	0.0697	0.0688	0.0687	0.0688	0.0688	0.0688	0.0689	0.0691	0.0692
39	***ANNUAL SAVINGS		\$1,560,678	\$1,523,689	\$1,507,423	\$1,489,373	\$1,478,948	\$1,452,780	\$1,435,381	\$1,417,663	\$1,399,393	\$1,380,487	\$1,360,794	\$1,340,268	\$1,318,638	\$1,296,453	\$1,273,055	\$1,248,565	\$1,223,200	\$1,198,719	\$1,169,008	\$1,150,034
40	TOTAL SAVINGS FOR STUDY PERIOD		\$27,533,748																			
41	*BASED ON ML&P MID CASE + 1 MILL FOR WHEELING (ML&P) LETTER FEBRUARY 1994--** BASED ON INFORMATION PROVIDED BY CHUGACH (DECEMBER 1993) ***SAVINGS COMPARING CASE 1 TO CASE 2.																					

FILE: SUMCOMP. MARCH 18, 1994
MEDIUM HIGH LOAD-MEDIUM FUEL

SUMMARY OF COST COMPARISONS OF ALTERNATIVE POWER SUPPLY OPTIONS

2 YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
3 SUPPLEMENTARY KWH REQUIRED	38,999	42,799	46,574	50,386	54,000	57,516	61,012	61,622	62,230	62,842	63,459	64,084	64,717	65,359	66,007	66,665	67,317	67,972	68,631	69,295
5 UNIT COST OF POWER----- ALL VALUES EXPRESSED IN LINES 8,7,8 & 9 ARE IN \$ KWH																				
6 DIESEL EXP. COST OF POWER	\$0.1496	\$0.1450	\$0.1420	\$0.1399	\$0.1366	\$0.1341	\$0.1395	\$0.1410	\$0.1425	\$0.1433	\$0.1419	\$0.1436	\$0.1451	\$0.1464	\$0.1481	\$0.1499	\$0.1519	\$0.1520	\$0.1523	\$0.1528
7 ALLISON LAKE POWER COST	\$0.1383	\$0.1264	\$0.2064	\$0.1957	\$0.1872	\$0.1802	\$0.1768	\$0.1766	\$0.1764	\$0.1755	\$0.1724	\$0.1723	\$0.1716	\$0.1718	\$0.1714	\$0.1771	\$0.1715	\$0.1716	\$0.1697	\$0.1682
8 INTERTIE--NON-FIRM--NON-INTEG.	\$0.1137	\$0.1077	\$0.1018	\$0.0968	\$0.1024	\$0.0892	\$0.0862	\$0.0857	\$0.0852	\$0.0840	\$0.0804	\$0.0800	\$0.0790	\$0.0785	\$0.0779	\$0.0775	\$0.0771	\$0.0768	\$0.0764	\$0.0762
9 INTERTIE--FIRM--INTEGRATED	\$0.0748	\$0.0747	\$0.0733	\$0.0721	\$0.0712	\$0.0704	\$0.0698	\$0.0697	\$0.0697	\$0.0689	\$0.0658	\$0.0659	\$0.0653	\$0.0653	\$0.0652	\$0.0653	\$0.0654	\$0.0656	\$0.0657	\$0.0658
11 ANNUAL POWER COST-----ALL VALUES EXPRESSED IN LINES 12,13,14 & 15 ARE IN \$ ANNUALLY (000)																				
12 DIESEL CASE (L3 x L6)	\$5,834	\$6,206	\$6,614	\$7,049	\$7,376	\$7,713	\$8,511	\$8,689	\$8,868	\$9,005	\$9,005	\$9,202	\$9,390	\$9,569	\$9,776	\$9,993	\$10,225	\$10,332	\$10,453	\$10,588
13 ALLISON LAKE (L3 x L7)	\$5,394	\$5,410	\$9,613	\$9,881	\$10,109	\$10,364	\$10,787	\$10,882	\$10,977	\$11,029	\$10,940	\$11,042	\$11,105	\$11,216	\$11,314	\$11,809	\$11,545	\$11,664	\$11,647	\$11,655
14 INTERTIE--NON-INTEG. (L3 x L8)	\$4,434	\$4,809	\$4,741	\$4,677	\$5,530	\$5,130	\$5,259	\$5,281	\$5,302	\$5,279	\$5,102	\$5,127	\$5,113	\$5,131	\$5,142	\$5,167	\$5,190	\$5,220	\$5,243	\$5,280
15 INTERTIE--INTEGRATED (L3 x L9)	\$2,917	\$3,197	\$3,414	\$3,633	\$3,645	\$4,049	\$4,259	\$4,295	\$4,337	\$4,330	\$4,176	\$4,223	\$4,226	\$4,268	\$4,304	\$4,353	\$4,403	\$4,459	\$4,509	\$4,560
17 ANNUAL SAVINGS-----NON-INTEGRATED INTERTIE----- ALL VALUES EXPRESSED IN \$ ANNUALLY (000)																				
18 INTERTIE TO DIESEL (L12-L14)	\$1,400	\$3,009	\$1,872	\$3,418	\$1,847	\$3,664	\$3,252	\$4,394	\$3,586	\$4,675	\$3,903	\$4,979	\$4,276	\$5,301	\$4,834	\$5,640	\$5,035	\$5,873	\$5,209	\$8,029
19 INTERTIE TO ALLISON LAKE (L13-L14)	\$959	\$800	\$4,872	\$4,983	\$4,579	\$5,234	\$5,528	\$5,601	\$5,675	\$5,750	\$5,838	\$5,915	\$5,993	\$6,085	\$6,172	\$6,643	\$6,355	\$6,444	\$6,403	\$6,375
21 ANNUAL SAVINGS-----INTEGRATED INTERTIE-----ALL VALUES EXPRESSED IN \$ ANNUALLY (000)																				
22 INTERTIE TO OISEL (L12-L16)	\$2,917	\$3,009	\$3,200	\$3,416	\$3,532	\$3,664	\$4,253	\$4,394	\$4,530	\$4,675	\$4,829	\$4,979	\$5,164	\$5,301	\$5,472	\$5,640	\$5,823	\$5,873	\$5,943	\$6,029
23 INTERTIE TO ALLISON LAKE (L13-L16)	\$2,476	\$2,213	\$6,199	\$6,228	\$6,264	\$6,315	\$6,528	\$6,587	\$6,640	\$6,699	\$6,765	\$6,819	\$6,879	\$6,948	\$7,010	\$7,456	\$7,142	\$7,205	\$7,138	\$7,096
25 YEAR																				
26 SUPPLEMENTARY KWH REQUIRED	38909	37543	38188	38898	39639	40282	40800	41509	42118	42729	43347	43972	44605	45246	45895	46553	47207	47665	48529	49197
28 UNIT COST OF POWER-----ALL VALUES EXPRESSED IN \$ KWH																				
29 OISEL EXPANSION CASE	\$0.1550	\$0.1577	\$0.1611	\$0.1615	\$0.1619	\$0.1627	\$0.1747	\$0.1755	\$0.1762	\$0.1760	\$0.1725	\$0.1736	\$0.1745	\$0.1749	\$0.1759	\$0.1772	\$0.1788	\$0.1773	\$0.1763	\$0.1757
30 ALLISON LAKE CASE	\$0.1431	\$0.1368	\$0.2398	\$0.2370	\$0.2342	\$0.2320	\$0.2337	\$0.2317	\$0.2298	\$0.2269	\$0.2207	\$0.2190	\$0.2165	\$0.2149	\$0.2131	\$0.2117	\$0.2103	\$0.2089	\$0.2048	\$0.2009
31 INTERTIE--CL OR NF--NON INTEGRATED	\$0.1182	\$0.1177	\$0.1163	\$0.1147	\$0.1213	\$0.1120	\$0.1109	\$0.1098	\$0.1087	\$0.1065	\$0.1011	\$0.1001	\$0.0984	\$0.0974	\$0.0963	\$0.0954	\$0.0947	\$0.0939	\$0.0932	\$0.0928
32 INTERTIE--FIRM--INTEGRATED	\$0.0759	\$0.0771	\$0.0768	\$0.0765	\$0.0762	\$0.0760	\$0.0758	\$0.0756	\$0.0755	\$0.0742	\$0.0697	\$0.0697	\$0.0688	\$0.0687	\$0.0686	\$0.0686	\$0.0686	\$0.0686	\$0.0689	\$0.0692
34 ANNUAL COST OF POWER--ALL VALUES EXPRESSED IN \$ ANNUALLY (000)																				
35 DIESEL CASE (L26xL29)	\$5,721	\$5,921	\$6,152	\$6,282	\$6,418	\$6,554	\$7,145	\$7,285	\$7,421	\$7,520	\$7,477	\$7,634	\$7,784	\$7,914	\$8,073	\$8,249	\$8,431	\$8,486	\$8,556	\$8,644
36 ALLISON LAKE (L26xL30)	\$5,282	\$5,126	\$9,157	\$9,219	\$9,283	\$9,345	\$9,558	\$9,616	\$9,679	\$9,695	\$9,567	\$9,630	\$9,657	\$9,723	\$9,780	\$9,655	\$9,928	\$9,999	\$9,939	\$9,884
37 INTERTIE--NON INTEGRATED (L26xL31)	\$4,383	\$4,419	\$4,441	\$4,462	\$4,808	\$4,512	\$4,536	\$4,558	\$4,578	\$4,551	\$4,382	\$4,402	\$4,389	\$4,407	\$4,420	\$4,441	\$4,471	\$4,495	\$4,523	\$4,556
38 INTERTIE INTEGRATED (L26xL32)	\$2,801	\$2,895	\$2,933	\$2,976	\$3,020	\$3,061	\$3,100	\$3,136	\$3,180	\$3,170	\$3,021	\$3,085	\$3,089	\$3,108	\$3,148	\$3,194	\$3,246	\$3,298	\$3,353	\$3,404
40 ANNUAL SAVINGS-----NON INTEGRATED INTERTIE-----ALL VALUES EXPRESSED IN \$ ANNUALLY (000)																				
41 INTERTIE TO DIESEL (L35-L37)	\$1,358	\$1,502	\$1,711	\$1,820	\$1,609	\$2,042	\$2,809	\$2,727	\$2,843	\$2,970	\$3,095	\$3,232	\$3,394	\$3,507	\$3,653	\$3,808	\$3,981	\$3,992	\$4,033	\$4,086
42 INTERTIE TO ALLISON LAKE (L36-L37)	\$919	\$710	\$4,716	\$4,757	\$4,475	\$4,834	\$5,023	\$5,080	\$5,100	\$5,145	\$5,184	\$5,228	\$5,268	\$5,316	\$5,361	\$5,414	\$5,457	\$5,504	\$5,416	\$5,328
44 ANNUAL SAVINGS-----INTEGRATED INTERTIE-----ALL VALUES EXPRESSED IN \$ ANNUALLY (000)																				
45 INTERTIE TO DIESEL (L35-L38)	\$2,920	\$3,028	\$3,219	\$3,306	\$3,397	\$3,492	\$4,045	\$4,147	\$4,241	\$4,350	\$4,456	\$4,569	\$4,715	\$4,805	\$4,925	\$5,056	\$5,183	\$5,189	\$5,202	\$5,239
46 INTERTIE TO ALLISON LAKE (L36-L38)	\$2,480	\$2,234	\$6,225	\$6,243	\$6,263	\$6,284	\$6,458	\$6,480	\$6,499	\$6,525	\$6,545	\$6,565	\$6,588	\$6,615	\$6,632	\$6,662	\$6,680	\$6,701	\$6,585	\$6,479

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
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MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT FACTOR	ACTUAL 1991	ACTUAL 1992	ACTUAL 1993	BUDGET 1994	FOUR YEAR AVG	1995	1996	1997	1998	1999	2000	2001	2002	2003
MWH REQUIREMENT															
SOLOMON GULCH		39,634	40,880	52,364	44,925	44,451	49,462	50,549	51,553	52,606	52,606	52,606	52,606	52,606	52,606
EXISTING DIESELS		20,765	21,607	20,548	28,777	22,924	31,618	22,846	14,946	6,488	1,317	1,445	1,573	1,732	4,262
NEW DIESELS								11,300	21,539	32,712	41,630	45,264	48,915	52,338	53,293
SGL															
LOSSES							(197)	(201)	(202)	(201)	(168)	(135)	(102)	(70)	(39)
TOTAL REQ		60,399	62,487	72,912	73,702	67,375	80,883	84,494	87,836	91,605	95,385	99,180	102,992	106,606	110,122
TOTAL LESS SOLOMON		20,765	21,607	20,548	28,777	22,924	31,421	33,945	36,283	38,999	42,779	46,574	50,386	54,000	57,516
FUEL GALLONS							2,417	2,611	2,502	2,600	2,760	3,005	3,251	3,484	3,711
FUEL EFFICIENCY							13	13	14.5	15	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%						0.75	0.771	0.792	0.814	0.836	0.859	0.883	0.907	0.932
DSL FUEL COST		1376	1252	1,178	1,412	1,304	1,813	2,012	1,981	2,115	2,307	2,581	2,869	3,159	3,458
LABOR A & E	2.75%	84	65	87	79	79	83	85	88	90	93	95	98	100	103
LABOR PRODUCTION	2.75%	689	750	837	748	756	793	814	837	860	883	908	933	958	985
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	330	339	348	358	368
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	110	226	348	358	368
GDP GENERAL	2.75%	152	89	214	208	166	211	217	223	229	235	242	248	255	262
GDP UNITS	2.75%	109	71	285	184	162	235	241	248	254	56	57	59	60	62
VDP GENERAL	2.75%	75	162	269	141	162	205	211	216	222	228	235	241	248	255
VDP UNITS	2.75%	83	268	89	162	156	126	129	132	136	56	57	59	60	62
OTHER	2.75%	153	173	38	13	94	30	31	32	33	33	34	35	36	37
DSL INTEREST	FIXED	220	212	205	192	207	179	168	157	147	137	128	119	111	105
DSL DEPREC	FIXED	235	237	244	244	240	244	244	244	244	244	244	244	244	244
NEW DIESEL BLDG		0	0	0	0	0	0	0	133	133	133	133	133	133	133
NEW DIESELS O&M	SCH	0	0	0	0	0	27	55	85	116	119	123	126	130	133
NEW DIESELS INTEREST	SCH	0	0	0	0	0	172	346	522	698	678	655	632	607	580
NEW DIESELS DEPREC	SCH	0	0	0	0	0	132	269	411	558	558	558	558	558	558
TOTAL COSTS		3176	3299	3,444	3,383	3,326	4,248	4,822	5,308	5,836	6,201	6,615	7,051	7,377	7,712
COST PER KWH/SUPP		\$0.1529	\$0.1527	\$0.1676	\$0.1176	\$0.1451	\$0.1352	\$0.1420	\$0.1463	\$0.1496	\$0.1450	\$0.1420	\$0.1399	\$0.1366	\$0.1341

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
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MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MWH REQUIREMENT															
SOLOMON GULCH		52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,608	52,606	52,606	52,606	52,606
EXISTING DIESELS		1,937	1,955	2,130	2,249	2,368	2,489	2,611	2,735	2,859	2,985	3,110	3,236	3,362	3,671
NEW DIESELS		59,084	59,671	60,100	60,593	61,091	61,595	62,108	62,624	63,148	63,680	64,207	64,736	65,269	65,623
SGL															1
LOSSES		(9)	(4)	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL REQ		113,618	114,228	114,836	115,448	116,065	116,690	117,323	117,965	118,613	119,271	119,923	120,578	121,237	121,901
TOTAL LESS SOLOMON		61,012	61,622	62,230	62,842	63,459	64,084	64,717	65,359	66,007	66,665	67,317	67,972	68,631	69,295
FUEL GALLONS		3,936	3,976	4,015	4,054	4,094	4,134	4,175	4,217	4,259	4,301	4,343	4,385	4,428	4,471
FUEL EFFICIENCY		15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%	0.957	0.984	1.011	1.039	1.067	1.096	1.127	1.158	1.189	1.222	1.256	1.290	1.325	1.362
DSL FUEL COST		3,769	3,911	4,058	4,211	4,389	4,533	4,704	4,881	5,065	5,257	5,454	5,658	5,870	6,090
LABOR A & E	2.75%	106	109	112	115	118	121	125	128	132	135	139	143	147	151
LABOR PRODUCTION	2.75%	1,012	1,039	1,068	1,097	1,128	1,159	1,190	1,223	1,257	1,291	1,327	1,363	1,401	1,439
ADD 3 OPERATORS	SCH	378	388	399	410	421	433	445	457	470	483	496	510	524	538
ADD MAINTENANCE CREW	SCH	378	388	399	410	421	433	445	457	489	482	495	509	523	538
GDP GENERAL	2.75%	269	277	284	292	300	308	317	326	335	344	353	363	373	383
GDP UNITS	2.75%	64	66	67	69	71	73	75	77	79	81	84	86	88	91
VDP GENERAL	2.75%	262	269	276	284	292	300	308	316	325	334	343	353	362	372
VDP UNITS	2.75%	64	66	67	69	71	73	75	77	79	81	84	88	88	91
OTHER	2.75%	38	39	40	42	43	44	45	46	48	49	50	52	53	54
DSL INTEREST	FIXED	98	92	85	80	75	70	26	18	3	0	0	0	0	0
DSL DEPREC	FIXED	244	244	244	195	0	0	0	0	0	0	0	0	0	0
NEW DIESEL BLDG		133	133	133	133	133	133	133	133	133	133	133	133	133	133
NEW DIESELS O&M	SCH	173	178	183	188	193	198	204	209	215	221	227	233	240	246
NEW DIESELS INTEREST	SCH	787	751	712	671	630	582	563	479	424	364	300	233	178	133
NEW DIESELS DEPREC	SCH	739	739	739	739	739	739	739	739	739	739	739	739	739	739
TOTAL COSTS		8,513	8,689	8,868	9,005	9,004	9,199	9,393	9,568	9,773	9,995	10,224	10,329	10,450	10,588
COST PER KWH/SUPP		\$0.1395	\$0.1410	\$0.1425	\$0.1433	\$0.1419	\$0.1436	\$0.1451	\$0.1464	\$0.1481	\$0.1499	\$0.1519	\$0.1520	\$0.1523	\$0.1528

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
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SUPPORTING SCHEDULES

MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT FACTOR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
NEW DIESEL COSTS													
INTEREST EXPENSE	1995				172	168	163	158	153	147	141	134	127
INTEREST EXPENSE	1996					178	174	169	164	158	152	146	139
INTEREST EXPENSE	1997						185	180	175	169	184	158	151
INTEREST EXPENSE	1998							191	186	181	175	169	163
INTEREST EXPENSE	2004												
SUB INT ON NEW UNITS					172	346	522	698	678	655	632	607	580
DEPRECIATION	1995				132	132	132	132	132	132	132	132	132
DEPRECIATION	1996					137	137	137	137	137	137	137	137
DEPRECIATION	1997						142	142	142	142	142	142	142
DEPRECIATION	1998							147	147	147	147	147	147
DEPRECIATION	2004												
SUB DEPREC ON NEW UNITS					132	269	411	558	558	558	558	558	558
PLANTOPERATOR	2.75%	91	94	96	99	101	104	107	110	113	116	119	123
ADD 1 MAINT CREW	2.75%	91							110	113	116	119	123
ADD 1 MAINT CREW	2.75%	91								113	116	119	123
ADD 1 MAINT CREW	2.75%	91									116	119	122
TOTAL MAINT CREW					0	0	0	0	110	226	348	358	368
CAPITAL COST 2150 KW	3.5%				2,651	2,743	2,840	2,939					
MAINTENANCE													
	1995 2.75%				27	27	28	29	30	30	31	32	33
	1996 2.75%					27	28	29	30	31	31	32	33
	1997 2.75%						28	29	30	31	32	33	33
	1998 2.75%							29	30	31	32	33	34
	2004 2.75%												
TOTAL MAINT NEW UNITS					27	55	85	116	119	123	126	130	133
TOTAL MAINT OLD UNITS	2.75%				50	51	53	54	56	57	59	60	62

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MEDIUM HIGH-MEDIUM FUEL CASE

		INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NEW DIESEL COSTS																
INTEREST EXPENSE	1995		120	112	104	95	86	76	95	53	41	28	15			
INTEREST EXPENSE	1996		132	124	116	108	99	89	78	67	55	43	29	15		
INTEREST EXPENSE	1997		144	137	129	120	112	102	92	81	70	57	44	30	16	
INTEREST EXPENSE	1998		156	149	141	133	125	115	106	95	84	72	59	46	32	16
INTEREST EXPENSE	2004		235	229	222	215	208	200	192	183	174	164	153	142	130	117
SUB INT ON NEW UNITS			787	751	712	671	630	582	563	479	424	364	300	233	178	133
DEPRECIATION																
DEPRECIATION	1995		132	132	132	132	132	132	132	132	132	132	132			
DEPRECIATION	1996		137	137	137	137	137	137	137	137	137	137	137	137		
DEPRECIATION	1997		142	142	142	142	142	142	142	142	142	142	142	142	142	
DEPRECIATION	1998		147	147	147	147	147	147	147	147	147	147	147	147	147	147
DEPRECIATION	2004		181	181	181	181	181	181	181	181	181	181	181	181	181	181
SUB DEPREC ON NEW UNITS			739	739	739	739	739	739	739	739	739	739	739	607	470	328
PLANTOPERATOR																
PLANTOPERATOR		2.75%	126	129	133	137	140	144	148	152	157	161	165	170	175	179
ADD 1 MAINT CREW																
ADD 1 MAINT CREW		2.75%	126	129	133	137	140	144	148	152	157	161	165	170	174	179
ADD 1 MAINT CREW		2.75%	126	129	133	137	140	144	148	152	156	161	165	170	174	179
ADD 1 MAINT CREW		2.75%	126	129	133	137	140	144	148	152	156	161	165	170	174	179
TOTAL MAINT CREW			378	388	399	410	421	433	445	457	469	482	495	509	523	538
CAPITAL COST 2150 KW																
CAPITAL COST 2150 KW		3.5%	3,613													
MAINTENANCE																
MAINTENANCE	1995	2.75%	34	35	36	37	38	39	40	41	42	43	44	46	47	48
MAINTENANCE	1996	2.75%	34	35	36	37	38	39	40	41	42	44	45	46	47	48
MAINTENANCE	1997	2.75%	34	35	36	37	38	39	40	42	43	44	45	46	48	49
MAINTENANCE	1998	2.75%	35	36	37	38	39	40	41	42	43	44	45	47	48	49
MAINTENANCE	2004	2.75%	36	37	38	39	40	41	43	44	45	46	47	49	50	51
TOTAL MAINT NEW UNITS			173	178	183	188	193	198	204	209	215	221	227	233	240	246
TOTAL MAINT OLD UNITS																
TOTAL MAINT OLD UNITS		2.75%	64	66	67	69	71	73	75	77	79	81	84	86	88	91

COPPER VALLEY ELECTRIC
 ALLISON LAKE
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MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT	ACTUAL	ACTUAL	ACTUAL	BUDGET	FOUR											
	FACTOR	1991	1992	1993	1994	YEAR	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
						AVG											
MWH REQUIREMENT																	
SOLOMON GULCH		39,834	40,880	52,364	44,925	44,451	49,462	50,549	51,553	52,606	52,606	52,606	52,806	52,606	52,606	52,806	
EXISTING DIESELS		20,765	21,607	20,548	28,777	22,924	31,616	22,848	14,946	6,488	5,050	109	237	361	482	601	
NEW DIESELS								11,300	21,539	32,712	37,897	19,885	23,536	26,993	30,357	33,705	
ALLISON LAKE												26,715	26,715	26,715	26,715	26,715	
LOSSES							(197)	(201)	(202)	(201)	(188)	(135)	(102)	(70)	(39)	(9)	
TOTAL REQ		60,399	62,487	72,912	73,702	67,375	80,863	84,494	87,836	91,605	95,385	99,180	102,992	106,605	110,121	113,618	
TOTAL LESS SOLOMON		20,765	21,607	20,548	28,777	22,924	31,421	33,945	36,283	38,999	42,779	46,574	50,366	53,999	57,515	61,012	
FUEL GALLONS							2,432	2,827	2,516	2,813	2,771	1,290	1,534	1,765	1,990	2,213	
FUEL EFFICIENCY							13	13	14.5	15	15.5	15.5	15.5	15.5	15.5	15.5	
FUEL PRICE	2.75%						0.75	0.771	0.792	0.814	0.838	0.869	0.883	0.907	0.932	0.957	
SOLOMON GULCH RATE	2.75%	0.064	0.064	0.064	0.068	0.0645	0.066	0.067	0.067	0.068	0.069	0.070	0.071	0.071	0.072	0.073	
DSL FUEL COST		1,376	1,252	1,178	1,412	1,304	1,824	2,024	1,992	2,128	2,318	1,108	1,354	1,600	1,854	2,119	
LABOR A & E	2.75%	84	85	87	79	79	83	85	88	90	93	95	98	100	103	106	
LABOR PRODUCTION	2.75%	689	750	837	748	756	793	814	837	860	741	781	782	804	826	848	
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GDP GENERAL	2.75%	152	89	214	208	168	211	217	223	229	235	242	248	255	262	269	
GDP UNITS	2.75%	109	71	285	184	162	235	241	248	254	56	57	59	60	62	64	
VDP GENERAL	2.75%	75	162	269	141	162	205	211	216	222	228	235	241	248	255	262	
VDP UNITS	2.75%	83	288	89	182	156	126	129	132	136	56	57	59	60	62	64	
OTHER	2.75%	153	173	38	13	94	30	31	32	33	33	34	35	36	37	38	
DSL INTEREST	FIXED	220	212	205	192	207	179	168	157	147	137	128	119	111	105	98	
DSL DEPREC	FIXED	235	237	244	244	240	244	244	244	244	244	244	244	244	244	244	
SOLOMON POWER COST		0	0	0	0	0	0	0	0	0	0	932	943	954	966	978	
ALLISON INTEREST												3,138	3,110	3,080	3,048	3,015	
ALLISON DEPRECIATION												1,046	1,046	1,046	1,046	1,046	
ALLISON O & M	2.75%											264	292	300	308	317	
NEW DIESEL BLDG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW DIESELS O&M	SCH	0	0	0	0	0	0	27	57	88	120	124	127	131	134	138	
NEW DIESELS INTEREST	SCH	0	0	0	0	0	0	178	359	540	723	701	678	654	628	601	
NEW DIESELS DEPREC	SCH	0	0	0	0	0	0	137	279	426	426	426	426	426	426	426	
TOTAL COSTS		3,176	3,299	3,444	3,383	3,326	3,929	4,506	4,863	5,395	5,409	9,612	9,861	10,110	10,366	10,784	
COST PER KWH/SUPP		\$0.1529	\$0.1527	\$0.1676	\$0.1176	\$0.1451	\$0.1250	\$0.1328	\$0.1340	\$0.1383	\$0.1264	\$0.2064	\$0.1957	\$0.1872	\$0.1802	\$0.1768	

COPPER VALLEY ELECTRIC
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MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT FACTOR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MWH REQUIREMENT														
SOLOMON GULCH		52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606	52,606
EXISTING DIESELS		619	794	913	1,033	1,154	1,276	1,399	1,523	1,649	1,774	1,900	2,026	2,153
NEW DIESELS		34,291	34,720	35,214	35,712	36,218	36,727	37,244	37,769	38,301	38,827	39,357	39,890	40,245
ALLISON LAKE		26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715
LOSSES		(4)	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL REQ		114,227	114,835	115,448	116,066	116,691	117,324	117,964	118,613	119,271	119,922	120,578	121,237	121,719
TOTAL LESS SOLOMON		61,621	62,229	62,842	63,460	64,085	64,718	65,358	66,007	66,665	67,316	67,972	68,631	69,113
FUEL GALLONS		2,252	2,291	2,331	2,371	2,411	2,452	2,493	2,535	2,577	2,619	2,662	2,704	2,735
FUEL EFFICIENCY		15.5	16.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%	0.984	1.011	1.039	1.067	1.096	1.127	1.158	1.189	1.222	1.258	1.290	1.326	1.362
SOLOMON GULCH RATE	2.75%	0.074	0.075	0.078	0.077	0.078	0.079	0.080	0.081	0.082	0.084	0.085	0.086	0.087
OSL FUEL COST		2,216	2,316	2,421	2,530	2,644	2,762	2,888	3,015	3,150	3,289	3,435	3,585	3,726
LABOR A & E	2.75%	109	112	115	118	121	125	128	132	135	139	143	147	151
LABOR PRODUCTION	2.75%	872	898	920	946	972	998	1,026	1,054	1,083	1,113	1,143	1,175	1,207
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0
GDP GENERAL	2.75%	277	284	292	300	308	317	326	335	344	353	363	373	383
GDP UNITS	2.75%	86	87	89	91	93	95	97	99	101	103	105	107	109
VDP GENERAL	2.75%	269	276	284	292	300	308	316	325	334	343	353	362	372
VDP UNITS	2.75%	88	89	91	93	95	97	99	101	103	105	107	109	111
OTHER	2.75%	39	40	42	43	44	45	46	47	48	49	50	51	52
DSL INTEREST	FIXED	92	85	80	75	70	65	60	55	50	45	40	35	30
DSL DEPREC	FIXED	244	244	195	0	0	0	0	0	0	0	0	0	0
SOLOMON POWER COST		990	1,002	1,015	1,028	1,042	1,056	1,070	1,085	1,100	1,116	1,132	1,148	1,165
ALLISON INTEREST		2,979	2,941	2,901	2,859	2,814	2,767	2,716	2,663	2,608	2,546	2,482	2,415	2,343
ALLISON DEPRECIATION		1,046	1,046	1,048	1,048	1,048	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046
ALLISON O & M	2.75%	325	334	343	353	363	373	383	393	404	415	427	438	450
NEW DIESEL BLDG		0	0	0	0	0	0	0	0	0	0	0	0	0
NEW DIESELS O&M	SCH	142	146	150	154	158	162	167	171	178	181	186	191	196
NEW DIESELS INTEREST	SCH	572	540	507	474	435	395	352	307	259	208	152	96	49
NEW DIESELS DEPREC	SCH	578	578	578	578	578	578	578	578	578	578	578	441	299
TOTAL COSTS		10,880	10,976	11,027	10,937	11,040	11,108	11,213	11,314	11,427	11,545	11,662	11,648	11,625
COST PER KWH/SUPP		\$0.1786	\$0.1784	\$0.1755	\$0.1724	\$0.1723	\$0.1718	\$0.1716	\$0.1714	\$0.1714	\$0.1715	\$0.1716	\$0.1697	\$0.1682

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SUPPORTING SCHEDULES

MEDIUM HIGH-MEDIUM FUEL CASE

	INFLAT FACTOR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
NEW DIESEL COSTS													
INTEREST EXPENSE	1996					178	174	169	164	158	152	146	139
INTEREST EXPENSE	1997						185	180	175	169	164	158	151
INTEREST EXPENSE	1998							191	186	181	175	169	163
INTEREST EXPENSE	1999								198	193	187	181	175
SUB INT ON NEW UNITS					0	178	359	540	723	701	678	654	628
DEPRECIATION	1996					137	137	137	137	137	137	137	137
DEPRECIATION	1997						142	142	142	142	142	142	142
DEPRECIATION	1998							147	147	147	147	147	147
DEPRECIATION	1999												
SUB OEPREC ON NEW UNITS					0	137	279	426	426	426	426	426	426
PLANTOPERATOR	2.75%	91	94	96	99	101	104	107	110	113	116	119	123
ADD 1 MAINT CREW	2.75%	91							0	0	0	0	0
ADD 1 MAINT CREW	2.75%	91								0	0	0	0
ADD 1 MAINT CREW	2.75%	91									0	0	0
TOTAL MAINT CREW					0	0	0	0	0	0	0	0	0
CAPITAL COST 2150 KW	3.5%					2,743	2,840	2,939	3,042				
MAINTENANCE													
	1996 2.75%					27	28	29	30	31	31	32	33
	1997 2.75%						28	29	30	31	32	33	33
	1998 2.75%							29	30	31	32	33	34
	1999 2.75%								30	31	32	33	34
TOTAL MAINT NEW UNITS					0	27	57	88	120	124	127	131	134
TOTAL MAINT OLD UNITS	2.75%				50	51	53	54	56	57	59	60	62

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MEDIUM HIGH-MEDIUM FUEL CASE

		INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NEW DIESEL COSTS																
INTEREST EXPENSE	1996		132	124	116	108	99	89	78	67	55	43	29	15		
INTEREST EXPENSE	1997		144	137	129	120	112	102	92	81	70	57	44	30	18	
INTEREST EXPENSE	1998		156	149	141	133	125	115	106	95	84	72	59	46	32	16
INTEREST EXPENSE	1999		169	162	154	146	138	129	119	109	98	87	76	61	48	33
SUB INT ON NEW UNITS			601	572	540	507	474	435	395	352	307	259	208	152	96	49
DEPRECIATION	1996		137	137	137	137	137	137	137	137	137	137	137	137		
DEPRECIATION	1997		142	142	142	142	142	142	142	142	142	142	142	142	142	
DEPRECIATION	1998		147	147	147	147	147	147	147	147	147	147	147	147	147	147
DEPRECIATION	1999		152	152	152	152	152	152	152	152	152	152	152	152	152	152
SUB DEPREC ON NEW UNITS			578	578	578	578	578	578	578	578	578	578	578	578	441	299
PLANTOPERATOR		2.75%	128	129	133	137	140	144	148	152	157	161	165	170	175	179
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MAINT CREW			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAPITAL COST 2150 KW		3.5%														
MAINTENANCE																
	1996	2.75%	34	35	36	37	38	39	40	41	42	44	45	46	47	48
	1997	2.75%	34	35	36	37	38	39	40	42	43	44	45	46	48	49
	1998	2.75%	35	36	37	38	39	40	41	42	43	44	45	47	48	49
	1999	2.75%	35	36	37	38	39	40	41	42	43	44	46	47	48	50
TOTAL MAINT NEW UNITS			138	142	148	150	154	158	162	167	171	176	181	186	191	196
TOTAL MAINT OLD UNITS		2.75%	64	66	67	69	71	73	75	77	79	81	84	86	88	91

SUTTON TO GLENNALLEN 138 KV INTERTIE--POWER COST ANALYSIS--NON-INTEGRATED CAPACITY LEASE OR ECONOMY ENERGY VS INTEGRATED FIRM ENERGY																						
2	JANUARY 21, 1994 REVISED 3/21/94																					
3	ASSUMPTIONS																					
4	INFLATION ADJUSTED	102.75%	ANN. PAY.																			
5	50 YEAR, ZERO INT. LOAN	\$35.0 MILLION	\$700,000																			
6	35 YEAR, 8.00% LOAN	\$17.1 MILLION	\$1,183,207																			
7	TOTAL COST OF LINE	\$52.1 MILLION	\$1,883,207																			
8	POWER COST CLNF 1998 \$/a (KWH)*	\$0.035	CAPACITY LEASE OR ECONOMY ENERGY--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																			
9	POWER COST--FIRM1998 \$/a (KWH)**	\$0.056	INTEGRATED INTO RAILBELT SYSTEM--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																			
10	YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
12	CASE 1A-- NON-FIRM--MEDIUM HIGH LOAD-- (NOT INTEGRATED)																					
13	INFL. RATE																					
14	SUPPL. KWH REQ.	38,999,000	42,779,000	46,574,000	50,386,000	54,000,000	57,516,000	61,012,000	64,522,000	68,030,000	71,540,000	75,050,000	78,560,000	82,070,000	85,580,000	89,090,000	92,600,000	96,110,000	99,620,000	103,130,000	106,640,000	
15	DEPRECIATION	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	
16	ANNUAL INTEREST	\$1,029,285	\$1,020,029	\$1,010,238	\$999,860	\$988,859	\$977,198	\$964,838	\$951,736	\$937,848	\$923,128	\$907,521	\$890,980	\$873,446	\$854,861	\$835,160	\$814,277	\$792,142	\$768,678	\$743,808	\$717,442	
17	SUBTOTAL DEBT SERVICE	0%	\$2,072,353	\$2,063,117	\$2,053,326	\$2,042,948	\$2,031,947	\$2,020,286	\$2,007,926	\$1,994,824	\$1,980,938	\$1,966,214	\$1,950,609	\$1,934,088	\$1,916,534	\$1,897,949	\$1,878,248	\$1,857,385	\$1,835,230	\$1,811,768	\$1,786,894	
18	DEBT SERVICE COST KWH		0.0531	0.0482	0.0441	0.0405	0.0376	0.0351	0.0329	0.0324	0.0318	0.0313	0.0307	0.0302	0.0298	0.0294	0.0290	0.0285	0.0281	0.0277	0.0273	
19	LINE O&M EXPENSE	2.75%	\$263,412	\$270,856	\$276,099	\$285,747	\$293,605	\$301,879	\$309,975	\$318,499	\$327,258	\$336,258	\$345,505	\$355,006	\$364,769	\$374,800	\$385,107	\$395,697	\$406,579	\$417,760	\$429,248	\$441,053
20	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
21	DIESEL PLANT O&M	2.75%	\$114,527	\$117,878	\$120,913	\$124,238	\$127,854	\$131,165	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
22	SUBTOTAL LINE OP. COST		\$2,679,346	\$2,688,802	\$2,694,163	\$2,701,408	\$2,708,514	\$2,715,459	\$2,722,216	\$2,728,757	\$2,735,052	\$2,741,088	\$2,746,772	\$2,752,125	\$2,757,088	\$2,761,618	\$2,765,868	\$2,769,189	\$2,772,129	\$2,774,430	\$2,776,031	\$2,786,669
23	LINE OP. COST KWH		0.0887	0.0828	0.0788	0.0752	0.0722	0.0692	0.0662	0.0632	0.0602	0.0572	0.0542	0.0512	0.0482	0.0452	0.0422	0.0392	0.0362	0.0332	0.0302	
24	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$65,000	\$60,000	\$55,000	\$50,000	\$45,000	\$40,000	\$35,000	\$30,000
25	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000
26	SUB-TOTAL COST LESS P.C.		\$3,070,348	\$3,087,802	\$3,086,163	\$3,084,408	\$3,083,514	\$3,084,459	\$3,084,216	\$3,084,757	\$3,084,052	\$3,018,068	\$2,821,772	\$2,822,125	\$2,783,088	\$2,779,618	\$2,766,888	\$2,769,189	\$2,772,129	\$2,774,430	\$2,776,031	\$2,786,669
27	COST, LESS POWER COST KWH		0.0787	0.0717	0.0658	0.0608	0.0567	0.0533	0.0502	0.0472	0.0448	0.0438	0.0433	0.0429	0.0425	0.0421	0.0417	0.0413	0.0409	0.0405	0.0401	0.0397
28	POWER COST	2.75%	\$1,384,985	\$1,538,440	\$1,874,917	\$1,812,007	\$1,941,975	\$2,088,419	\$2,194,144	\$2,216,081	\$2,237,948	\$2,259,855	\$2,282,144	\$2,304,621	\$2,327,385	\$2,350,473	\$2,373,777	\$2,397,440	\$2,420,888	\$2,444,443	\$2,468,142	\$2,492,021
29	TOTAL COST OF POWER		\$4,435,311	\$4,606,242	\$4,741,080	\$4,876,414	\$5,031,657	\$5,132,878	\$5,258,360	\$5,280,838	\$5,301,999	\$5,278,024	\$5,103,916	\$5,128,746	\$5,110,473	\$5,130,091	\$5,142,445	\$5,166,629	\$5,193,017	\$5,218,873	\$5,244,174	\$5,278,890
30	COST OF POWER KWH		0.1137	0.1077	0.1018	0.0988	0.1024	0.0892	0.0862	0.0857	0.0852	0.0840	0.0800	0.0790	0.0785	0.0779	0.0775	0.0771	0.0768	0.0764	0.0762	
32	CASE 2A-- FIRM--MEDIUM HIGH LOAD--(INTEGRATED)																					
33																						
34	COST OF SUPP. POWER	2.75%	\$2,183,944	\$2,461,504	\$2,879,868	\$2,899,210	\$3,107,160	\$3,309,471	\$3,510,630	\$3,545,730	\$3,580,714	\$3,815,929	\$3,851,431	\$3,887,393	\$3,723,818	\$3,780,757	\$3,798,043	\$3,835,904	\$3,873,420	\$3,911,109	\$3,949,028	\$3,987,234
35	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
36	DIESEL PLANT O&M	2.75%	\$114,527	\$117,878	\$120,913	\$124,238	\$127,854	\$131,165	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
37	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$65,000	\$60,000	\$55,000	\$50,000	\$45,000	\$40,000	\$35,000	\$30,000
38	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000
39	TOTAL POWER COST		\$2,918,525	\$3,195,533	\$3,414,806	\$3,634,924	\$3,845,123	\$4,051,985	\$4,256,948	\$4,297,164	\$4,338,573	\$4,329,526	\$4,177,089	\$4,220,445	\$4,225,602	\$4,287,828	\$4,303,358	\$4,352,031	\$4,403,741	\$4,458,013	\$4,508,917	\$4,562,520
40	TOTAL COST KWH		0.0748	0.0747	0.0733	0.0721	0.0712	0.0704	0.0698	0.0697	0.0697	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689	0.0689
41	***ANNUAL SAVINGS		\$1,516,786	\$1,410,709	\$1,326,474	\$1,241,491	\$1,168,534	\$1,080,913	\$1,001,414	\$983,675	\$965,428	\$946,498	\$928,827	\$906,301	\$884,872	\$862,465	\$839,089	\$814,598	\$789,276	\$762,860	\$735,257	\$716,370
42	TOTAL SAVINGS FOR STUDY PERIOD		\$20,397,836																			
44	BASED ON ML&P MID CASE IML&P LETTER FEB. 94+ 1 MILL FOR WHEELING (MEA LETTER)--** BASED ON INFORMATION PROVIDED BY CHUGACH (DECEMBER 1993) ***SAVINGS COMPARING CASE 1 TO CASE 2.																					

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
 FILENAME:\SGLCHDSLML

3/18/94

MEDIUM LOW-MEDIUM FUEL CASE

	INFLAT FACTOR	ACTUAL 1991	ACTUAL 1992	ACTUAL 1993	BUDGET 1994	FOUR YEAR AVG	1995	1996	1997	1998	1999	2000	2001	2002	2003
MWH REQUIREMENT															
SOLOMON GULCH		39,834	40,880	52,364	44,925	44,451	49,482	50,549	51,553	51,824	52,097	52,378	52,606	52,606	52,606
EXISTING DIESELS		20,785	21,807	20,548	28,777	22,924	31,818	22,846	14,946	5,149	1,113	1,335	1,899	1,189	1,208
NEW DIESELS								11,300	21,539	31,984	36,835	37,060	37,206	38,651	39,270
SGL LOSSES							(197)	(201)	(202)	(204)	(205)	(207)	(207)	(201)	(196)
TOTAL REQ		60,399	62,487	72,912	73,702	67,376	80,883	84,494	87,836	88,733	89,640	90,564	91,504	92,245	92,888
TOTAL LESS SOLOMON		20,765	21,807	20,548	28,777	22,924	31,421	33,945	36,283	36,909	37,543	38,188	38,898	39,839	40,282
FUEL GALLONS							2,417	2,811	2,502	2,461	2,422	2,464	2,510	2,557	2,599
FUEL EFFICIENCY							13	13	14.5	15	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%						0.75	0.771	0.792	0.814	0.836	0.859	0.883	0.907	0.932
DSL FUEL COST		1378	1252	1,178	1,412	1,304	1,813	2,012	1,981	2,002	2,025	2,118	2,215	2,319	2,422
LABOR A & E	2.75%	84	85	87	79	79	83	85	88	90	93	95	98	100	103
LABOR PRODUCTION	2.75%	889	750	837	748	766	793	814	837	860	883	908	933	958	985
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	330	339	348	358	368
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	110	226	232	239	245
GDP GENERAL	2.75%	162	89	214	208	166	211	217	223	229	235	242	248	255	262
GDP UNITS	2.75%	109	71	285	184	182	235	241	248	254	56	57	59	60	82
VDP GENERAL	2.75%	75	162	269	141	162	205	211	218	222	228	235	241	248	255
VDP UNITS	2.75%	83	288	89	162	166	126	129	132	136	58	57	59	60	62
OTHER	2.75%	153	173	38	13	94	30	31	32	33	33	34	35	36	37
DSL INTEREST	FIXED	220	212	205	192	207	179	168	157	147	137	128	119	111	105
DSL DEPREC	FIXED	235	237	244	244	240	244	244	244	244	244	244	244	244	244
NEW DIESEL BLDG		0	0	0	0	0	0	0	133	133	133	133	133	133	133
NEW DIESELS O&M	SCH	0	0	0	0	0	27	55	85	118	119	123	126	130	133
NEW DIESELS INTEREST	SCH	0	0	0	0	0	172	346	522	698	678	855	632	607	580
NEW DIESELS DEPREC	SCH	0	0	0	0	0	132	269	411	558	558	558	558	558	558
TOTAL COSTS		3178	3299	3,444	3,383	3,326	4,248	4,822	5,308	5,722	5,919	6,150	6,281	6,417	6,554
COST PER KWH/SUPP		\$0.1529	\$0.1527	\$0.1676	\$0.1176	\$0.1461	\$0.1352	\$0.1420	\$0.1463	\$0.1550	\$0.1577	\$0.1611	\$0.1615	\$0.1619	\$0.1627

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
 FILENAME:ISGLICHDSLML

3/18/94

MEDIUM LOW-MEDIUM FUEL CASE

	INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MWH REQUIREMENT															
SOLOMON GULCH		52,806	52,806	52,806	52,806	52,608	52,608	52,608	52,806	52,806	52,606	52,606	52,606	52,606	52,606
EXISTING DIESELS		1,228	1,244	1,262	1,280	1,298	1,318	1,335	1,354	1,373	1,392	1,411	1,430	1,450	1,469
NEW DIESELS		39,865	40,452	41,038	41,627	42,222	42,824	43,434	44,051	44,676	45,310	45,940	46,574	47,213	47,856
SGL															1
LOSSES		(191)	(187)	(182)	(178)	(173)	(168)	(164)	(159)	(154)	(149)	(144)	(139)	(134)	(129)
TOTAL REQ		93,506	94,115	94,724	95,335	95,953	96,578	97,211	97,852	98,501	99,159	99,813	100,471	101,135	101,803
TOTAL LESS SOLOMON		40,900	41,509	42,118	42,729	43,347	43,972	44,605	45,246	45,895	46,553	47,207	47,865	48,529	49,197
FUEL GALLONS		2,839	2,878	2,717	2,757	2,797	2,837	2,878	2,919	2,961	3,003	3,046	3,088	3,131	3,174
FUEL EFFICIENCY		15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%	0.957	0.984	1.011	1.039	1.067	1.098	1.127	1.158	1.189	1.222	1.256	1.290	1.326	1.362
DSL FUEL COST		2,526	2,634	2,747	2,883	2,984	3,111	3,242	3,379	3,522	3,671	3,825	3,985	4,151	4,324
LABOR A & E	2.75%	108	109	112	115	118	121	126	128	132	135	139	143	147	151
LABOR PRODUCTION	2.75%	1,012	1,039	1,068	1,097	1,128	1,159	1,190	1,223	1,257	1,291	1,327	1,363	1,401	1,439
ADD 3 OPERATORS	SCH	378	388	399	410	421	433	445	457	470	483	498	510	524	538
ADD MAINTENANCE CREW	SCH	252	259	268	273	281	289	296	305	313	322	330	340	349	358
GDP GENERAL	2.75%	289	277	284	292	300	308	317	328	335	344	353	363	373	383
GDP UNITS	2.75%	84	66	67	69	71	73	75	77	79	81	84	86	88	91
VDP GENERAL	2.75%	282	289	278	284	292	300	308	316	325	334	343	353	362	372
VDP UNITS	2.75%	84	86	87	89	91	93	95	97	99	101	103	105	107	109
OTHER	2.75%	38	39	40	42	43	44	45	46	48	49	50	52	53	54
DSL INTEREST	FIXED	98	92	85	80	75	70	26	18	3	0	0	0	0	0
DSL DEPREC	FIXED	244	244	244	195	0	0	0	0	0	0	0	0	0	0
NEW DIESEL BLDG		133	133	133	133	133	133	133	133	133	133	133	133	133	133
NEW DIESELS O&M	SCH	173	178	183	188	193	198	204	209	215	221	227	233	240	246
NEW DIESELS INTEREST	SCH	787	751	712	671	630	582	533	479	424	364	300	233	178	133
NEW DIESELS DEPREC	SCH	739	739	739	739	739	739	739	739	739	739	739	739	739	739
TOTAL COSTS		7,145	7,283	7,423	7,521	7,479	7,632	7,783	7,913	8,073	8,248	8,430	8,485	8,557	8,642
COST PER KWH/SUPP		\$0.1747	\$0.1755	\$0.1762	\$0.1760	\$0.1725	\$0.1736	\$0.1745	\$0.1749	\$0.1759	\$0.1772	\$0.1786	\$0.1773	\$0.1763	\$0.1757

COPPER VALLEY ELECTRIC		3/18/94	SUPPORTING SCHEDULES											
BASE CASE-ALL DIESEL														
FILENAME:ISGL\CHDSLML														
MEDIUM LOW-MEDIUM FUEL CASE														
		INFLAT	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
		FACTOR												
NEW DIESEL COSTS														
INTEREST EXPENSE	1995					172	188	163	158	153	147	141	134	127
INTEREST EXPENSE	1996						178	174	169	164	158	152	146	139
INTEREST EXPENSE	1997							185	180	175	169	164	158	151
INTEREST EXPENSE	1998								191	188	181	175	169	163
INTEREST EXPENSE	2004													
SUB INT ON NEW UNITS						172	346	522	698	678	655	632	607	580
DEPRECIATION	1995					132	132	132	132	132	132	132	132	132
DEPRECIATION	1996						137	137	137	137	137	137	137	137
DEPRECIATION	1997							142	142	142	142	142	142	142
DEPRECIATION	1998								147	147	147	147	147	147
DEPRECIATION	2004													
SUB DEPREC ON NEW UNITS						132	269	411	558	558	558	558	558	558
PLANTOPERATOR	2.75%		91	94	96	99	101	104	107	110	113	116	119	123
ADD 1 MAINT CREW	2.75%		91							110	113	116	119	123
ADD 1 MAINT CREW	2.75%		91								113	116	119	123
ADD 1 MAINT CREW	2.75%											116	119	123
TOTAL MAINT CREW						0	0	0	0	110	226	232	239	245
CAPITAL COST 2150 KW	3.5%					2,851	2,743	2,840	2,939					
MAINTENANCE														
	1995	2.75%				27	27	28	29	30	30	31	32	33
	1996	2.75%					27	28	29	30	31	31	32	33
	1997	2.75%						28	29	30	31	32	33	33
	1998	2.75%							29	30	31	32	33	33
	2004	2.75%								29	30	31	32	34
TOTAL MAINT NEW UNITS						27	55	85	116	119	123	126	130	133
TOTAL MAINT OLD UNITS	2.75%					50	51	53	54	56	57	59	60	62

COPPER VALLEY ELECTRIC
 BASE CASE-ALL DIESEL
 FILENAME:SGLICHDLSML

3/18/94

MEDIUM LOW-MEDIUM FUEL CASE

		INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NEW DIESEL COSTS																
INTEREST EXPENSE	1995		120	112	104	95	86	78	95	53	41	28	15			
INTEREST EXPENSE	1996		132	124	118	108	99	89	78	67	55	43	29	15		
INTEREST EXPENSE	1997		144	137	129	120	112	102	92	81	70	57	44	30	16	
INTEREST EXPENSE	1998		158	149	141	133	125	115	106	95	84	72	59	48	32	18
INTEREST EXPENSE	2004		235	229	222	215	208	200	192	183	174	184	153	142	130	117
SUB INT ON NEW UNITS			787	751	712	671	630	582	563	479	424	384	300	233	178	133
DEPRECIATION																
DEPRECIATION	1995		132	132	132	132	132	132	132	132	132	132	132			
DEPRECIATION	1996		137	137	137	137	137	137	137	137	137	137	137	137		
DEPRECIATION	1997		142	142	142	142	142	142	142	142	142	142	142	142	142	
DEPRECIATION	1998		147	147	147	147	147	147	147	147	147	147	147	147	147	147
DEPRECIATION	2004		181	181	181	181	181	181	181	181	181	181	181	181	181	181
SUB DEPREC ON NEW UNITS			739	739	739	739	739	739	739	739	739	739	739	607	470	328
PLANT OPERATOR																
		2.75%	128	129	133	137	140	144	148	152	157	161	165	170	175	179
ADD 1 MAINT CREW																
		2.75%	128	129	133	137	140	144	148	152	157	161	165	170	174	179
		2.75%	128	129	133	137	140	144	148	152	158	161	165	170	174	179
		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MAINT CREW			252	259	266	273	281	289	296	305	313	322	330	340	349	358
CAPITAL COST 2150 KW																
		3.5%	3,813													
MAINTENANCE																
	1995	2.75%	34	35	38	37	38	39	40	41	42	43	44	48	47	48
	1996	2.75%	34	35	38	37	38	39	40	41	42	44	45	46	47	48
	1997	2.75%	34	35	36	37	38	39	40	42	43	44	45	46	48	49
	1998	2.75%	35	38	37	38	39	40	41	42	43	44	45	47	48	49
	2004	2.75%	36	37	38	39	40	41	43	44	45	46	47	49	50	51
TOTAL MAINT NEW UNITS			173	178	183	188	193	198	204	209	215	221	227	233	240	246
TOTAL MAINT OLD UNITS		2.75%	64	66	67	69	71	73	75	77	79	81	84	86	88	91

COPPER VALLEY ELECTRIC
 ALLISON LAKE
 FILENAME:\SGLCHALLML

3/21/94

MEDIUM LOW-MEDIUM FUEL CASE

	INFLAT	ACTUAL	ACTUAL	ACTUAL	BUDGET	FOUR											
	FACTOR	1991	1992	1993	1994	YEAR	1995	1998	1997	1998	1999	2000	2001	2002	2003	2004	
						AVG											
MWH REQUIREMENT																	
SOLOMON GULCH		39,834	40,880	52,364	44,925	44,451	49,462	50,549	51,553	51,824	52,097	52,378	52,608	52,806	52,606	52,606	
EXISTING DIESELS		20,765	21,807	20,548	28,777	22,924	31,618	22,846	14,946	5,149	1,113	0	0	0	0	0	
NEW DIESELS								11,300	21,539	31,984	38,635	11,797	12,490	13,213	13,840	14,442	
ALLISON LAKE												26,715	26,715	28,715	26,715	26,715	
LOSSES							(197)	(201)	(202)	(204)	(205)	(324)	(308)	(289)	(273)	(257)	
TOTAL REQ		60,399	62,487	72,912	73,702	67,375	80,883	84,494	87,838	88,733	89,640	90,564	91,503	92,245	92,888	93,506	
TOTAL LESS SOLOMON		20,765	21,607	20,548	28,777	22,924	31,421	33,945	36,283	36,909	37,543	38,188	38,897	39,839	40,282	40,900	
FUEL GALLONS							2,432	2,627	2,518	2,474	2,435	761	806	852	893	932	
FUEL EFFICIENCY							13	13	14.5	15	15.5	15.5	15.5	15.5	15.5	15.5	
FUEL PRICE	2.75%						0.75	0.771	0.792	0.814	0.836	0.859	0.883	0.907	0.932	0.957	
SOLOMON GULCH RATE	2.75%	0.064	0.064	0.064	0.068	0.0645	0.086	0.067	0.067	0.068	0.069	0.070	0.071	0.071	0.072	0.073	
DSL FUEL COST		1,378	1,252	1,178	1,412	1,304	1,824	2,024	1,992	2,013	2,036	654	711	773	832	892	
LABOR A & E	2.75%	84	65	87	79	79	83	85	88	90	93	95	98	100	103	106	
LABOR PRODUCTION	2.75%	889	750	837	748	766	793	814	837	860	741	781	782	804	826	848	
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GDP GENERAL	2.75%	152	89	214	208	166	211	217	223	229	235	242	248	255	262	269	
GDP UNITS	2.75%	109	71	285	184	182	235	241	248	254	58	57	59	60	62	64	
VDP GENERAL	2.75%	75	182	269	141	182	205	211	218	222	228	235	241	248	255	262	
VDP UNITS	2.75%	83	288	89	182	156	128	129	132	136	56	57	59	60	62	64	
OTHER	2.75%	153	173	38	13	94	30	31	32	33	33	34	35	36	37	38	
DSL INTEREST	FIXED	220	212	205	192	207	179	168	157	147	137	128	119	111	105	98	
DSL DEPREC	FIXED	235	237	244	244	240	244	244	244	244	244	244	244	244	244	244	
SOLOMON POWER COST		0	0	0	0	0	0	0	0	0	0	932	943	954	968	978	
ALLISON INTEREST												3,138	3,110	3,080	3,048	3,015	
ALLISON DEPRECIATION												1,048	1,048	1,048	1,048	1,046	
ALLISON O & M	2.75%											284	292	300	308	317	
NEW DIESEL BLDG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW DIESELS O&M	SCH	0	0	0	0	0	0	27	57	88	120	124	127	131	134	138	
NEW DIESELS INTEREST	SCH	0	0	0	0	0	0	178	359	540	723	701	678	654	628	601	
NEW DIESELS DEPREC	SCH	0	0	0	0	0	0	137	279	426	426	426	426	428	428	428	
TOTAL COSTS		3,176	3,299	3,444	3,383	3,326	3,929	4,508	4,863	5,282	5,128	9,158	9,218	9,283	9,344	9,558	
COST PER KWH/SUPP		\$0.1529	\$0.1527	\$0.1878	\$0.1176	\$0.1451	\$0.1250	\$0.1326	\$0.1340	\$0.1431	\$0.1366	\$0.2398	\$0.2370	\$0.2342	\$0.2320	\$0.2337	

COPPER VALLEY ELECTRIC
 ALLISON LAKE
 FILENAME:\SGL\CHALLML

3/21/94

MEDIUM LOW-MEDIUM FUEL CASE

	INFLAT FACTOR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MWH REQUIREMENT														
SOLOMON GULCH		52,808	52,608	52,608	52,608	52,608	52,608	52,606	52,808	52,806	52,606	52,608	52,606	52,606
EXISTING DIESELS		0	0	0	0	0	0	18	37	56	75	95	114	134
NEW DIESELS		15,036	15,829	16,225	16,828	17,437	18,054	18,672	19,297	19,930	20,560	21,195	21,833	22,478
ALLISON LAKE		26,715	28,715	26,715	28,715	26,715	28,715	26,715	26,715	26,715	26,715	26,715	26,715	26,715
LOSSES		(242)	(226)	(211)	(196)	(180)	(164)	(159)	(154)	(149)	(144)	(139)	(134)	(129)
TOTAL REQ		94,115	94,724	95,335	95,953	96,578	97,211	97,852	98,501	99,156	99,812	100,472	101,134	101,802
TOTAL LESS SOLOMON		41,509	42,118	42,729	43,347	43,972	44,605	45,248	45,895	46,552	47,206	47,868	48,528	49,198
FUEL GALLONS		970	1,008	1,047	1,088	1,125	1,185	1,206	1,247	1,289	1,331	1,374	1,418	1,459
FUEL EFFICIENCY		15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
FUEL PRICE	2.75%	0.984	1.011	1.039	1.087	1.096	1.127	1.158	1.189	1.222	1.256	1.290	1.326	1.362
SOLOMON GULCH RATE	2.75%	0.074	0.075	0.076	0.077	0.078	0.079	0.080	0.081	0.082	0.084	0.085	0.086	0.087
DSL FUEL COST		954	1,019	1,087	1,159	1,234	1,312	1,396	1,484	1,576	1,672	1,772	1,877	1,987
LABOR A & E	2.75%	109	112	115	118	121	125	128	132	135	139	143	147	151
LABOR PRODUCTION	2.75%	872	898	920	948	972	998	1,028	1,054	1,083	1,113	1,143	1,175	1,207
ADD 3 OPERATORS	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD MAINTENANCE CREW	SCH	0	0	0	0	0	0	0	0	0	0	0	0	0
GDP GENERAL	2.75%	277	284	292	300	308	317	326	335	344	353	363	373	383
GDP UNITS	2.75%	66	67	69	71	73	75	77	79	81	84	86	88	91
VDP GENERAL	2.75%	289	278	284	292	300	308	318	325	334	343	353	362	372
VDP UNITS	2.75%	88	67	89	71	73	75	77	79	81	84	88	88	91
OTHER	2.75%	39	40	42	43	44	45	46	48	49	50	52	53	54
DSL INTEREST	FIXED	92	85	80	75	70	28	18	3	0	0	0	0	0
DSL DEPREC	FIXED	244	244	195	0	0	0	0	0	0	0	0	0	0
SOLOMON POWER COST		990	1,002	1,015	1,028	1,042	1,056	1,070	1,085	1,100	1,118	1,132	1,148	1,165
ALLISON INTEREST		2,979	2,941	2,901	2,859	2,814	2,787	2,716	2,663	2,608	2,548	2,482	2,415	2,343
ALLISON DEPRECIATION		1,046	1,046	1,046	1,046	1,046	1,046	1,048	1,048	1,048	1,048	1,048	1,048	1,048
ALLISON O & M	2.75%	325	334	343	353	363	373	383	393	404	415	427	438	450
NEW DIESEL BLDG		0	0	0	0	0	0	0	0	0	0	0	0	0
NEW DIESELS O&M	SCH	142	146	150	154	158	162	167	171	176	181	186	191	198
NEW DIESELS INTEREST	SCH	572	540	507	474	435	395	352	307	259	208	152	98	49
NEW DIESELS DEPREC	SCH	578	578	578	578	578	578	578	578	578	578	578	441	299
TOTAL COSTS		9,619	9,679	9,694	9,566	9,630	9,658	9,722	9,782	9,853	9,928	10,000	9,940	9,886
COST PER KWH/SUPP		\$0.2317	\$0.2298	\$0.2289	\$0.2207	\$0.2190	\$0.2165	\$0.2149	\$0.2131	\$0.2117	\$0.2103	\$0.2089	\$0.2048	\$0.2009

COPPER VALLEY ELECTRIC
 ALLISON LAKE
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SUPPORTING SCHEDULES

MEDIUM LOW-MEDIUM FUEL CASE

	INFLAT FACTOR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
NEW DIESEL COSTS													
INTEREST EXPENSE	1996					178	174	169	164	158	152	146	139
INTEREST EXPENSE	1997						185	180	175	169	164	158	151
INTEREST EXPENSE	1998							191	186	181	175	169	163
INTEREST EXPENSE	1999								198	193	187	181	175
SUB INT ON NEW UNITS					0	178	359	540	723	701	678	654	628
DEPRECIATION	1996					137	137	137	137	137	137	137	137
DEPRECIATION	1997						142	142	142	142	142	142	142
DEPRECIATION	1998							147	147	147	147	147	147
DEPRECIATION	1999												
SUB DEPREC ON NEW UNITS					0	137	279	426	426	426	426	426	426
PLANTOPERATOR	2.75%	91	94	96	99	101	104	107	110	113	116	119	123
ADD 1 MAINT CREW	2.75%	91							0	0	0	0	0
ADD 1 MAINT CREW	2.75%	91								0	0	0	0
ADD 1 MAINT CREW	2.75%	91									0	0	0
TOTAL MAINT CREW					0	0	0	0	0	0	0	0	0
CAPITAL COST 2150 KW	3.5%					2,743	2,840	2,939	3,042				
MAINTENANCE													
	1996 2.75%					27	28	29	30	31	31	32	33
	1997 2.75%						28	29	30	31	32	33	33
	1998 2.75%							29	30	31	32	33	34
	1999 2.75%								30	31	32	33	34
TOTAL MAINT NEW UNITS					0	27	57	88	120	124	127	131	134
TOTAL MAINT OLD UNITS	2.75%				50	51	53	54	56	57	59	60	62

COPPER VALLEY ELECTRIC
 ALLISON LAKE
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MEDIUM LOW-MEDIUM FUEL CASE

		INFLAT FACTOR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NEW DIESEL COSTS																
INTEREST EXPENSE	1996		132	124	116	108	99	89	78	67	55	43	29	15		
INTEREST EXPENSE	1997		144	137	129	120	112	102	92	81	70	57	44	30	16	
INTEREST EXPENSE	1998		156	149	141	133	125	115	106	95	84	72	59	46	32	16
INTEREST EXPENSE	1999		169	162	154	146	138	129	119	109	98	87	76	61	48	33
SUB INT ON NEW UNITS			601	572	540	507	474	435	395	352	307	259	208	152	96	49
DEPRECIATION	1996		137	137	137	137	137	137	137	137	137	137	137	137		
DEPRECIATION	1997		142	142	142	142	142	142	142	142	142	142	142	142	142	
DEPRECIATION	1998		147	147	147	147	147	147	147	147	147	147	147	147	147	147
DEPRECIATION	1999		152	152	152	152	152	152	152	152	152	152	152	152	152	152
SUB DEPREC ON NEW UNITS			578	578	578	578	578	578	578	578	578	578	578	578	441	299
PLANTOPERATOR		2.75%	126	129	133	137	140	144	148	152	157	161	165	170	175	179
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADD 1 MAINT CREW		2.75%	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MAINT CREW			0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAPITAL COST 2150 KW		3.5%														
MAINTENANCE																
	1996	2.75%	34	35	36	37	38	39	40	41	42	44	45	46	47	48
	1997	2.75%	34	35	36	37	38	39	40	42	43	44	45	46	48	49
	1998	2.75%	35	36	37	38	39	40	41	42	43	44	45	47	48	49
	1999	2.75%	35	36	37	38	39	40	41	42	43	44	46	47	48	50
TOTAL MAINT NEW UNITS			138	142	146	150	154	158	162	167	171	176	181	186	191	196
TOTAL MAINT OLD UNITS		2.75%	64	66	67	69	71	73	75	77	79	81	84	86	88	91

SUTTON TO GLENNALLEN 138 KV INTERTIE--POWER COST ANALYSIS--NON-INTEGRATED CAPACITY LEASE OR ECONOMY VS INTEGRATED FIRM

2	JANUARY, 21, 1994	REVISED 3/21/94																				
3	ASSUMPTIONS																					
4	INFLATION ADJUSTED	102.75%	ANN. PAY.																			
5	50 YEAR, ZERO INT. LOAN	\$35.0 MILLION	\$700,000																			
6	35 YEAR, 8.00% LOAN	\$17.1 MILLION	\$1,183,207																			
7	TOTAL COST OF LINE	\$52.1 MILLION	\$1,883,207																			
8	POWER COST CLNF 1998 (KWH)*	0.035 CAPACITY LEASE OR ECONOMY ENERGY--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
9	POWER COST FIRM 1998 (KWH)**	10.058 INTEGRATED INTO RAILBELT SYSTEM --INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
10	YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
11	CASE 1A--CAPACITY LEASE OR NON-FIRM--MEDIUM LOW LOAD-- (NOT INTEGRATED)																					
12	INFL. RATE																					
13																						
14	SUPPLEMENTAL KWH REQ.	36,909,000	37,543,000	38,188,000	38,898,000	39,839,000	40,282,000	40,900,000	41,509,000	42,118,000	42,729,000	43,347,000	43,972,000	44,605,000	45,246,000	45,895,000	46,553,000	47,207,000	47,885,000	48,529,000	49,197,000	
15	DEPRECIATION	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	
16	ANNUAL INTEREST	\$1,029,265	\$1,020,029	\$1,010,236	\$999,860	\$988,859	\$977,198	\$964,838	\$951,738	\$937,846	\$923,128	\$907,521	\$890,980	\$873,446	\$854,881	\$835,160	\$814,277	\$792,142	\$768,878	\$743,808	\$717,442	
17	SUBTOTAL DEBT SERVICE	0%	\$2,072,353	\$2,083,117	\$2,053,326	\$2,042,946	\$2,031,947	\$2,020,286	\$2,007,926	\$1,994,824	\$1,980,938	\$1,966,214	\$1,950,809	\$1,934,068	\$1,916,534	\$1,897,949	\$1,878,246	\$1,857,385	\$1,835,230	\$1,811,766	\$1,788,894	
18	DEBT SERVICE COST KWH		0.0581	0.0550	0.0538	0.0525	0.0513	0.0502	0.0491	0.0481	0.0470	0.0460	0.0450	0.0440	0.0430	0.0419	0.0409	0.0399	0.0389	0.0379	0.0368	
19	LINE O&M EXPENSE	2.75%	\$263,412	\$270,856	\$278,099	\$285,747	\$293,805	\$301,879	\$309,975	\$318,499	\$327,258	\$336,258	\$345,505	\$355,008	\$364,769	\$374,800	\$385,107	\$395,897	\$408,579	\$417,760	\$429,248	
20	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,878	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
21	DIESEL PLANT O&M	2.75%	\$114,527	\$117,876	\$120,913	\$124,238	\$127,854	\$131,185	\$134,772	\$138,478	\$142,286	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
22	SUBTOTAL LINE OP. COST		\$2,879,348	\$2,886,802	\$2,894,163	\$2,901,408	\$2,908,514	\$2,915,459	\$2,922,216	\$2,928,757	\$2,935,052	\$2,941,088	\$2,946,872	\$2,952,125	\$2,957,086	\$2,961,618	\$2,965,868	\$2,969,189	\$2,972,129	\$2,974,430	\$2,977,031	\$2,978,869
23	LINE OP. COST KWH		0.0728	0.0716	0.0705	0.0694	0.0683	0.0674	0.0664	0.0654	0.0644	0.0634	0.0624	0.0614	0.0604	0.0594	0.0584	0.0574	0.0564	0.0554	0.0544	
24	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$86,000	\$80,000	\$75,000	\$70,000	\$66,000	\$62,000	\$58,000	\$55,000	\$52,000	\$49,000	\$47,000	\$45,000
25	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
26	SUB-TOTAL COST LESS P.C.		\$3,070,348	\$3,087,802	\$3,088,163	\$3,084,408	\$3,083,514	\$3,084,459	\$3,084,216	\$3,084,757	\$3,084,052	\$3,083,088	\$3,081,772	\$3,080,125	\$3,078,086	\$3,075,618	\$3,072,868	\$3,069,189	\$3,064,129	\$3,057,430	\$3,049,031	\$3,038,869
27	COST, LESS POWER COST KWH		0.0832	0.0817	0.0803	0.0788	0.0773	0.0761	0.0749	0.0738	0.0727	0.0716	0.0705	0.0694	0.0684	0.0674	0.0664	0.0654	0.0644	0.0634	0.0624	
28	POWER COST	2.75%	\$1,291,815	\$1,350,140	\$1,373,338	\$1,398,889	\$1,425,518	\$1,448,841	\$1,470,888	\$1,492,787	\$1,514,889	\$1,536,842	\$1,558,868	\$1,581,343	\$1,604,107	\$1,627,159	\$1,650,499	\$1,674,162	\$1,697,682	\$1,721,345	\$1,745,224	\$1,769,247
29	TOTAL COST OF POWER		\$4,362,161	\$4,417,942	\$4,439,499	\$4,463,277	\$4,486,738	\$4,513,100	\$4,535,082	\$4,557,525	\$4,578,721	\$4,599,710	\$4,620,638	\$4,641,469	\$4,662,195	\$4,682,778	\$4,703,259	\$4,723,682	\$4,744,057	\$4,764,384	\$4,784,663	\$4,804,896
30	COST OF POWER KWH		0.1182	0.1177	0.1183	0.1147	0.1213	0.1120	0.1109	0.1098	0.1087	0.1085	0.1011	0.1001	0.0984	0.0974	0.0963	0.0954	0.0947	0.0939	0.0932	
32	CASE 2A-- FIRM--MEDIUM LOW LOAD--(INTEGRATED)																					
33																						
34	COST OF SUPP. POWER	2.75%	\$2,088,904	\$2,160,224	\$2,197,338	\$2,238,191	\$2,280,828	\$2,317,828	\$2,353,388	\$2,388,428	\$2,423,470	\$2,458,827	\$2,494,188	\$2,530,149	\$2,568,572	\$2,603,455	\$2,640,798	\$2,678,660	\$2,718,291	\$2,754,152	\$2,792,359	\$2,830,795
35	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,878	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
36	DIESEL PLANT O&M	2.75%	\$114,527	\$117,876	\$120,913	\$124,238	\$127,854	\$131,185	\$134,772	\$138,478	\$142,286	\$146,199	\$150,219	\$154,350	\$158,595	\$162,958	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
37	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$86,000	\$80,000	\$75,000	\$70,000	\$66,000	\$62,000	\$58,000	\$55,000	\$52,000	\$49,000	\$47,000	\$45,000
38	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
39	TOTAL POWER COST		\$2,801,485	\$2,894,254	\$2,932,075	\$2,973,904	\$3,018,791	\$3,066,320	\$3,099,701	\$3,139,882	\$3,179,328	\$3,172,224	\$3,019,845	\$3,063,200	\$3,088,357	\$3,110,324	\$3,146,112	\$3,194,787	\$3,248,811	\$3,299,058	\$3,352,248	\$3,406,082
40	TOTAL COST KWH		0.0759	0.0771	0.0768	0.0785	0.0782	0.0780	0.0758	0.0758	0.0755	0.0742	0.0697	0.0697	0.0688	0.0687	0.0688	0.0688	0.0688	0.0689	0.0691	0.0692
41	***ANNUAL SAVINGS		\$1,560,678	\$1,523,689	\$1,607,423	\$1,489,373	\$1,789,948	\$1,452,780	\$1,435,381	\$1,417,683	\$1,399,393	\$1,380,487	\$1,360,794	\$1,340,268	\$1,318,838	\$1,298,453	\$1,273,055	\$1,248,565	\$1,223,200	\$1,198,719	\$1,169,008	\$1,150,034
42	TOTAL SAVINGS FOR STUDY PERIOD		\$27,533,748																			
44	*BASED ON ML&P MID CASE + 1 MILL FOR WHEELING (ML&P) LETTER FEBRUARY 1994--** BASED ON INFORMATION PROVIDED BY CHUGACH (DECEMBER 1993) ***SAVINGS COMPARING CASE 1 TO CASE 2.																					

COPPER VALLEY ELECTRIC
DIESEL EXPANSION CASE ASSUMPTIONS

1. General rate of inflation 2.75 %.
2. Add three operators in 1999.
3. Add three-man maintenance crew. One each 1999, 2000, and 2001 for meduim-high case. (add two for medium-low)
4. New diesel cost \$1,112 in 1992 dollars, interest 6.5%, 20 year life, no salvage for depreciation.
5. New diesel O&M 1 % of capital cost.
6. Load forecast assumes Beck mwh.
7. Fuel efficiency:

1995-96	13
1997	14.5
1998	15
1999-2017	15.5
8. Glennallen and Valdez maintenance on units set at \$50,000/year each plant. Indexed to inflation.
9. Assume diesel units are added in 1995, 1996, 1997, 1998, and 2004.

COPPER VALLEY ELECTRIC
ALLISON LAKE ASSUMPTIONS

1. Use Beck load forecast assumptions as to resource output.
2. General rate of inflation 2.75 %.
3. Inflate Solomon Gulch power cost at rate of inflation for O&M component only.
4. Assume reduction of 1.5 operators in 1999.
5. Assume diesel units added in 1996, 1997, 1998, and 1999.
6. Assume Beck cost of power analysis as to project cost.
7. Assume 50-year life for depreciation.
8. Assume 6%, 35-year loan (see attached amortization schedule).
9. Assume maintenance on new diesels at 1% of cost.
10. New diesel cost \$1,112kw in 1992 dollars, interest 6.5%, 20-year life, no salvage for depreciation.
11. Glennallen and Valdez maintenance on units set at \$50,000/year each plant. Indexed to inflation.

COPPER VALLEY ELECTRIC
INTERTIE ASSUMPTIONS

1. Project Cost
 \$52.1 million per Beck cost of power analysis.
2. Project Finance
 State loan 50-year, 0%, \$35 million
 REA loan 35-year, 6%, \$17.1 million
3. Cost of Power
 Nonfirm 3.5¢ in 1998
 Firm 5.6¢ in 1998
4. General rate of inflation 2.75 %
5. Assume two standby diesel operators
6. Assume diesel O&M \$100,000/year in 1995
7. Assume 50-year life, no salvage for depreciation
8. Assume intertie O&M per Beck study

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

SUTTON/GLENNALLEN LINE	SUPP	35,000,000	DEPRECIATION	17,154,423	52,154,423
		50		35	50
		700,000		490,126	1,043,088
PRINCIPAL	17,154,423				
INTEREST RATE	6.0%				
TERM	35				
PAYMENT	(1,183,206.75)				

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				17,154,423
1	1,183,207	1,029,265	153,941	17,000,482
2	1,183,207	1,020,029	163,178	16,837,304
3	1,183,207	1,010,238	172,969	16,664,335
4	1,183,207	999,860	183,347	16,480,989
5	1,183,207	988,859	194,347	16,286,641
6	1,183,207	977,198	206,008	16,080,633
7	1,183,207	964,838	218,369	15,862,264
8	1,183,207	951,736	231,471	15,630,793
9	1,183,207	937,848	245,359	15,385,434
10	1,183,207	923,126	260,081	15,125,353
11	1,183,207	907,521	275,686	14,849,668
12	1,183,207	890,980	292,227	14,557,441
13	1,183,207	873,446	309,760	14,247,681
14	1,183,207	854,861	328,346	13,919,335
15	1,183,207	835,160	348,047	13,571,288
16	1,183,207	814,277	368,929	13,202,359
17	1,183,207	792,142	391,065	12,811,294
18	1,183,207	768,678	414,529	12,396,764
19	1,183,207	743,806	439,401	11,957,364
20	1,183,207	717,442	465,765	11,491,599
21	1,183,207	689,496	493,711	10,997,888
22	1,183,207	659,873	523,333	10,474,554
23	1,183,207	628,473	554,733	9,919,821
24	1,183,207	595,189	588,018	9,331,803
25	1,183,207	559,908	623,299	8,708,505
26	1,183,207	522,510	660,696	8,047,808
27	1,183,207	482,868	700,338	7,347,470
28	1,183,207	440,848	742,359	6,605,111
29	1,183,207	396,307	786,900	5,818,211
30	1,183,207	349,093	834,114	4,984,097
31	1,183,207	299,046	884,161	4,099,936
32	1,183,207	245,996	937,211	3,162,726
33	1,183,207	189,764	993,443	2,169,283
34	1,183,207	130,157	1,053,050	1,116,233
35	1,183,207	66,974	1,116,233	0

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

ALLISON LAKE

PRINCIPAL	52,296,000
INTEREST RATE	6.0%
TERM	35
PAYMENT	(3,607,056.93)
DEPRECIATION	1,045,920 50 YEARS

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				52,296,000
1	3,607,057	3,137,760	469,297	51,826,703
2	3,607,057	3,109,602	497,455	51,329,248
3	3,607,057	3,079,755	527,302	50,801,946
4	3,607,057	3,048,117	558,940	50,243,006
5	3,607,057	3,014,580	592,477	49,650,530
6	3,607,057	2,979,032	628,025	49,022,504
7	3,607,057	2,941,350	665,707	48,356,798
8	3,607,057	2,901,408	705,649	47,651,149
9	3,607,057	2,859,069	747,988	46,903,161
10	3,607,057	2,814,190	792,867	46,110,293
11	3,607,057	2,766,618	840,439	45,269,854
12	3,607,057	2,716,191	890,866	44,378,988
13	3,607,057	2,662,739	944,318	43,434,671
14	3,607,057	2,606,080	1,000,977	42,433,694
15	3,607,057	2,546,022	1,061,035	41,372,659
16	3,607,057	2,482,360	1,124,697	40,247,961
17	3,607,057	2,414,878	1,192,179	39,055,782
18	3,607,057	2,343,347	1,263,710	37,792,072
19	3,607,057	2,267,524	1,339,533	36,452,540
20	3,607,057	2,187,152	1,419,905	35,032,635
21	3,607,057	2,101,958	1,505,099	33,527,536
22	3,607,057	2,011,652	1,595,405	31,932,131
23	3,607,057	1,915,928	1,691,129	30,241,002
24	3,607,057	1,814,460	1,792,597	28,448,406
25	3,607,057	1,706,904	1,900,153	26,548,253
26	3,607,057	1,592,895	2,014,162	24,534,091
27	3,607,057	1,472,045	2,135,011	22,399,080
28	3,607,057	1,343,945	2,263,112	20,135,968
29	3,607,057	1,208,158	2,398,899	17,737,069
30	3,607,057	1,064,224	2,542,833	15,194,236
31	3,607,057	911,654	2,695,403	12,498,833
32	3,607,057	749,930	2,857,127	9,641,706
33	3,607,057	578,502	3,028,555	6,613,152
34	3,607,057	396,789	3,210,268	3,402,884
35	3,607,057	204,173	3,402,884	0

COPPER VALLEY ELECTRIC
DIESEL CASE ASSUMPTIONS

	1992 PRICE PER KW	1,112	1,112	COST FOR 2150 KW	
	INFLATE AT	3.5%	5.0%		
1993		1,151	1,168	2,474,478	2,510,340
1994		1,191	1,226	2,561,085	2,635,857
1995		1,233	1,287	2,650,723	2,767,650
1996		1,276	1,352	2,743,498	2,906,032
1997		1,321	1,419	2,839,520	3,051,334
1998		1,367	1,490	2,938,904	3,203,901
1999		1,415	1,565	3,041,765	3,364,096
2000		1,464	1,643	3,148,227	3,532,300
2001		1,516	1,725	3,258,415	3,708,915
2002		1,569	1,811	3,372,460	3,894,361
2003		1,623	1,902	3,490,496	4,089,079
2004		1,680	1,997	3,612,663	4,293,533
2005		1,739	2,097	3,739,106	4,508,210

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

YEAR ACQUIRED	1995
PRINCIPAL	2,648,800
INTEREST RATE	6.5%
TERM	20
PAYMENT	(240,395.54)
ANN DEPREC	132,440
COST ESCALATOR	3%

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				2,648,800
1	240,396	172,172	68,224	2,580,576
2	240,396	167,737	72,658	2,507,918
3	240,396	163,015	77,381	2,430,538
4	240,396	157,985	82,411	2,348,127
5	240,396	152,628	87,767	2,260,360
6	240,396	146,923	93,472	2,166,887
7	240,396	140,848	99,548	2,067,340
8	240,396	134,377	106,018	1,961,321
9	240,396	127,486	112,910	1,848,412
10	240,396	120,147	120,249	1,728,163
11	240,396	112,331	128,065	1,600,098
12	240,396	104,006	136,389	1,463,709
13	240,396	95,141	145,254	1,318,454
14	240,396	85,700	154,696	1,163,758
15	240,396	75,644	164,751	999,007
16	240,396	64,935	175,460	823,547
17	240,396	53,531	186,865	636,682
18	240,396	41,384	199,011	437,670
19	240,396	28,449	211,947	225,724
20	240,396	14,672	225,724	0

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

YEAR ACQUIRED	1996
PRINCIPAL	2,743,400
INTEREST RATE	6.5%
TERM	20
PAYMENT	(248,981.10)
ANN DEPREC	137,170
COST ESCALATOR	3%

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				2,743,400
1	248,981	178,321	70,660	2,672,740
2	248,981	173,728	75,253	2,597,487
3	248,981	168,837	80,144	2,517,342
4	248,981	163,627	85,354	2,431,989
5	248,981	158,079	90,902	2,341,087
6	248,981	152,171	96,810	2,244,276
7	248,981	145,878	103,103	2,141,173
8	248,981	139,176	109,805	2,031,368
9	248,981	132,039	116,942	1,914,426
10	248,981	124,438	124,543	1,789,883
11	248,981	116,342	132,639	1,657,244
12	248,981	107,721	141,260	1,515,984
13	248,981	98,539	150,442	1,365,542
14	248,981	88,760	160,221	1,205,321
15	248,981	78,346	170,635	1,034,686
16	248,981	67,255	181,727	852,959
17	248,981	55,442	193,539	659,420
18	248,981	42,862	206,119	453,302
19	248,981	29,465	219,516	233,785
20	248,981	15,196	233,785	0

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

YEAR ACQUIRED	1997
PRINCIPAL	2,840,150
INTEREST RATE	6.5%
TERM	20
PAYMENT	(257,761.78)
ANN DEPREC	142,008
COST ESCALATOR	3%

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				2,840,150
1	257,762	184,610	73,152	2,766,998
2	257,762	179,855	77,907	2,689,091
3	257,762	174,791	82,971	2,606,120
4	257,762	169,398	88,364	2,517,756
5	257,762	163,654	94,108	2,423,649
6	257,762	157,537	100,225	2,323,424
7	257,762	151,023	106,739	2,216,685
8	257,762	144,085	113,677	2,103,008
9	257,762	136,695	121,066	1,981,941
10	257,762	128,826	128,936	1,853,006
11	257,762	120,445	137,316	1,715,689
12	257,762	111,520	146,242	1,569,447
13	257,762	102,014	155,748	1,413,700
14	257,762	91,890	165,871	1,247,828
15	257,762	81,109	176,653	1,071,175
16	257,762	69,626	188,135	883,040
17	257,762	57,398	200,364	682,676
18	257,762	44,374	213,388	469,288
19	257,762	30,504	227,258	242,030
20	257,762	15,732	242,030	0

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

YEAR ACQUIRED	1998
PRINCIPAL	2,939,050
INTEREST RATE	6.5%
TERM	20
PAYMENT	(266,737.58)
ANN DEPREC	146,953
COST ESCALATOR	3%

YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				2,939,050
1	266,738	191,038	75,699	2,863,351
2	266,738	186,118	80,620	2,782,731
3	266,738	180,878	85,860	2,696,871
4	266,738	175,297	91,441	2,605,430
5	266,738	169,353	97,385	2,508,045
6	266,738	163,023	103,715	2,404,331
7	266,738	156,281	110,456	2,293,874
8	266,738	149,102	117,636	2,176,239
9	266,738	141,456	125,282	2,050,957
10	266,738	133,312	133,425	1,917,531
11	266,738	124,640	142,098	1,775,433
12	266,738	115,403	151,334	1,624,099
13	266,738	105,566	161,171	1,462,928
14	266,738	95,090	171,647	1,291,280
15	266,738	83,933	182,804	1,108,476
16	266,738	72,051	194,687	913,789
17	266,738	59,396	207,341	706,448
18	266,738	45,919	220,818	485,629
19	266,738	31,566	235,172	250,458
20	266,738	16,280	250,458	0

COPPER VALLEY ELECTRIC
AMORTIZATION SCHEDULE

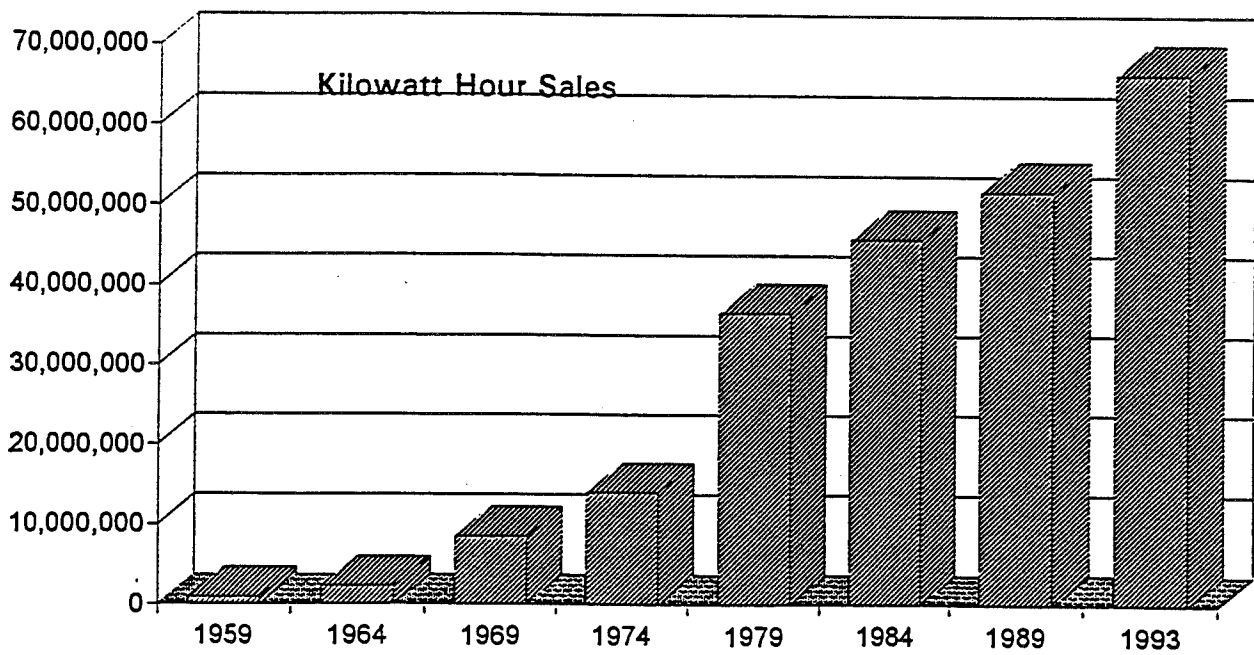
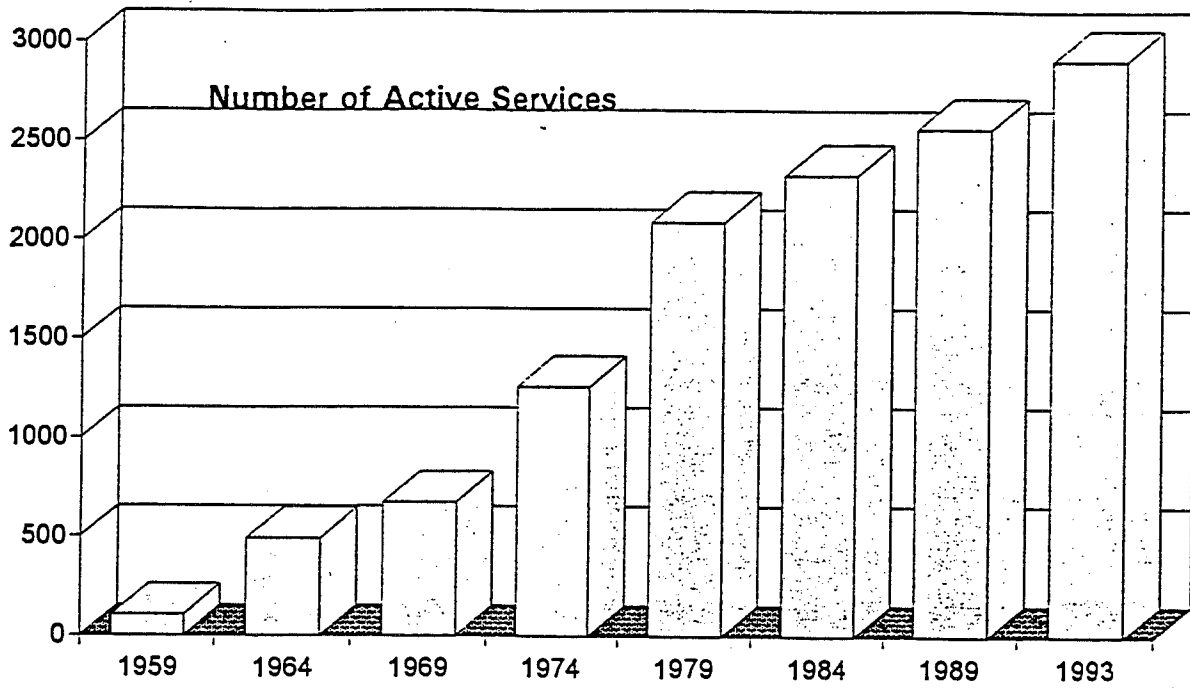
YEAR ACQUIRED	2004
PRINCIPAL	3,612,000
INTEREST RATE	6.5%
TERM	20
PAYMENT	(327,812.10)
ANN DEPREC	180,600
COST ESCALATOR	3%

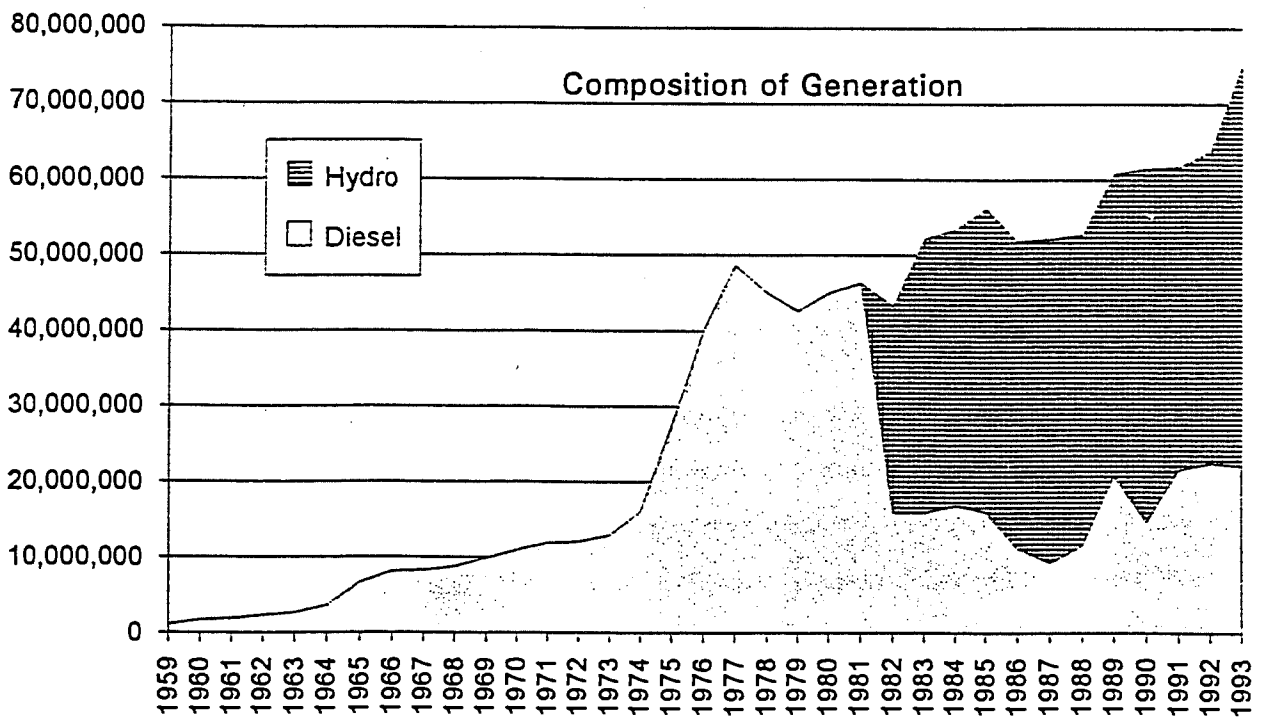
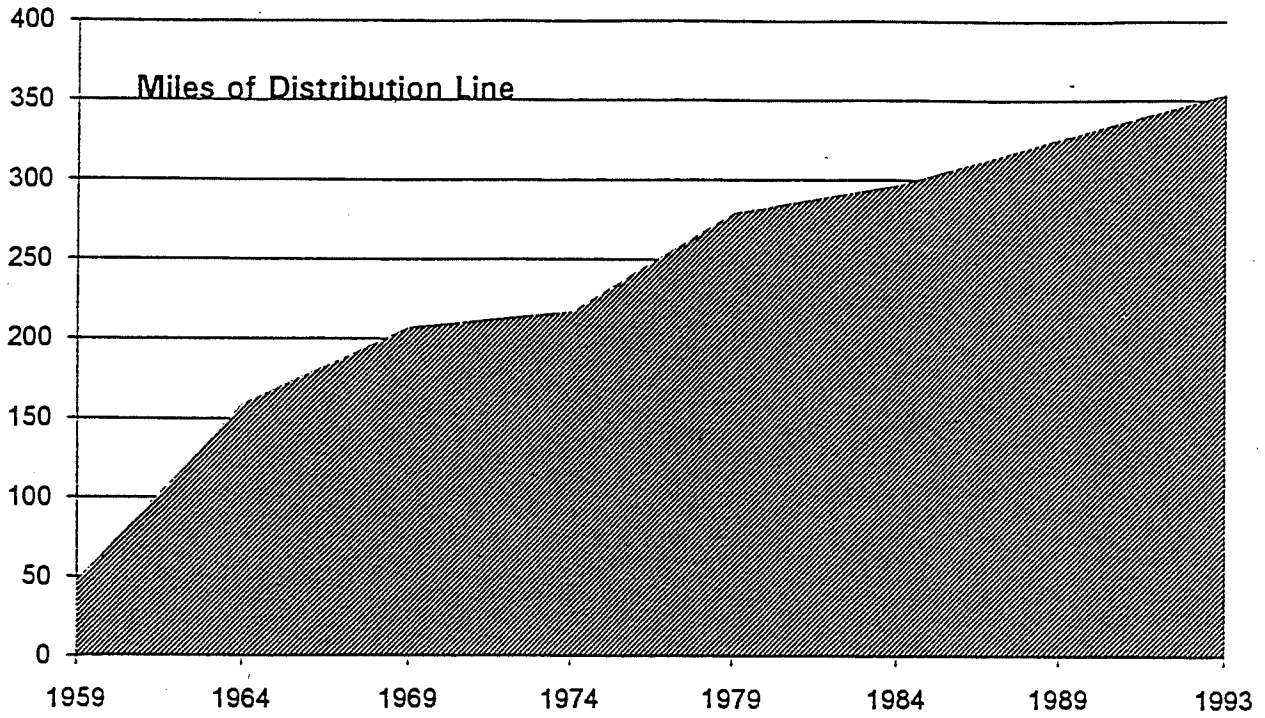
YEAR	PAYMENT	INTEREST	PRINCIPAL	BALANCE
				3,612,000
1	327,812	234,780	93,032	3,518,968
2	327,812	228,733	99,079	3,419,889
3	327,812	222,293	105,519	3,314,369
4	327,812	215,434	112,378	3,201,991
5	327,812	208,129	119,683	3,082,309
6	327,812	200,350	127,462	2,954,847
7	327,812	192,065	135,747	2,819,100
8	327,812	183,241	144,571	2,674,529
9	327,812	173,844	153,968	2,520,561
10	327,812	163,836	163,976	2,356,586
11	327,812	153,178	174,634	2,181,951
12	327,812	141,827	185,985	1,995,966
13	327,812	129,738	198,074	1,797,892
14	327,812	116,863	210,949	1,586,943
15	327,812	103,151	224,661	1,362,282
16	327,812	88,548	239,264	1,123,018
17	327,812	72,996	254,816	868,202
18	327,812	56,433	271,379	596,823
19	327,812	38,794	289,019	307,805
20	327,812	20,007	307,805	0

COPPER VALLEY ELECTRIC LOAD FORECAST RESULTS

YEAR	NUMBER OF SERVICES				
	BECK			CVEA	CVEA
	MED LOW	MED HIGH	HIGH	PRS	ACTUAL
1993	2,912	2,912	2,913	2,893	2,943
1994	2,959	2,959	2,986	2,957	
1995	3,017	3,017	3,071	3,030	
1996	3,076	3,076	3,157	3,112	

	PETRO STAR DEMAND (KW)				
	BECK			CVEA	CVEA
	MED LOW	MED HIGH	HIGH	PRS	ACTUAL
1993	1,600	1,600	1,600	2,375	1,800
1994	1,900	1,900	1,900	2,375	
1995	2,400	2,400	2,400	2,375	
1996	2,700	2,700	2,700	2,375	
1997	3,000	3,000	3,000	2,375	
2004	3,000	5,500	5,500	2,375	







CHUGACH ELECTRIC

ASSOCIATION, INC.

DAVID L. HIGHERS
General Manager

March 14, 1994

Mr. Clayton Hurless
General Manager
Copper Valley Electric Association, Inc.
P.O. Box 45
Glennallen, AK 99588-0045

Subject: *Wholesale Power Provision/CVEA Intertie*

Dear Clayton:

Chugach has previously provided the conceptual framework for provision of wholesale power to Copper Valley Electric Association. Tom Lovas, Chugach's Manager of Planning and Rates made an oral presentation of the concepts to the CVEA Board at the December 3, 1993 special board meeting in Valdez. The purpose of this letter is two-fold: 1) to indicate our continuing interest in working with CVEA to develop a mutually beneficial power supply arrangement; and, 2) to affirm the cost estimates associated with the concepts discussed at that meeting.

Chugach is committed to providing cost-effective wholesale and retail energy today and into the future. We wish to be considered a resource to CVEA, and are prepared to assist CVEA in securing long-term power supplies. In that vein, we have submitted formal comments on the draft CVEA Intertie Feasibility Study that support the development of the transmission line accessing Railbelt power supplies and we stand ready to provide additional assistance at your request. The memorandum of understanding we previously provided to you will support the dedication of Chugach's resources toward the development of an appropriate arrangement.

As we indicated in December, our preference is for a firm power sale. A firm power arrangement provides the assurance an adequate and continuous supply for CVEA members. Further, it would provide a basis for development of future loads, such as expansion to serve the Alyeska terminal. Finally, it would provide security for Chugach investment in the generation and transmission facilities necessary to serve CVEA.

Preliminary analysis completed by Chugach staff indicates that CVEA's overall cost of power could potentially be reduced significantly by entering into a net requirements power supply arrangement with Chugach. Net requirements means provision of all power required in excess of that produced by Solomon Gulch which is currently purchased directly by CVEA. Under a net requirements arrangement, Chugach could participate in the construction of the CVEA intertie in such a way that the costs of the intertie would be included in the generation and transmission cost pool of Chugach.

Mr. Clayton Hurlless
Wholesale Power Provision/CVEA Intertie

March 14, 1994

Page 2

The initial cost of such net requirements power delivered to the Pump Station 11 substation, with an intertie construction cost of \$40 million, was estimated at approximately 5.4 ¢/kWh beginning in 1996. This assumes that the total cost of the CVEA intertie (i.e., state loan, any additional financing and operation and maintenance expenses) would be included in Chugach's generation and transmission costs and allocated among all Chugach firm power customers. If the construction cost is increased to the R.W. Beck estimate of \$52 million, the cost of power under that type of arrangement would increase to around 5.5 ¢/kWh in 1996. With firm, net requirements service, CVEA will, of course, be eligible for capital credits in the same fashion as other wholesale customers.

Under the net requirements arrangement with Chugach participating in the interties in that fashion, we estimate that the break-even point for existing Chugach customers would be between 4 and 6 years following the completion of the line. We do not consider that period to be unreasonable for a power supply arrangement that could extend, theoretically, for the economic life of the transmission line.

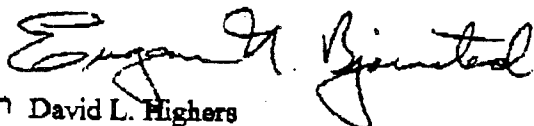
Chugach could, alternatively, provide net requirements for CVEA without pooling the cost of the line, delivered to O'Neill, at a rate on the order of 5.1 ¢/kWh in 1996. In this alternative, CVEA would shoulder the entire burden of the intertie costs.

However, if CVEA were to shoulder the entire burden of the intertie costs, CVEA would presumably look to non-assured, interruptible power delivered to O'Neill substation at a lower cost of around 3.5 ¢/kWh (in 1996). We are not particularly interested in providing non-firm service. Furthermore, our estimates indicated that CVEA would see much greater potential interconnection benefits from net requirements and pooled transmission costs than from non-firm service. In the event of interruptible power provision, we would be unable to obligate our system to CVEA, and there would be no guarantee of power deliveries. Non-assured supplies or limited service obligations on the part of Chugach (or any other railbelt utility) would likely constrain CVEA's ability to negotiate for the Alyeska terminal load or, perhaps, other potential and significant sales opportunities.

The estimates in this letter are projected rates under alternative concepts for supplying power to CVEA. Before we formally offer to contract we would like to discuss these and any other concepts and methodologies in detail. Of course, approval of the Chugach board and the APUC will be required. I trust this information is helpful to your consideration of a power supply arrangement. Please let me know if any other information would assist you in considering our proposed memorandum of understanding. We seek to be CVEA's supplier of choice, and support your efforts to secure low-cost power for your members.

Sincerely,

CHUGACH ELECTRIC ASSOCIATION, INC.



David L. Highers
General Manager

APUC No. 8 21st Revision Sheet No. 99

Cancelling

20th Revision Sheet No. 99

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NOV 19 1993

State of Alaska
Public Utilities Commission

CHUGACH ELECTRIC ASSOCIATION, INC.

SALES FOR RESALE

Available to either "All Power Requirements" or "Partial Requirements" wholesale customers who have long-term special contracts with Chugach which have been approved by the APUC. Available from Chugach's integrated transmission system at various points of delivery.

Monthly Rates

Customer Charge: \$150.00 per Meter

Energy Charge:

AEG&T d/b/a Homer Electric Assoc., Inc. \$0.01196 per kWh I
All Other Wholesale Customers \$0.01174 per kWh I

Demand Charge:

AEG&T d/b/a Matanuska Electric Assoc., Inc. \$16.65 per kW I
AEG&T d/b/a Homer Electric Assoc., Inc. \$10.60 per kW I
City of Seward \$12.40 per kW I

Premium Demand Charge:

AEG&T d/b/a Homer Electric Assoc., Inc. \$12.98 per kW I

Billing Demand: For "All Requirements" consumers, the billing demand shall be the maximum 15-minute integrated demand in the billing month. For "Partial Requirements" consumers, the monthly billing demand will be the demand level specified in the consumer's contract with Chugach. The premium demand charge will be applied to each kW of peak demand in excess of the contract capacity, if Chugach supplies the power to meet the excess demand.

Power Factor: The customer will make a reasonable effort to maintain unity power factor. Demand charges will be adjusted to correct for average power factors less than 90%. Such adjustments will be made by increasing the measured demand 1% for each 1% by which the average power factor is less than 90% lagging.

Fuel and Purchased Power Cost Adjustment: In accordance with Tariff Sheet Nos. 90 - 96, a surcharge or credit will be applied to each billing for service rendered under this schedule to reflect increases or decreases in fuel and purchased power expenses.

Tariff Advice No. 151-8Effective: 01/01/94

Chugach Electric Association, Inc.

Issued by P. O. Box 196300, Anchorage, Alaska 99519-6300By: David L. Hichers Title: General Manager

APUC No. 3 27th Revision Sheet No. 94
 Cancelling
 26th Revision Sheet No. 94

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State of Alaska
 Public Utilities Commission

CHUGACH ELECTRIC ASSOCIATION, INC.

FUEL AND PURCHASED POWER COST ADJUSTMENT FACTOR

e.1. Predicted costs for the quarter beginning January 1, 1994:

Source	Estimated Quantities	Cost Per Unit	Calculation of Predicted Costs	
			Except HEA	HEA Only
a) Beluga Gas - Mcf's	4,898,192	\$0.7833	\$3,836,754	\$3,836,754
b) Bernice Lake Gas - Mcf's	30,105	\$1.5900	\$47,873	\$47,873
c) International Gas - Mcf's	37,367	\$2.2200	\$82,955	\$82,955
d) Purch Power-Eklutna - MWh	24,999	\$17.0000	\$424,983	\$424,983
e) Purch Power-Bradley - MWh	55,886	---	\$1,568,776	---
f) Purch Power - ANLP - MWh	0	\$0.0000	\$0	\$0
g) Fuel Oil			\$0	\$0
h) Other Purchases			\$0	\$0
i) Alaska Intertie Expense			\$12,000	\$12,000
j) Wheeling Revenue Credit			(\$120,000)	(\$120,000)
k) Economy Margins Credit			(\$319,210)	(\$319,210)
2. Predicted Total Fuel & Purchased Power Costs			\$5,534,131	\$3,965,355
a. Less: HEA Assigned Costs (L 12)			\$836,434	---
3. Predicted Fuel & Purchased Power Costs			\$4,697,697	\$3,965,355
4. Predicted MWh Generation & Purchases			541,931.1	541,931.1
a. Less Purch Power - Bradley Lake			---	55,886.4
b. Less HEA at Generation			102,524.0	---
5. Net Predicted MWh Generation & Purchases			439,407.0	486,044.7
6. Predicted Cost/MWh at Generator			\$10.69099	\$8.15842
7. Projected Balance: January 1, 1994		Retail (\$324,572)	MEA/SES (\$161,234)	HEA (\$140,261)
8. Predicted Cost/MWh at Generator		\$10.69099	\$10.69099	\$8.15842
9. Predicted Line Loss Factor		5.340%	5.219%	5.219%
10. Predicted Cost/MWh Sold		\$11.26192	\$11.24895	\$8.58420
11. Predicted MWh Sales		271,216.2	144,459.1	97,438.7
12. Predicted Fuel & Purch. Power Costs		\$3,854,415	\$1,625,014	\$836,434
13. Predicted MWh Sales		271,216.2	144,459.1	97,438.7
14. Base Fuel Cost/MWh		\$6.50498	\$6.18332	\$6.18332
15. Base Rate Fuel Cost Recovery		\$1,784,256	\$893,237	\$602,495
16. Fuel Costs to be Recovered		\$965,587	\$570,543	\$93,678
17. Predicted MWh Sales		271,216.2	144,459.1	97,438.7
18. Fuel Adjustment Factor/kwh		\$0.00356	\$0.00395	\$0.00096

Tariff Advice No. 150-8 Effective: 01/01/94

Chugach Electric Association, Inc.
 Issued by: P. O. Box 196300, Anchorage, Alaska 99519-6300
 By: [Signature] Title: General Manager



COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

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APR 01 1994

DIVISION OF ENERGY/DCRA

March 29, 1994

Mr. Herv Hensley
Division of Energy
Department of Community & Regional Affairs
333 West 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Herv:

Enclosed are the corrected spreadsheets on the cost comparisons of the resource options I delivered on Friday. The inflation rate on the cost of purchase power was erroneously calculated and has been corrected on the enclosed sheets.

Sorry for any inconvenience this error may have caused. Give me a call if you have any questions.

Yours truly,

Clayton Hurless
General Manager

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Revised table from page 2 of March 22, 1994, letter as a result of changed resource outputs.

CENTS PER KWH					
	BECK	CVEA		BECK	CVEA
YEAR	2000	2000		2010	2010
MEDIUM HIGH					
Diesel	12.6	14.2		18.5	14.5
Allison Lake	18.8	20.6		19.9	17.2
Intertie (nonfirm)		10.3			9.1
Intertie (firm)	10.2	7.5		12.6	8.5
MEDIUM LOW					
Diesel	12.9	16.1		19.6	17.4
Allison Lake	20.6	24.0		19.6	21.6
Intertie (nonfirm)		11.7			11.1
Intertie (firm)	11.2	7.8		13.3	8.9

C:\WPDOCS\CDH\REVTABLE

FILE: SUMCOMP. MARCH 28, 1994		SUMMARY OF COST COMPARISONS OF ALTERNATIVE POWER SUPPLY OPTIONS																			
MEDIUM HIGH LOAD-MEDIUM FUEL		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
2	YEAR																				
3	SUPPLEMENTARY KWH REQUIRED	38,999	42,799	46,574	50,386	54,000	57,516	61,012	61,622	62,230	62,842	63,459	64,084	64,717	65,359	66,007	66,665	67,317	67,972	68,631	69,295
5	UNIT COST OF POWER---- ALL VALUES EXPRESSED IN LINES 6,7,8 & 9 ARE IN \$ KWH																				
6	DIESEL EXP. COST OF POWER	\$0.1496	\$0.1450	\$0.1420	\$0.1399	\$0.1368	\$0.1341	\$0.1395	\$0.1410	\$0.1425	\$0.1433	\$0.1419	\$0.1436	\$0.1451	\$0.1464	\$0.1481	\$0.1499	\$0.1519	\$0.1520	\$0.1523	\$0.1528
7	ALLISON LAKE POWER COST	\$0.1383	\$0.1284	\$0.2064	\$0.1957	\$0.1872	\$0.1802	\$0.1768	\$0.1766	\$0.1764	\$0.1755	\$0.1724	\$0.1723	\$0.1716	\$0.1716	\$0.1714	\$0.1711	\$0.1715	\$0.1716	\$0.1697	\$0.1682
8	INTERTIE--NON-FIRM--NON-INTEG.	\$0.1137	\$0.1077	\$0.1028	\$0.0988	\$0.0957	\$0.0934	\$0.0914	\$0.0921	\$0.0927	\$0.0927	\$0.0904	\$0.0912	\$0.0915	\$0.0923	\$0.0931	\$0.0941	\$0.0952	\$0.0963	\$0.0975	\$0.0988
9	INTERTIE--FIRM--INTEGRATED	\$0.0748	\$0.0747	\$0.0749	\$0.0753	\$0.0761	\$0.0770	\$0.0781	\$0.0799	\$0.0817	\$0.0828	\$0.0817	\$0.0838	\$0.0853	\$0.0874	\$0.0895	\$0.0919	\$0.0943	\$0.0966	\$0.0994	\$0.1021
11	ANNUAL POWER COST----ALL VALUES EXPRESSED IN LINES 12,13,14 & 15 ARE IN \$ ANNUALLY (000)																				
12	DIESEL CASE (L3 x L8)	\$5,834	\$6,206	\$6,814	\$7,049	\$7,376	\$7,713	\$8,511	\$8,689	\$8,868	\$9,005	\$9,005	\$9,202	\$9,390	\$9,569	\$9,776	\$9,993	\$10,225	\$10,332	\$10,453	\$10,588
13	ALLISON LAKE (L3 x L7)	\$5,394	\$5,410	\$9,613	\$9,861	\$10,109	\$10,364	\$10,787	\$10,882	\$10,977	\$11,029	\$10,940	\$11,042	\$11,105	\$11,216	\$11,314	\$11,809	\$11,545	\$11,664	\$11,647	\$11,655
14	INTERTIE--NON-INTEG. (L3 x L8)	\$4,434	\$4,809	\$4,786	\$4,978	\$5,166	\$5,372	\$5,578	\$5,875	\$5,769	\$5,825	\$5,737	\$5,844	\$5,922	\$6,033	\$6,145	\$6,273	\$6,409	\$6,548	\$6,692	\$6,846
15	INTERTIE--INTEGRATED (L3 x L9)	\$2,917	\$3,197	\$3,488	\$3,794	\$4,109	\$4,429	\$4,765	\$4,924	\$5,084	\$5,203	\$5,185	\$5,370	\$5,520	\$5,712	\$5,908	\$6,127	\$6,348	\$6,580	\$6,822	\$7,075
17	ANNUAL SAVINGS----NON-INTEGRATED INTERTIE---- ALL VALUES EXPRESSED IN \$'s ANNUALLY (000)																				
18	INTERTIE TO DIESEL (L12-L14)	\$1,400	\$1,598	\$1,826	\$2,071	\$2,209	\$2,341	\$2,935	\$3,013	\$3,099	\$3,180	\$3,268	\$3,358	\$3,469	\$3,536	\$3,630	\$3,720	\$3,817	\$3,788	\$3,761	\$3,742
19	INTERTIE TO ALLISON LAKE (L13-L14)	\$959	\$800	\$4,825	\$4,882	\$4,941	\$4,992	\$5,210	\$5,207	\$5,209	\$5,203	\$5,204	\$5,197	\$5,184	\$5,163	\$5,168	\$5,536	\$5,136	\$5,116	\$4,955	\$4,809
21	ANNUAL SAVINGS----INTEGRATED INTERTIE----ALL VALUES EXPRESSED IN \$'s ANNUALLY (000)																				
22	INTERTIE TO DIESEL (L12-L15)	\$2,917	\$3,009	\$3,125	\$3,255	\$3,267	\$3,284	\$3,746	\$3,765	\$3,784	\$3,802	\$3,820	\$3,832	\$3,870	\$3,856	\$3,868	\$3,867	\$3,877	\$3,752	\$3,631	\$3,513
23	INTERTIE TO ALLISON LAKE (L13-L15)	\$2,476	\$2,213	\$6,124	\$6,086	\$5,999	\$5,938	\$6,022	\$5,959	\$5,893	\$5,825	\$5,756	\$5,671	\$5,585	\$5,503	\$5,406	\$5,683	\$5,197	\$5,084	\$4,825	\$4,580
MEDIUM LOW LOAD--MEDIUM FUEL																					
25	YEAR																				
28	SUPPLEMENTARY KWH REQUIRED	38909	37543	38188	38686	39839	40282	40900	41509	42118	42729	43347	43972	44605	45246	45895	46553	47207	47865	48529	49197
28	UNIT COST OF POWER----ALL VALUES EXPRESSED IN \$'s KWH																				
29	DIESEL EXPANSION CASE	\$0.1550	\$0.1577	\$0.1611	\$0.1615	\$0.1619	\$0.1627	\$0.1747	\$0.1755	\$0.1762	\$0.1760	\$0.1725	\$0.1738	\$0.1745	\$0.1749	\$0.1759	\$0.1772	\$0.1788	\$0.1773	\$0.1763	\$0.1757
30	ALLISON LAKE CASE	\$0.1431	\$0.1366	\$0.2398	\$0.2370	\$0.2342	\$0.2320	\$0.2337	\$0.2317	\$0.2298	\$0.2269	\$0.2207	\$0.2190	\$0.2165	\$0.2149	\$0.2131	\$0.2117	\$0.2103	\$0.2089	\$0.2048	\$0.2009
31	INTERTIE--CL OR NF--NON INTEGRATED	\$0.1182	\$0.1177	\$0.1172	\$0.1187	\$0.1163	\$0.1162	\$0.1161	\$0.1162	\$0.1162	\$0.1153	\$0.1110	\$0.1114	\$0.1109	\$0.1112	\$0.1115	\$0.1121	\$0.1127	\$0.1135	\$0.1142	\$0.1153
32	INTERTIE--FIRM--INTEGRATED	\$0.0759	\$0.0771	\$0.0784	\$0.0797	\$0.0810	\$0.0826	\$0.0841	\$0.0858	\$0.0875	\$0.0882	\$0.0856	\$0.0876	\$0.0888	\$0.0909	\$0.0929	\$0.0952	\$0.0977	\$0.1002	\$0.1028	\$0.1055
34	ANNUAL COST OF POWER--ALL VALUES EXPRESSED IN \$'s ANNUALLY (000)																				
35	DIESEL CASE (L26xL29)	\$5,721	\$5,921	\$6,152	\$6,282	\$6,418	\$6,554	\$7,145	\$7,285	\$7,421	\$7,520	\$7,477	\$7,634	\$7,784	\$7,914	\$8,073	\$8,249	\$8,431	\$8,486	\$8,556	\$8,644
36	ALLISON LAKE (L26xL30)	\$5,282	\$5,128	\$9,157	\$9,219	\$9,283	\$9,345	\$9,558	\$9,618	\$9,679	\$9,695	\$9,567	\$9,630	\$9,657	\$9,723	\$9,780	\$9,855	\$9,928	\$9,999	\$9,939	\$9,884
37	INTERTIE--NON INTEGRATED (L26xL31)	\$4,363	\$4,419	\$4,478	\$4,538	\$4,610	\$4,681	\$4,748	\$4,823	\$4,894	\$4,927	\$4,812	\$4,898	\$4,947	\$5,031	\$5,117	\$5,219	\$5,320	\$5,433	\$5,542	\$5,672
38	INTERTIE INTEGRATED (L26xL32)	\$2,801	\$2,895	\$2,994	\$3,100	\$3,211	\$3,327	\$3,440	\$3,561	\$3,685	\$3,769	\$3,711	\$3,852	\$3,961	\$4,113	\$4,264	\$4,432	\$4,612	\$4,796	\$4,989	\$5,190
40	ANNUAL SAVINGS----NON INTEGRATED INTERTIE--ALL VALUES EXPRESSED IN \$'s ANNUALLY (000)																				
41	INTERTIE TO DIESEL (L35-L37)	\$1,359	\$1,502	\$1,876	\$1,743	\$1,808	\$1,873	\$2,397	\$2,461	\$2,527	\$2,594	\$2,666	\$2,735	\$2,837	\$2,882	\$2,958	\$3,031	\$3,111	\$3,054	\$3,014	\$2,971
42	INTERTIE TO ALLISON LAKE (L36-L37)	\$919	\$710	\$4,682	\$4,679	\$4,673	\$4,665	\$4,810	\$4,794	\$4,785	\$4,769	\$4,755	\$4,731	\$4,710	\$4,692	\$4,683	\$4,637	\$4,607	\$4,566	\$4,397	\$4,211
44	ANNUAL SAVINGS----INTEGRATED INTERTIE--ALL VALUES EXPRESSED IN \$'s ANNUALLY (000)																				
45	INTERTIE TO DIESEL (L35-L38)	\$2,920	\$3,026	\$3,158	\$3,182	\$3,207	\$3,227	\$3,706	\$3,723	\$3,738	\$3,752	\$3,767	\$3,782	\$3,823	\$3,801	\$3,809	\$3,817	\$3,819	\$3,690	\$3,567	\$3,454
46	INTERTIE TO ALLISON LAKE (L36-L38)	\$2,480	\$2,234	\$6,164	\$6,119	\$6,073	\$6,018	\$6,119	\$6,058	\$5,993	\$5,927	\$5,856	\$5,778	\$5,696	\$5,611	\$5,517	\$5,423	\$5,316	\$5,203	\$4,950	\$4,693

SUTTON TO GLENNALLEN 138 KV INTERTIE--POWER COST ANALYSIS--NON-INTEGRATED CAPACITY LEASE OR ECONOMY ENERGY VS INTEGRATED FIRM ENERGY																						
2	JANUARY, 21, 1994 REVISED 3/28/94																					
3	ASSUMPTIONS																					
4	INFLATION ADJUSTED	102.75%	ANN. PAY.																			
5	50 YEAR, ZERO INT. LOAN	\$35.0 MILLION	\$700,000																			
6	35 YEAR, 6.00% LOAN	\$17.1 MILLION	\$1,183,207																			
7	TOTAL COST OF LINE	\$52.1 MILLION	\$1,883,207																			
8	POWER COST CL/NF 1998*'s (KWH)**	\$0.035	CAPACITY LEASE OR ECONOMY ENERGY--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																			
9	POWER COST--FIRM 1998 #'s (KWH)**	\$0.058	INTEGRATED INTO RAILBELT SYSTEM --INCLUDES 1 MILL KWH FOR WHEELING TO MEA																			
10	YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
12	CASE 1A-- NON-FIRM--MEDIUM HIGH LOAD-- (NOT INTEGRATED)																					
13	POWER COST (KWH)	\$0.0350	\$0.0380	\$0.0370	\$0.0380	\$0.0390	\$0.0401	\$0.0412	\$0.0423	\$0.0435	\$0.0447	\$0.0459	\$0.0472	\$0.0485	\$0.0498	\$0.0512	\$0.0526	\$0.0540	\$0.0555	\$0.0570	\$0.0586	
14	SUPPL. KWH REQ.	38,999,000	42,779,000	46,574,000	50,388,000	54,000,000	57,518,000	61,012,000	64,622,000	68,230,000	71,842,000	75,459,000	79,084,000	82,717,000	86,359,000	90,007,000	93,665,000	97,317,000	100,972,000	104,631,000	108,295,000	
15	DEPRECIATION	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	
16	ANNUAL INTEREST	\$1,029,285	\$1,020,029	\$1,010,238	\$999,860	\$988,859	\$977,198	\$964,838	\$951,738	\$937,848	\$923,128	\$907,521	\$890,980	\$873,448	\$854,861	\$835,180	\$814,277	\$792,142	\$768,878	\$743,806	\$727,442	
17	SUBTOTAL DEBT SERVICE	\$2,072,353	\$2,083,117	\$2,053,326	\$2,042,948	\$2,031,947	\$2,020,286	\$2,007,928	\$1,994,824	\$1,980,936	\$1,968,214	\$1,950,809	\$1,934,068	\$1,918,534	\$1,897,949	\$1,878,248	\$1,857,365	\$1,835,230	\$1,811,766	\$1,786,894	\$1,770,530	
18	DEBT SERVICE COST KWH	0%	0.0531	0.0482	0.0441	0.0405	0.0376	0.0351	0.0329	0.0324	0.0318	0.0307	0.0302	0.0298	0.0290	0.0285	0.0279	0.0273	0.0267	0.0260	0.0256	
19	LINE O&M EXPENSE	2.75%	\$263,412	\$270,658	\$278,099	\$285,747	\$293,605	\$301,679	\$309,975	\$318,499	\$327,258	\$336,256	\$345,505	\$355,008	\$364,769	\$374,800	\$385,107	\$395,697	\$406,579	\$417,760	\$429,246	\$441,053
20	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
21	DIESEL PLANT O&M	2.75%	\$114,527	\$117,876	\$120,913	\$124,238	\$127,854	\$131,165	\$134,772	\$138,478	\$142,268	\$146,189	\$150,219	\$154,350	\$158,595	\$162,956	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
22	SUBTOTAL LINE OP. CDST	\$2,879,248	\$2,888,802	\$2,894,183	\$2,901,408	\$2,908,514	\$2,915,459	\$2,922,216	\$2,928,787	\$2,935,052	\$2,941,088	\$2,946,772	\$2,952,125	\$2,957,088	\$2,961,618	\$2,965,868	\$2,969,819	\$2,973,472	\$2,976,819	\$2,979,831	\$2,982,503	
23	LINE OP. COST KWH	0.0887	0.0828	0.0788	0.0758	0.0732	0.0712	0.0694	0.0678	0.0664	0.0651	0.0640	0.0630	0.0621	0.0612	0.0604	0.0596	0.0589	0.0582	0.0575	0.0568	
24	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$65,000	\$60,000	\$55,000	\$50,000	\$45,000	\$40,000	\$35,000	
25	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
26	SUB-TOTAL COST LESS P.C.	\$3,070,346	\$3,067,802	\$3,066,163	\$3,064,408	\$3,063,514	\$3,064,459	\$3,064,218	\$3,064,757	\$3,064,052	\$3,063,088	\$3,061,772	\$3,060,125	\$3,058,088	\$3,055,618	\$3,052,819	\$3,049,672	\$3,046,172	\$3,042,319	\$3,038,111	\$3,033,533	
27	COST, LESS POWER COST KWH	0.0787	0.0717	0.0658	0.0608	0.0567	0.0533	0.0502	0.0477	0.0452	0.0427	0.0402	0.0377	0.0352	0.0327	0.0302	0.0277	0.0252	0.0227	0.0202	0.0177	
28	POWER COST	2.75%	\$1,364,965	\$1,538,440	\$1,720,978	\$1,913,037	\$2,106,834	\$2,305,504	\$2,512,895	\$2,807,814	\$3,075,987	\$3,320,725	\$3,545,005	\$3,748,887	\$3,923,492	\$4,069,917	\$4,189,362	\$4,283,817	\$4,354,392	\$4,403,007	\$4,431,672	\$4,451,387
29	TOTAL COST OF POWER	\$4,435,311	\$4,606,242	\$4,787,140	\$4,977,445	\$5,170,148	\$5,369,983	\$5,577,111	\$5,822,571	\$6,070,019	\$6,320,719	\$6,573,733	\$6,829,988	\$7,089,503	\$7,352,380	\$7,618,117	\$7,886,714	\$8,158,181	\$8,433,518	\$8,712,725	\$8,995,802	
30	COST OF POWER KWH	0.1137	0.1077	0.1028	0.0988	0.0957	0.0934	0.0914	0.0921	0.0927	0.0927	0.0927	0.0924	0.0912	0.0915	0.0923	0.0931	0.0941	0.0952	0.0963	0.0975	
32	CASE 2A-- FIRM--MEDIUM HIGH LOAD--(INTEGRATED)																					
33	COST OF POWER (KWH)	\$0.0560	\$0.0575	\$0.0591	\$0.0607	\$0.0624	\$0.0641	\$0.0659	\$0.0677	\$0.0696	\$0.0715	\$0.0735	\$0.0755	\$0.0775	\$0.0797	\$0.0819	\$0.0841	\$0.0864	\$0.0888	\$0.0913	\$0.0938	
34	COST OF SUPP. POWER	2.75%	\$2,183,944	\$2,481,504	\$2,753,584	\$3,060,880	\$3,370,815	\$3,688,806	\$4,020,632	\$4,172,503	\$4,329,547	\$4,492,359	\$4,661,220	\$4,836,573	\$5,018,667	\$5,207,835	\$5,404,103	\$5,608,089	\$5,818,846	\$6,036,833	\$6,262,984	\$6,497,476
35	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,956	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
36	DIESEL PLANT O&M	2.75%	\$114,527	\$117,876	\$120,913	\$124,238	\$127,854	\$131,165	\$134,772	\$138,478	\$142,268	\$146,189	\$150,219	\$154,350	\$158,595	\$162,956	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
37	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$65,000	\$60,000	\$55,000	\$50,000	\$45,000	\$40,000	\$35,000	
38	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
39	TOTAL POWER COST	\$2,918,525	\$3,195,533	\$3,488,302	\$3,798,573	\$4,108,577	\$4,431,300	\$4,788,947	\$5,123,937	\$5,435,405	\$5,725,966	\$6,000,000	\$6,267,725	\$6,529,817	\$6,786,817	\$7,039,217	\$7,287,417	\$7,531,017	\$7,770,617	\$8,006,817	\$8,239,217	
40	TOTAL COST KWH	0.0748	0.0747	0.0749	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	
41	*** ANNUAL SAVINGS	\$1,516,786	\$1,410,709	\$1,298,838	\$1,180,872	\$1,061,571	\$938,662	\$810,164	\$748,635	\$684,614	\$617,837	\$548,158	\$475,359	\$399,303	\$319,811	\$236,818	\$150,036	\$59,816	(\$34,287)	(\$132,477)	(\$224,971)	
42	TOTAL SAVINGS FOR STUDY PERIOD	\$12,086,250																				
44	BASED ON ML&P MID CASE (ML&P LETTER FEB. 94) * 1 MILL FOR WHEELING (MEA LETTER)--** BASED ON INFORMATION PROVIDED BY CHUGACH (DECEMBER 1993) ***SAVINGS COMPARING CASE 1 TO CASE 2.																					

SUTTON TO GLENNALLEN 138 KV INTERTIE--POWER COST ANALYSIS--NON-INTEGRATED CAPACITY LEASE OR ECONOMY VS INTEGRATED FIRM																						
2	JANUARY, 21, 1994 REVISED 3/28/94																					
3	ASSUMPTIONS																					
4	INFLATION ADJUSTED	102.75%	ANN. PAY.																			
5	50 YEAR, ZERO INT. LOAN	\$35.0 MILLION	\$700,000																			
6	35 YEAR, 8.00% LOAN	\$17.1 MILLION	\$1,163,207																			
7	TOTAL COST OF LINE	\$52.1 MILLION	\$1,863,207																			
8	POWER COST CLNF 1998* (KWH)*	0.035 CAPACITY LEASE OR ECONOMY ENERGY--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
9	POWER COST FIRM 1998* (KWH)**	0.058 INTEGRATED INTO RAILBELT SYSTEM--INCLUDES 1 MILL KWH FOR WHEELING TO MEA																				
10	YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
11	CASE 1A--CAPACITY LEASE OR NON-FIRM--MEDIUM LOW LOAD-- (NOT INTEGRATED)																					
12	POWER COST (KWH)	\$0.0350	\$0.0360	\$0.0370	\$0.0380	\$0.0390	\$0.0401	\$0.0412	\$0.0423	\$0.0435	\$0.0447	\$0.0459	\$0.0472	\$0.0485	\$0.0498	\$0.0512	\$0.0526	\$0.0540	\$0.0555	\$0.0570	\$0.0588	
13	SUPPLEMENTAL KWH REQ.	INFLAT.	36,909,000	37,543,000	38,188,000	38,838,000	39,493,000	40,282,000	40,900,000	41,509,000	42,118,000	42,729,000	43,347,000	43,972,000	44,605,000	45,248,000	45,895,000	46,553,000	47,207,000	47,865,000	48,529,000	
14	DEPRECIATION	RATE	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	\$1,043,088	
15	ANNUAL INTEREST		\$1,029,285	\$1,020,029	\$1,010,238	\$999,860	\$988,859	\$977,198	\$964,838	\$951,738	\$937,848	\$923,128	\$907,521	\$890,980	\$873,448	\$854,861	\$835,160	\$814,277	\$792,142	\$768,878	\$743,808	
16	SUBTOTAL DEBT SERVICE	0%	\$2,072,353	\$2,063,117	\$2,053,328	\$2,042,948	\$2,031,947	\$2,020,288	\$2,007,928	\$1,994,824	\$1,980,936	\$1,966,214	\$1,950,609	\$1,934,068	\$1,916,534	\$1,897,949	\$1,878,248	\$1,857,385	\$1,835,230	\$1,811,766	\$1,786,894	
17	DEBT SERVICE COST KWH		0.0581	0.0550	0.0538	0.0525	0.0513	0.0502	0.0491	0.0481	0.0470	0.0460	0.0450	0.0440	0.0430	0.0419	0.0409	0.0399	0.0389	0.0379	0.0368	
18	LINE O&M EXPENSE	2.75%	\$283,412	\$270,858	\$278,099	\$285,747	\$293,605	\$301,879	\$309,975	\$318,499	\$327,258	\$336,258	\$345,505	\$355,008	\$364,769	\$374,800	\$385,107	\$395,897	\$406,579	\$417,780	\$429,248	
19	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,958	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	\$383,524
20	DIESEL PLANT O&M	2.76%	\$114,527	\$117,878	\$120,913	\$124,238	\$127,664	\$131,185	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,956	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	\$191,762
21	SUBTOTAL LINE DP. COST		\$2,879,348	\$2,886,802	\$2,894,183	\$2,901,408	\$2,908,514	\$2,915,459	\$2,922,216	\$2,928,757	\$2,935,052	\$2,941,088	\$2,946,772	\$2,952,125	\$2,957,068	\$2,961,618	\$2,965,668	\$2,969,189	\$2,972,129	\$2,974,430	\$2,976,669	
22	LINE DP. COST KWH		0.0728	0.0718	0.0705	0.0694	0.0683	0.0674	0.0665	0.0657	0.0649	0.0642	0.0634	0.0626	0.0618	0.0610	0.0603	0.0595	0.0587	0.0580	0.0572	
23	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$66,000	\$62,000	\$58,000	\$55,000	\$52,000	\$49,000	\$47,000	
24	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
25	SUB-TOTAL COST LESS P.C.		\$3,070,348	\$3,067,802	\$3,065,183	\$3,062,408	\$3,059,514	\$3,056,459	\$3,053,216	\$3,049,757	\$3,046,052	\$3,042,088	\$3,037,872	\$3,033,412	\$3,028,718	\$3,023,700	\$3,018,368	\$3,012,772	\$3,006,912	\$2,999,772	\$2,991,248	
26	COST, LESS POWER COST KWH		0.0832	0.0817	0.0803	0.0788	0.0773	0.0761	0.0749	0.0738	0.0727	0.0716	0.0705	0.0694	0.0684	0.0674	0.0664	0.0654	0.0644	0.0634	0.0624	
27	POWER COST	2.75%	\$1,291,615	\$1,350,140	\$1,411,103	\$1,476,885	\$1,548,387	\$1,614,887	\$1,684,544	\$1,755,641	\$1,831,430	\$1,909,094	\$1,989,985	\$2,074,170	\$2,161,890	\$2,253,264	\$2,348,438	\$2,447,615	\$2,550,258	\$2,656,912	\$2,767,949	\$2,883,112
28	TOTAL COST OF POWER		\$4,382,181	\$4,417,942	\$4,477,285	\$4,541,273	\$4,609,901	\$4,679,145	\$4,748,780	\$4,821,399	\$4,895,483	\$4,975,162	\$5,051,737	\$5,134,298	\$5,212,868	\$5,297,458	\$5,388,178	\$5,484,038	\$5,585,158	\$5,691,748	\$5,804,038	\$5,922,248
29	TOTAL COST OF POWER KWH		0.1182	0.1177	0.1172	0.1167	0.1163	0.1162	0.1161	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	0.1162	
32	CASE 2A-- FIRM--MEDIUM LOW LOAD--(INTEGRATED)																					
33	POWER COST (KWH)		\$0.0580	\$0.0576	\$0.0591	\$0.0607	\$0.0624	\$0.0641	\$0.0659	\$0.0677	\$0.0698	\$0.0715	\$0.0735	\$0.0755	\$0.0775	\$0.0797	\$0.0819	\$0.0841	\$0.0864	\$0.0888	\$0.0913	
34	COST OF SUPP. POWER	2.75%	\$2,086,904	\$2,180,224	\$2,257,784	\$2,362,984	\$2,474,218	\$2,583,498	\$2,695,270	\$2,810,828	\$2,930,289	\$3,054,550	\$3,183,944	\$3,318,672	\$3,459,024	\$3,605,222	\$3,757,500	\$3,916,185	\$4,080,409	\$4,251,080	\$4,428,558	
35	STANDBY LABOR DIESEL	2.75%	\$229,054	\$235,353	\$241,825	\$248,475	\$255,308	\$262,329	\$269,544	\$276,958	\$284,572	\$292,398	\$300,439	\$308,701	\$317,190	\$325,913	\$334,876	\$344,085	\$353,547	\$363,270	\$373,259	
36	DIESEL PLANT O&M	2.75%	\$114,527	\$117,878	\$120,913	\$124,238	\$127,664	\$131,185	\$134,772	\$138,478	\$142,288	\$146,199	\$150,219	\$154,350	\$158,595	\$162,956	\$167,438	\$172,042	\$176,774	\$181,635	\$186,630	
37	RESIDUAL INTEREST DIESEL	0%	\$147,000	\$137,000	\$128,000	\$119,000	\$111,000	\$105,000	\$98,000	\$92,000	\$85,000	\$80,000	\$75,000	\$70,000	\$66,000	\$62,000	\$58,000	\$55,000	\$52,000	\$49,000	\$47,000	
38	RES. DEPRECIATION DIESEL	0%	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	\$244,000	
39	TOTAL POWER COST		\$2,801,485	\$2,894,254	\$2,992,502	\$3,098,697	\$3,212,181	\$3,325,993	\$3,441,586	\$3,562,060	\$3,686,147	\$3,818,147	\$3,957,602	\$4,104,824	\$4,260,409	\$4,424,824	\$4,598,447	\$4,780,824	\$4,972,447	\$5,173,447	\$5,384,447	
40	TOTAL COST KWH		0.0771	0.0784	0.0797	0.0810	0.0828	0.0841	0.0858	0.0875	0.0892	0.0908	0.0926	0.0944	0.0962	0.0980	0.0999	0.1018	0.1037	0.1057	0.1077	
41	***ANNUAL SAVINGS		\$1,580,676	\$1,523,689	\$1,484,783	\$1,442,578	\$1,397,720	\$1,353,153	\$1,307,175	\$1,259,338	\$1,209,336	\$1,157,015	\$1,102,135	\$1,044,572	\$984,169	\$920,791	\$854,292	\$784,493	\$711,655	\$635,378	\$555,433	
42	TOTAL SAVINGS FOR STUDY PERIOD		\$21,770,074																			
44	*BASED ON ML&P MID CASE + 1 MILL FOR WHEELING (ML&P) LETTER FEBRUARY 1994--** BASED ON INFORMATION PROVIDED BY CHUGACH (DECEMBER 1993) ***SAVINGS COMPARING CASE 1 TO CASE 2.																					

February 25, 1994

Telephone comment received by Herv Hensley, Director, from Mr. John Netzel:

Mr. Netzel stated that there should be at least two substations connected to the proposed intertie. He stated that the intertie should not be just for large consumers in Valdez and Glennallen but should be accessible as well to small consumers who are not presently connected to utility power. Further, he stated that people whose rates would be affected by the intertie should have a firm quote of what their electricity rates would be after completion of the project.

7021 Hunt Ave.
Anchorage, Ak. 99504
February 24, 1994

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FEB 25 1994

DIVISION OF ENERGY/DCRA

Herv Hensley, Director
Division of Energy, DCRA
333 W. 4th Ave. Suite 220
Anchorage, Ak. 99501-2341

Dear Sir:

The following are comments on the draft Sutton to Glennallen/Copper Valley Intertie feasibility study.

Although there are some potential environmental impacts which I think the draft downplays, I think careful planning, alignment and construction techniques can minimize potential harm to scenic, recreational and wildlife impacts. In particular, I think the scenic vistas from King Mountain to Eureka Summit should be strictly protected from obvious power line intrusions.


My principal concerns center on the economics of the project. As a state citizen and potential state taxpayer in the near future, I am very worried that project costs will exceed those stated, that excessive power costs will result, that "loans" may not be repaid and that ultimately, the state will be stuck with the bill--to the detriment of other needed state programs and projects.

The proposed line appears to be feasible only under the high and medium-high load growth cases. At lesser loads other alternatives become superior. The higher loads depend on greatly increased demand by the Valdez refinery continuing through 2047. 1) Why would one ever build a very expensive project based on more than a mid-range case? A conservative estimate of long-term demand is warranted when tens of millions of state, local utility and rate-payer dollars are involved.

2) Sensible analysis of demand is warranted. Reliance of refinery power demand through 2047 ignores the expected realities of the plant's feedstock--oil. Production through TAPS is now in steady decline and is not expected to be at high enough levels to economically run the line an additional 20 years, let alone yield enough royalty oil to fuel to Valdez refinery for more than 50 years.

The decision to appropriate the \$35 million, 0% interest loan was tied to this feasibility study for good reason. Without an honest, straightforward presentation of the feasibility of this project it could well end up to be a much larger expenditure than anyone--the legislature, the rate-payers or the citizens of Alaska--ever bargained for. Now is the time to take a hard look, dig for some information, make some reasonable assumptions and take a longer-range view of the choices before us.

Sincerely,



Pat Pourchot



**Matanuska Electric
Association, Inc.**

P.O. Box 2929
Palmer, Alaska 99645
Telephone: (907) 745-3231
Fax: (907) 745-9328

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MAR 1 1994

DIVISION OF ENERGY/DCRA

February 24, 1994

Mr. Herv Hensley, Director
Division of Energy
Department of Community & Regional Affairs
State of Alaska
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Hensley:

Subject: Proposed Sutton to Glennallen Intertie
MEA Comments on Draft Feasibility Study

Matanuska Electric Association, Inc. (MEA) staff has reviewed the draft report of the Feasibility Study prepared by R. W. Beck and Associates, Inc.

We would offer several general comments about the study, followed by specific comments on the estimated cost of line. Finally, we offer several comments about right-of-way acquisition, permitting and the environmental analysis.

Probably the most important problem that we noticed is that Page X-17 shows the lowest energy cost available to be Alison Lake but it does not include payment for power as described in Four Dam Pool Agreement. We believe that showing this figure is misleading. There is no reason to believe that power could be obtained without payment; indeed, all available evidence would indicate the opposite.

Page IX-19 indicates that economy energy may not be available from Chugach Electric Association (CEA) and/or Anchorage Municipal Light & Power Co. (AML&P) in the future, because their loads will grow to match their existing generation. This is simply not true. As the CEA and AML&P loads grow, CEA and AML&P will install additional generation to provide a capacity margin. At the present time, they have both agreed to provide a capacity margin equal to 30% of their peak load. This will result in economy sales capability for the foreseeable future. The capability to buy and sell economy energy will be limited only by the capacity of the existing CVEA generation to provide backup capacity, and by availability of generation at CEA and AML&P with regard to maintenance, or forced outages of generation.

On page IV-2, there is a discussion of problems on the CVEA system due to a fault and/or backfeed of the O'Neill, Eklutna, Shaw transmission line. A three-terminal line presents interesting problems in protective relaying, but the line in question could, and should, be relayed to open at the proposed Sutton autotransformer station and isolate the CVEA system from the problem.

It appears to us that there are a number of corrections that should be made to the R. W. Beck Feasibility Study which would tend to lower the estimated cost of constructing the Sutton-Glennallen Intertie and improve the project's economic feasibility.

1. On page IV-11, there is a statement that the proposed intertie is perpendicular to the prevailing wind. This is contrary to the winds I have observed along the route of the line. In my experience, the wind tends to parallel the valleys, and thus would parallel much of the line.
2. On page IV-21, there is a statement that "Rock may be encountered in loading Zone 1 and we will assume rock anchored foundation types for the feasibility study." This statement needs explanation. How many rock anchors? Where will they be used? The geological data demonstrates that Loading Zone 1 contains very little rock.
3. On page IV-24, there is a typographical error which repeats the disadvantages of SSAC Teal.
4. Figure V-2 is a one-line diagram of the proposed step-up station at Sutton. The diagram indicates two full sets of CCVTs and two PVTs. Only one set of PTs is needed for metering and relaying, and one additional CCVT or PT for synchronizing. The PVTs are not necessary, as station service can be provided from the local distribution system. The diagram also indicates a circuit breaker and a circuit switcher. Two circuit switchers would provide equal performance. This is because available fault currents are well within the ratings of the circuit switcher and necessary current transformers can easily be placed on the transformer bushings. These changes would result in substantial cost savings, and no functional change. Further savings could be realized by incorporating line disconnects for the tap point into the same structure used for 115 KV circuit switcher disconnects.
5. On page VI-6, there is a table showing estimated costs of various types of construction. This table indicates that single pole wood construction and "X" frame steel construction cost essentially the same amount per mile. On pages VI-14, and VI-15 there are historical actual costs of similar transmission lines in Alaska. The historical data does not include the 15-mile wood pole line to Sutton, but its costs are in line with the costs of other single pole wood lines shown. The historical costs of single pole wood line is about 60% of the cost of steel "X" tower line. In light of this, we are very surprised that the estimated cost of new line is the same for both types of construction. We believe an explanation is needed.

The following comments pertain to Table I-2 on Page I-7 of Volume I, Section D.6 Right of Way Acquisition:

1. The \$1,000 per acre acquisition cost should also be applied to Native selected lands, Mat-Su Borough lands, and State Mental Health (MH) lands. In addition, the route(s) should be double checked to determine if any University of Alaska lands are crossed. If so, they should also be considered compensable at the

estimated \$1,000 per acre fair market value. It should also be noted that the \$1,000 per acre figure is purely a ball park order-of-magnitude estimate. Fair market value appraisals will have to be prepared to determine the actual compensation amounts.

2. The estimated \$100,000 cost of the services of a Right of Way Agent is not included in Table I-2, and we believe it should be. We question the statement on Page VI-3 of Volume I (in the last paragraph) that the cost is assumed to be included in the easement cost-per-acre. It is our belief that the entire \$1,000/acre should be allocated to reflect the actual compensation amount for the easement rights to be acquired.
3. At several of the recent public hearings it was pointed out that there was no cost allocated for possible eminent domain or other legal proceedings for right of way acquisition. This may be a valid observation, judging from comments at the public hearings. Several members of the Chickaloon Moose Creek Native Association testified that they will oppose any attempts to acquire an easement across their lands.

Also, strong opposition was expressed by the Chickaloon Community Council for the line being built within the Chickaloon Special Use Area, an area which extends from Kings River to Long Lake and encompasses some 164 square miles, and which requires Conditional Use Approval from the Mat-Su Borough Planning Commission.

Another possible problem area is acquiring a right of way easement on Mat-Su Borough owned land, which requires approval by the Borough Assembly. The required public hearing before the Assembly will present another opportunity for the Sutton, Chickaloon and Glacier View area residents to comment on the line.

All three of the above situations could potentially involve litigation, or at the least an abnormally large amount of administrative effort.

On Page I-3 of Volume 2, in the Environmental Analysis prepared by Dames & Moore, it is stated that a Corps of Engineers (COE) Section 404 permit could be required. It might be worth noting that an individual "404" permit is required only if dredge or fill material is deposited in wetlands, or if wetlands are excavated for other than transmission line structure foundations. The placement of transmission line structures is covered by COE Nationwide Permit No. 12 and only requires that any excess excavation material be removed to upland areas and any disturbed areas in wetlands be revegetated with native vegetation occurring in the general vicinity.

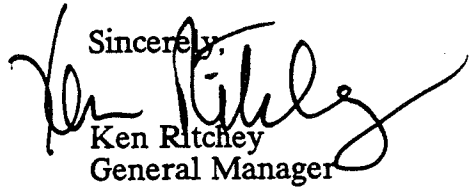
Another minor item is worth pointing out in this section of Volume 2. There is a statement that says the Mat-Su Borough "...could also require land use permits and utility permits for any use of Borough lands." That is true, but it should also be mentioned that, where the transmission line crosses Borough lands, a formal right of way easement, approved by the Borough Assembly, is required. This involves surveying to derive the specific easement description and a fair market value appraisal to determine the compensation.

Mr. Herv Hensley
Page 4
February 24, 1994

Finally, as you are probably aware, based upon the public hearings held throughout this last year, there is strong opposition to the line by MEA members in the Sutton, Chickaloon and Glacier View areas.

Thank you for the opportunity to comment on the draft Feasibility Study.

Sincerely,



Ken Ritchey
General Manager

EDES.784

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF FORESTRY

VALDEZ/COPPER RIVER AREA-VCRA
BOX 185
GLENNALLEN, ALASKA 99588
PHONE: (907)822-5534

RECEIVED

February 14, 1994

FEB 15 1994

Mr. Herv Hensley
State of Alaska- Department of Community and Regional Affairs
Director- Division of Energy
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

DIVISION OF ENERGY/DCRA

RE: Forestry Issues Related to the Copper Valley Intertie
Feasibility Study

Dear Mr. Hensley:

I have reviewed the Copper Valley Intertie Feasibility Study and have a few comments to offer on behalf of the Department of Natural Resources Division of Forestry. The project has not had a comprehensive Department-wide review and the views expressed do not reflect the Department of Natural Resources' (DNR) official position. I do not speak for all of the DNR Divisions.

If the preferred route (Route Alternative D) is approved and funding for construction of the intertie is secured I would expect to have a role in reviewing the project to ensure compliance with the Alaska Forest Resources and Practices Act. The project will impact the Division of Forestry's Valdez/Copper River Area and the Mat-Su Area. It is important that both offices are kept informed as the project will have potential impact on several aspects of the Division's operations. Please add to your mailing list:

Mr. Jim Eleazer
Mat-Su Area Forester
P.O. Box 520455
Big Lake, AK 99652
892-6027 Fax: 892-7958

Mr. Martin Maricle
Valdez/Copper River Area Forester
P.O. Box 185
Glennallen, AK 99588
822-5534 Fax: 822-5539

I have a number of concerns and will briefly outline some issues that I feel should be addressed. My area of responsibility begins at Mile 115 of the Glenn Highway so I will not address the Sutton to Sheep Mountain segments of the proposed intertie.

FOREST CLEARING

I have reviewed the maps included in the feasibility study and it appears that the route will avoid most of the heavily forested stands. I have not reviewed recent aerial photographs for the proposed route(s) but there may be some viable commercial timber near Tolsona Creek. If the Alternate route segment between Points 27 and 29 is used this will cross state land near commercial stands of timber in the Plumb Bob Lake vicinity. There may be some stands with significant commercial salvage value from Point 28 to Point 30 (at Pump Station 11).

The Division of Forestry would be very interested in reviewing any clearing contracts prior to their release to potential bidders. We could help develop a specific site treatment plan, subject to available funding.

I read the letter from Red Carlos Contracting (Exhibit F-3) regarding site clearing and was concerned that there was no provision to remove or salvage larger trees and that there was no specific mention of the requirement to obtain a permit from the Division of Forestry (AS 41.15.060). I assume that clearing work would be contracted out and Mr. Carlos was providing some estimates of what the job would entail.

Much of the clearing could be accomplished as Mr. Carlos describes in his letter of June 16, 1993. It is unlikely that the contractor would want to broadcast burn the sites due to logistical difficulties and costs. It is hoped that the centerline of the project and the clearing limits would be clearly marked on the ground prior to any actual clearing project. This would be imperative to keep the contractor performing the desired treatment in the proper location.

The intertie corridor is in an area of fairly intense bark beetle infestations. Bark beetles do not typically attack black spruce but it is very important that operations be conducted in such a way to prevent damage to residual trees and to avoid leaving piles of larger diameter spruce trees.

POTENTIAL EFFECTS ON FIRE OCCURRENCE

There was some discussion in the feasibility study about the possibility of upgrading some trails on state land to facilitate construction and maintenance of the power line. I am concerned that upgrading any trails with the intent to create access to the powerlines could increase the possibility of human caused fires in remote locations. Much of the intertie corridor receives limited protection and this protection level was established because the

probability of wildland fire was viewed as minimal. If roads are built to drive equipment to the intertie route this could allow all terrain vehicle (ATV) access and the Division could see an increase in abandoned campfires in the remote wildlands. Perhaps upgraded trails could be gated and locked and the Division of Forestry could be provided a key so that personnel could respond to fires.

As was discussed earlier, a burn permit must be obtained to debris burn between the dates May 1 through September 30. It is recommended that burning be conducted in the fall and some particularly hazardous fuels could even be burned when there is a snow cover on the ground. The Division's Fire Management Officer or Area Warden could help work out specific burn plans.

I am also concerned with the possibility of additional fires caused by trees falling across the electrical lines. I have reviewed the engineering diagrams and it appears that the timber will be cleared from the towers and this will substantially reduce the likelihood of electrical fires along the intertie. It seems that periodic maintenance of the route will be needed to keep timber from becoming a hazard to the line. Perhaps clearing will have to be conducted every twenty years to keep vegetation from the powerline.

Can the intertie withstand the effects of wildland fire on surrounding vegetation? Fire can burn quickly through continuous black spruce stands and the burning timber can generate some fairly intense radiant heat. If fire would be a threat to the intertie would the Division need to suppress fires that would burn over the intertie?

TECHNICAL AND ADMINISTRATIVE SUPPORT

The Division looks forward to working with future contractors and with your staff if the project is funded and constructed. We could help develop burn plans, determine specific clearing parameters, issue burn permits, and monitor operations on the State's behalf. Unfortunately, I have limited staff availability and I would be happy to propose a reimbursable service agreement (RSA) that would help cover our additional expenses of staff time, travel and so forth. We would like to fulfill our regulatory obligations as the project gets underway and our active involvement may help to ease some of the public's concerns.

Thank you for the opportunity to provide some comments. We look forward to working with you on this project and would be happy to review future modifications of the proposal. I was not on the original mailing list and I had to borrow a copy of the feasibility study from the Copper Valley Electric Association.

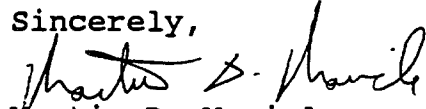
Mr. Herv Hensley

Copper Valley Intertie

Page Four

Let me know if you have any thoughts regarding my comments. I look forward to hearing from you soon.

Sincerely,



Martin D. Maricle

Valdez/Copper River Area Forester

CC: Clayton Hurless- CVEA
John See- DNR/DOF
Al Samet- DNR/Lands
Bruce Stafford- DNR/Lands
Jim Eleazer- DNR/DOF

MEMORANDUM

State of Alaska

DEPARTMENT OF FISH & GAME

TO: Dick Emmerman
Senior Economist
Division of Energy
Department of Community
and Regional Affairs

DATE: March 11, 1994
RECEIVED

FILE NO.:

MAR 15 1994

TELEPHONE NO.: 267-2284

DIVISION OF ENERGY/DCRA

SUBJECT: Copper Valley Inter-
tie; Feasibility
Study: Draft Report

Cevin Gilleland
FROM: Cevin Gilleland
Habitat Biologist
Region II
Habitat and Restoration Division
Department of Fish and Game

The Alaska Department of Fish and Game (ADF&G) was unable to complete a thorough review and analysis of the subject two volume document. We are primarily concerned that the route, construction, and maintenance activities avoid sensitive fish and wildlife habitats and that these activities minimize and fully mitigate impacts to important wetlands and fish bearing waters. Permits from the ADF&G will be required for all activities in or on the bed or banks of specified anadromous fish bearing waters. Full plans and specifications should be provided to the ADF&G, Habitat and Restoration Division, early in the planning stages so that timing can be planned to coincide with the absence of sensitive life stages.

The ADF&G suggests that alternatives be considered to avoid impacts to fish and wildlife. This should involve the identification of sensitive habitat areas specifically along the proposed route, as well as alternative locations, design features, and construction methods (timing; underground placement; markings). This should probably include scientific surveys conducted on the ground along the proposed route. A solid fish and wildlife survey database will provide the information necessary to fully evaluate construction methods, permit requirements, and mitigation.

Because of other staff commitments we are unable to provide additional assistance, except for those aspects of the project that require the approval of the ADF&G. Please contact me if I can be of assistance in determining those aspects of the proposed project that require ADF&G approval.

cc: R. Thompson, DNR/DL
J. Westlund, ADF&G

RECEIVED

MAR 04 1993

COMMISSIONER
COMMUNITY & REGIONAL AFFAIRS

Jim Colver
P.O. Box 427
Palmer, AK
99645

February 24, 1994

Director
Division of Energy
Department of Community & Regional Affairs
333 W. 4th Ave., Suite 220
Anchorage, AK
99501

Re: Copper Valley Intertie Feasibility Study Draft Report Comments

Dear Sir:

I offer the following comments regarding the Copper Valley Intertie Feasibility Study Draft Report. Please incorporate them into the final Feasibility Study Report.

I. Economics

The draft Feasibility Study finds that in order to derive any economic benefits from an intertie, the scenario of a large increase in demand at the Petro Star Refinery is necessary. There exists no commitment, nor a "take or pay" agreement with Petro Star to purchase the amount of energy demand forecasted in the study. Given this mid to high load range projection demand variable, and to protect ratepayers, any further consideration of this project should be predicated upon such a contract. If the line were built speculating on this high load, without a take or pay agreement, and the load did not develop, sharply higher electric rates would be necessary to retire the intertie debt. Furthermore, with the Trans Alaska Pipeline forecast to shut down in 2017, why does the study assume Petro Star will continue to operate until 2047? These appear to be the major flaws in the study's economic feasibility model.

The study shows the Allison Lake hydroelectric project to be the least cost alternative for sustainable energy generation for CVEA consumers. This option becomes even more attractive given the considerable hurdles an intertie would have to overcome including: archeology, environmental concerns, geotechnical engineering, crossing public recreational lands, crossing wetlands and critical habitats of endangered species, negative impacts on the tourism industry, pressure on fish and wildlife populations from access to and along an intertie right of way, reliance on the Petro Star Refinery, and major opposition from Matanuska Susitna Borough communities.

II. Access Roads

The draft study does not specify what and where access roads will be located. Increased access off the highway to the intertie will have the most significant impact of this project. Yet there is no siting of proposed road locations, nor does it quantify what the environmental and social impacts would be. New and improved roads will put additional pressure on the recreational, fish, and wildlife resources of adjacent lands according to the Environmental Report. Therefore, for this to be considered a proper feasibility study, the impacts of proposed access roads should be addressed in the final report. Furthermore, to minimize said impacts, access roads should not be built from the highway to the proposed transmission line.

III. Routing

A. The Draft Feasibility Study preferred route on map page 2 parallels the highway along the south face of Anthracite Ridge, crossing Purinton and Cascade Creeks despite Glacier View community preferences for the Boulder Creek route. Reroute this section in the final study to follow the Boulder Creek alternate at station 4A, "Simpson Cabin". In support of the alternate Boulder Creek route over the preferred highway/Hicks Creek route consider the following evaluation criteria, the same as was used by the study's transmission line engineer:

- 1) *Cultural resource conflict* , at section 4A on map page 2 the preferred route parallels the Nelchina trail, this is where indigenous peoples were believed to have traveled along Anthracite Ridge, so the possibility of the existence of archaeological remains is high;
- 2) *Visual Intrusion* , there are residences and private property located along the highway in the Cascade Creek to Hicks Creek vicinity;
- 3) *Scenic Viewshed* , the intertie will be visible from the highway if sited 1 mile parallel along the north side of the highway traversing the south face of Anthracite Ridge;
- 4) *Unstable Slopes* , Anthracite Ridge is an unstable geologic formation, there is frequent avalanching of rock on the road in the Long Lake area;
- 5) *Stream Crossings* , there are no less than 7 stream crossings along the preferred highway route;
- 6) *Increased Access* , close proximity of preferred route to the highway and trailheads will heavily impact the surrounding land, and wildlife resources;
- 7) *No Substaion in the Victory Bible Camp vicinity* , Matanuska Electric Assn. testified at the Glacier View Draft Feasibility Study public hearing that MEA has no future plans for a locating a substation in the area. Therefore the necessity of a substation is not a valid design factor for the intertie.

B. On map page 1, the preferred route goes along the south face of Knob Hill, where the line crosses Granite Creek, it will be visible from the highway, according to the study. To mitigate this visual impact, the line should be rerouted around the north side of Knob Hill in the final report.

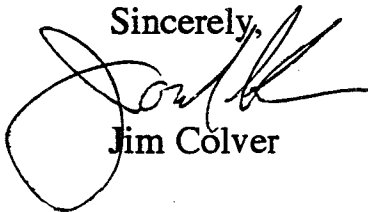
In general, a backcountry intertie route is preferable to an alignment near or visible from any point on the Glenn Highway.

IV. Electromagnetic Fields

The Feasibility Study Draft Report assumes a minimum safety clearance distance of 600 feet from residences in order to abate exposure to possible cancer causing electromagnetic fields. The 600 foot setback is based upon a 138 KV transmission line. However the Legislature granted legal authorization for the line to be upgraded to a higher voltage. To protect children from any risk of leukimia, the safe distance from residences and private property should be increased to a minimum of 1320 feet, to responsibly plan ahead for any future increase in the line's voltage.

In summary, given the marginal economic feasibility of an intertie project between Sutton and Glennallen, at a time when the State of Alaska is experiencing a severe deterioration of revenues, the project does not meet the "feasibility" test, does not warrant any further consideration, and should be dropped.

Sincerely,



Jim Colver

cc Commissioner Edgar Blatchford

BUSINESS

THURSDAY, February 24, 1994

ANCHORAGE DAILY NEWS

Pipeline approaches milestone

The Associated Press

VALDEZ — The trans-Alaska pipeline is about to hit a marker — pumping through its 10 billionth barrel of oil.

Alyeska Pipeline officials say the 10 billion mark will be reached sometime this week, though no one knows just when.

When the pipeline was finished in 1977, estimates of recoverable North Slope oil deposits were just under 9 billion barrels. That estimate has since been recalculated to be about 13 billion barrels.

The pipeline now transports around 1.5 million barrels a day, about a quarter of U.S. domestic production.

HOW LONG WILL THE PIPELINE PUMP NORTH SLOPE OIL?

13 BILLION BARRELS ESTIMATED RESERVES

10 BILLION BARRELS PRODUCED

3 BILLION BARRELS REMAINING RESERVES

CALCULATE LIFE OF TAPS:

3,000,000,000 BARRELS RESERVE/1,500,000 BARRELS DAILY PRODUCTION

= 2000 DAYS OF PRODUCTION AT CURRENT PRODUCTION LEVELS

= 5.48 YEARS OF PRODUCTION AT CURRENT LEVELS*

*(this does not account for lower future pipeline pumping levels)

UJ121011

MAR 08 1993

Feb. 22, 1994
General Delivery
Sutton, Ak. 99674

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Commissioner Edger Blatchford
Office of Community and
Regional Affairs

Dear Commissioner Blatchford:

I'm writing to comment on the recently published Feasibility Study for the proposed Sutton to Glennallen Intertie.

The Study examines several demand vs. cost scenarios. In order to decide whether to go ahead with the intertie project, you must determine which scenario is most realistic. For the reasons I address below, I believe this study is flawed in that it does not provide you or the public with a even-handed or reasonable prediction as to the costs of the proposed project, or the future needs of the Copper Valley region.

Additionally, I agree with the conclusions arrived at by Mark Foster, P.E., who has performed an independent assessment of the Draft Study. I would like to hereby incorporate by reference that assessment into my comments.

Costs

1. The construction costs of the project have been seriously underestimated in the Study. Labor costs, the cost of helicopter construction, and the cost of condemnation of private land along the 120 mile route are underestimated. Right-of-way around the proposed line has been reduced from the standard 150 ft. to 125 ft., thereby lowering cost, but also increasing the risk of fire to the forests along the route. The Study does not adequately address the legal fees that will arise in the permitting procedure, nor does it consider the considerable costs of defending law suits from the growing opposition to the intertie. Additionally, the projects estimated costs do not

include the \$5.6 million cost of a Static Var Compensator which will become necessary when the the proposed intertie carries a 27 Mw load. (We were told this by John Heberling of R.W. Beck at the Feb. 10 meeting in Sutton.) However, if the powerline is built, we must assume that it will eventually be used to its full (40 Mw) capacity - otherwise why build it? Thus, this \$5.6 million extra must be included at this stage to reflect the true costs of the project.

There are other inaccuracies in cost estimates, but I refer you to Mark Foster's comments for those underestimates.

Additionally, the Study does not attempt to assess the costs of the project to the rural communities in the Matanuska Valley. The communities of Sutton, Chickaloon, Glacier View, and Sheep Mountain are small and the few businesses and jobs that do exist in the Valley are dependent on tourism. Many business people, especially those focusing on recreational activities such as rafting, hiking tours, and trail rides, will be adversely affected by the construction of this proposed intertie. Visitors come to this Valley, as they do to the State and National Parks around the State, because this area provides pristine wilderness and spectacular scenery. If you have been hiking or snow machining in the Talkeetna mountains, you know that a five day trip into the mountains would take you far behind the proposed route of the powerline. However, a one day trip (and most tour outings are day-trips) would take the lucky sightseer directly to the powerline or just above it. People will not be inclined to hire a guide to take them up to a vista with a spectacular view of a huge powerline - a string of 80 ft towers set within a 125 ft right of way. This is not what outdoor enthusiasts seek out. They will go elsewhere.

Just as recreational users have created a vigorous economic base for the towns of Cantwell, McKinley Village, Chitina and McCarthy, the Matanuska Valley has begun to build its own tourism base. Building a huge electric powerline along the bus road into the heart of Denali Park (if the State could do it) would be unthinkable due to its

disastrous economic effects. Similarly, building this proposed intertie will stunt the growth of tourism business in the Matanuska Valley. The Study places a zero value on this cost. I hope to see a realistic value placed on this aspect of the project cost in the final version of the Study.

Next, the Study fails to consider the decrease in property values that will inevitably result from the construction of the proposed powerline. The people who live along the Matanuska Valley are fortunate enough to own land that provides some of the most spectacular views in the State. The designers of the powerline have sought to protect the users of the Glenn Highway from seeing the powerline. However, the people who live in and love the Valley will be forced to see it as long as they choose to live here. The Study places a zero value on this cost as well. I expect to see an attempt to tally these cost in the final draft.

More important than the inevitable loss in property value, the proposed intertie will harm, if not destroy, the quality of life for the people in the Matanuska Valley. I have chosen to live here simple because of the beauty and peace that this place provides. The fact that this country has not been degraded by large construction projects and human settlement gives it great value to me - far more than any purchase price for property. I am told that the writers of this Study were incapable of placing a value on this "intangible." I ask you to see their incapability as a flaw in the Study and to assess the Study in that light.

Finally, we are told by the environmental consultants (Dames and Moore) who contributed to the Study that many of the environmental effects of the proposed intertie cannot be known at this time because the route has not been determined. As a resident, I can tell you that the wildlife is rich in the Matanuska Valley and that the area is already a favorite of hunters. The introduction of access roads, wherever they end up, would bring more hunters from Anchorage and will impact the populations of moose, bear, sheep, caribou, wolf, beaver, and birds. Furthermore, the issue of Electro Magnetic Fields (EMFs) and their effect on people has been brushed aside because the proposed route

will supposedly be away from areas of human population. The Study should, however, address the effect of EMFs on animal and plant populations. Animals, just like people, use ready made access-ways for travel. It is probable that species such as moose and bear will use the proposed powerline right-of-way to travel through the mountains. Thus, they will be exposed to EMF's and will eat plants exposed to EMF's. Pure concern for the animal species should warrant greater concern for this issue. But, it must also be remembered that the animals of these mountains are the food for many local residents. The cost of these animal and human health effect must be considered to understand the full impact of the proposed project on wildlife and the environment.

While this list of inaccurate and unaccounted for costs is not complete, I believe it demonstrates the failure of the Study to correctly and appropriately assess the true "price" of the proposed intertie.

Power Demand

The Study has overestimated the future demand for electrical power by the Petro Star oil refinery in Valdez - CVEA's primary user of electricity. The projection that Petro Star will triple or quadruple is unsupported. This estimate was based on one letter from Petro Star. When later questioned by a Daily News reporter as to the basis for this estimate, a Petro Star official stated that the estimate was "only for the [feasibility] study". Such apparent manipulations of the data gathering process for the Study by the proponents of the intertie creates question as to the accuracy and honesty of the process. Petro Star's productivity and profitability as a business, and thus its power demand, depends in great part on future oil prices, oil output from Prudhoe Bay, and future upgrades of the company's own power generation systems. My understanding is that oil prices are projected to be lower in the future than they have been in the recent past. Additionally, the output of oil on the North Slope is diminishing, not increasing. Given these facts, CVEA's estimate of a three or four fold increase in power demand from Petro Star is at best unrealistic.

Finally, oil refineries all over the country now co-generate their own power. Such state-of-the-art technology could entice Petro Star in the years to come. If and when Petro Star does convert over to this more efficient method of producing power, the small rural communities within the CVEA will be left to pay back the loan for the intertie. Growth projections in the Feasibility Study suggest that the population of the towns CVEA supplies will not increase significantly during the life of the proposed intertie. Thus, if Petro Star co-generates their own power, or, goes out of business, the people of Glennallen and Valdez, who do not need, and will not need, three times more power will be left to foot the bill for an unnecessary project.

For all these reasons, I suggest that you re-assess and gather supplemental support for the Petro Star growth scenario.

Policy

In our society we place great value on fairness. The construction of the proposed intertie would be grossly unfair to the people of the Matanuska Valley and indeed to the people of Alaska in general.

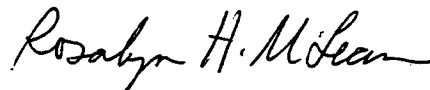
I believe that the people who gain the benefit from this project should be paying for it. While it is true that the people supplied by CVEA will pay back the State loan, they will not be experiencing many of the other real costs imposed by this project. It is the people in the communities along the Glenn Highway who will bear the brunt of this project - and gain absolutely no benefits for it. It will be me and my neighbors who will have to decide if they still want to live here in the Matanuska Valley. We will have to deal with decline in business profits and any health effects that may come to light as science learns more about EMFs. The people of Glennallen and Valdez will not have to experience these unhappy results.

Furthermore, Petro Star, the big winner in this whole scenario, will get the benefit of State subsidized energy. I disagree with this result. It should not be the responsibility of the State of Alaska to provide cheap power to Petro Star.

As an Alaskan, I am in favor of contributing to reasonable and fair projects which will provide cheaper power for the people in Valdez and Glennallen. I know they need cheaper power. I do, however, strongly object to subsidizing the energy needs of the oil industry. Other alternatives, including co-generation by Petro Star and the Allison Lake hydro project, do exist. In the most realistic projections of the future of the oil industry, Petro Star will not need three times more power. The Study indicates that in a realistic scenario the Allison Lake project, or even an upgrade of CVEA's diesel generators, is the best choice. If you study the growth projections closely, I believe you must come to the same conclusion.

I hope you will consider the objections to this feasibility study I've outlined. I expect as a public servant you will come to the most rational decision for all the people of Alaska. I expect that you will not bestow an unnecessarily large benefit to one large industrial consumer to the complete detriment to several rural communities. I hope you will hear the voices against this intertie and represent us, too. Thank you for your consideration.

Sincerely,



Rosalyn H. McLean
General Delivery
Sutton, Ak. 99674
(907) 745-7000

February 25, 1994

Herv Hensley
Acting Director, Division of Energy
Department of Community and Regional Affairs
333 West Fourth Avenue, Suite 220
Anchorage, Alaska 99501

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MAR 2 1994

DIVISION OF ENERGY/DCRA

Dear Mr. Hensley:

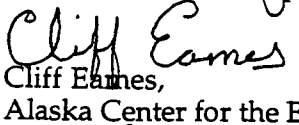
We appreciate the opportunity to comment on the draft Copper Valley Intertie Feasibility Study. Our organizations represent more than 10,000 Alaskans, many of whom are greatly concerned over the energy policies in the state of Alaska.

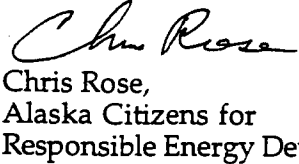
Our organizations commissioned Mark Foster & Associates to do an independent review of the study, a copy of which is enclosed. We share the conclusions of this study, particularly that there are less expensive alternatives than the Intertie to supply what appears to be Copper Valley Electric Association's real need for electricity in the future.

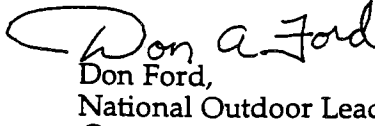
Thank you for considering this review in the development of the final feasibility study. If you would like to discuss any aspects of our review, please feel free to contact Cliff Eames at 274-3621.


Sincerely,

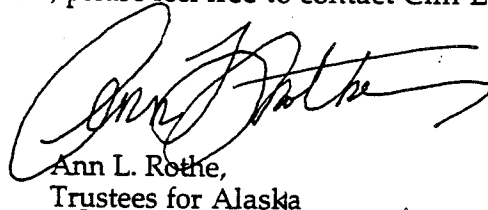

Skip Roy,
Nelchina Users' Group

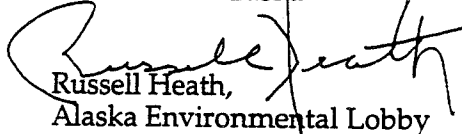

Cliff Eames,
Alaska Center for the Environment


Chris Rose,
Alaska Citizens for
Responsible Energy Development

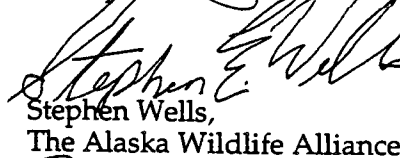

Don Ford,
National Outdoor Leadership School

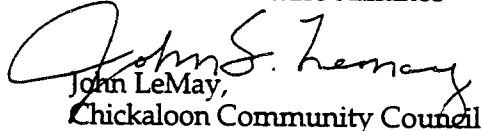

Theresa Anderson,
Sutton Community Council


Ann L. Rothe,
Trustees for Alaska


Russell Heath,
Alaska Environmental Lobby


Dorothy Childers,
Greenpeace Alaska


Stephen Wells,
The Alaska Wildlife Alliance


John LeMay,
Chickaloon Community Council

enclosed: study review

cc: Honorable Walter J. Hickel, Governor of Alaska
Honorable Edgar Blatchford, Commissioner, Dept. of Community and Regional Affairs
Members of the Alaska State Legislature

MAFA

RP-94-02

**REVIEW
OF
THE DRAFT
Copper Valley Intertie
FEASIBILITY STUDY**

Dated: January 19, 1994

Prepared by: Mark A. Foster, P.E.

Submitted to: Alaska Center for the Environment

February 25, 1994

The purpose of this report is to review and comment on the Draft Feasibility Study (herein referred to as the DFS) of the Copper Valley Intertie Project, prepared by R.W. Beck & Associates for the Division of Energy, Alaska Department of Community and Regional Affairs, dated January 19, 1994.

Conclusion:

...the best answer is the one that, under a broad range of contingencies or scenarios about the future, provides a good solution..¹

The proposed Copper Valley Intertie does not appear to be the best "least cost" alternative to supply electricity to the customers of Copper Valley Electric Association.

The proposed Copper Valley Intertie only appears as the "least cost" alternative under a narrow range of assumptions which do not appear likely at the present time. Unless a number of these critical assumptions can be adequately supported, the proposed intertie does not appear to be a prudent investment.

The critical assumptions include: projected demand for energy, the capital, operations and maintenance costs of the proposed intertie, the costs of diesel generated power, and the cost of the Allison Lake Hydroelectric Project.

The prudent approach appears to be pursuit of enhancements to the existing Solomon Gulch Hydroelectric Project, including Allison Lake, and replacement of existing inefficient diesel generating units with modern, efficient units.

¹Energy Aftermath: How we can learn from the blunders of the past to create a hopeful energy future, by Lee, Ball, and Tabors, Harvard Business School Press, 1990, page 223.

Introduction:

Due to the number of assumptions that appear biased toward increasing the paper feasibility of the intertie alternative in the the Draft Feasibility Study (DFS), this review will recast the scenarios to provide a "mid range" basket of scenarios along with a sensitivity analysis of critical assumptions.

The section entitled Review of the Draft Feasibility Study lists and explains a number of concerns with the DFS and indicates which assumptions have been adopted for the purpose of developing the "mid range" scenarios contained in this report.

The section entitled Utility Rates discusses the rate implications of the alternatives and concerns raised about how to frame the comparisons between alternatives including:

- how to treat the \$35 million no-interest "loan" from the State of Alaska
- how to treat the 6.4¢/kWh charge associated with power from the Solomon Gulch Project

The section entitled Mid Range Scenario provides a summary of the assumptions used in the economic analysis.

Finally, a technical appendix containing summary and supporting economic analysis is attached for reference.

Discussion:

The purpose of the feasibility study is to determine which alternative, from the point of view of the citizens of the State of Alaska, is most likely to supply the power and energy requirements of Copper Valley Electric Association for the least cost under a broad range of reasonable scenarios about the future.

It appears that the proposed intertie project does not meet that criteria given the slate of likely scenarios developed in this report.

In summary the economic analysis suggests that the Allison Lake Project in conjunction with the replacement of existing inefficient diesel generating units with new more efficient units is likely to provide a least cost plan to meet the needs of Copper Valley Electric Association's customers. The results are summarized in the Summary of Economic Analysis Results; Revision 1.1 to DFS schedule attached.

Review of the Draft Feasibility Study (DFS):

In reviewing the Draft Feasibility Study (DFS), several areas of concern emerged. They include:

1. Demand Forecast

- a. Petro Star demand can substantially drive which alternative appears to be the "least-cost."
 - 1) **Medium Low Case** presumes Petro Star will roughly **double** energy and demand requirements from 1993 to 1997.
 - 2) **Medium High Case** presumes Petro Star will roughly **quadruple** energy requirements and more than **triple** demand requirements by 2004.
 - 3) Given the sensitivity of the computer modeling to the Petro Star demand forecast, a **detailed analysis of Petro Star's potential demand for power and its ability to self-generate power is essential.**
 - 4) The possibility that Petro Star will be able to self-generate needs to be carefully examined since:
 - a) Its generator can be sized for its specific needs when they arise.
 - b) It will not have to bear a portion of CVEA's line loss.
 - c) It may be able to utilize some of the waste heat from its generators.
 - d) It may be able to burn the fuel it produces (avoiding fuel transport and distribution costs which CVEA must pay).
 - 5) One way to assess whether or not Petro Star has any substantial plans for expansion is to require them sign up for a take or pay contract with CVEA prior to a major capital expenditure predicated on PetroStar "plans." The terms of such an agreement could help protect CVEA against a potential over investment.
- b. The feasibility study extends all the loads projected to occur in 2017 out to 2047. This appears optimistic given the dependence of Valdez on oil terminal operations. This bias is evident in each of the demand forecasts.
 - 1) According to the Department of Energy Report referenced in the DFS², the Trans Alaska Pipeline System (TAPS) will be shut down in:
 - a) 2009 under a "most likely" case;
 - b) 2011 under a "high reserves" case;

²DOE Report "Alaska Oil & Gas: Energy Wealth or Vanishing Opportunity?" (DOE/OD/0150-H1, January 1991). See DFS at page VIII-5.

- c) 2025 under an "ANWR Multiple Field High" case³.
- 2) The Petro Star refinery is assumed to close in 2013 under the low load forecast in the DFS. In terms of continued TAPS operations, the low load forecast in the DFS corresponds roughly to a "high reserves" case projected by DOE.
- 3) Under the so called "medium" and "high" forecasts in the DFS, the demand is effectively projected flat from 2017 to 2047,
 - a) **38 years beyond** DOE's "most likely" projections for the continued operation of TAPS.
 - b) **22 years beyond** DOE's most optimistic case for ANWR development.

This creates a "phase shift" as follows:

DOE High	=	DFS Low
DOE High + ANWR High	=	DFS Medium-Low?
???	=	DFS Medium-High?

Thus the demand forecasts included in the DFS appear optimistically characterized. In order to compensate for this "phase shift", the medium-high and medium-low DFS forecasts will be included in this review as the high and medium cases respectively.

2. World Oil Price & Diesel Fuel Assumptions

- a. DFS assumes estimated mid-year 1993 price for West Texas Intermediate of \$19.00 per barrel. It has been between **\$14-\$16** for the past several months. In addition, recent projections by Kidder, Peabody "has WTI recovering by \$1-2/bbl from the current \$15/bbl level early in the year, then drifting down through most of 1994 and averaging about \$15/bbl for the year."⁴ Given these projections, it appears that the DFS may have used an inflated starting price for the comparisons.
- b. The DFS assumes 1993 prices for diesel fuel at:

Valdez	\$0.70 /gallon
Glennallen	\$0.75 /gallon

 based on actual prices paid at some time in 1993.

³See Figure 3-21, DOE Report DOE/OD/0150-H1. Even if one assumes that congressional approval of a lease sale is delayed beyond what is projected in the DOE report, the most optimistic high recovery case for ANWR (6.25 billion barrels of economically recoverable reserves) would only extend the operating life of TAPS by about 10 years (page 3-73).

⁴See Oil & Gas Journal, February 7, 1994, page 1 of the "Newsletter."

Meanwhile, actual prices paid by Copper Valley for deliveries in December 1993 were⁵:

Valdez	\$0.6123 /gallon
Glennallen	\$0.6423 /gallon

Again, this highlights that the DFS may have established a false starting price for comparisons.

- c. The Draft Feasibility Study assumes the real price of diesel for CVEA will escalate at approximately:
- 1) Low 0.03% per year
 - 2) Medium 1.73% per year
 - 3) High 2.45% per year

Meanwhile, long term price trends in the real cost of crude oil suggest that the so-called "low" fuel projections are more reflective of the actual historic data looking back over similarly long time horizons⁶.

Furthermore, there is evidence to suggest that the trend for the past forty years has been a decline in the inflation adjusted price for refined products⁷.

This review will include the DFS low and medium fuel escalation cases recast as the medium and high fuel escalation cases.

In addition, this review will use the December 1993 prices paid for diesel fuel as a starting point for fuel costs.

3. Discount Rate

- a. The DFS uses a 5% real discount rate. The proper discount rate is one that reflects the investment cost to Alaskans of the money sunk into the project. One reasonableness measure for Alaskans would be to compare whether or not the return on the investment was equal to or greater than an equivalent investment in the Permanent Fund. Given the Permanent Fund's average real return of 5% over the past several years and a

⁵From Copper Valley Electric Association tariff filings with the Alaska Public Utilities Commission in 1994.

⁶See for example "An OPEC Obituary", by Arlon R. Tussing, in *The Public Interest*, Number 70, Winter 1983, at page 21:

History offers some empirical support for the viability of a long term world oil price in the \$10-to-\$18 range [1982 dollars]. Over the past 110 years, the average price in 1982 dollars has been almost exactly \$13 per barrel and, despite an average constant-dollar price fluctuation of more than 20 percent per year, no long-term trend can be detected. (The average 1982-dollar price between 1871 and 1925 was \$12.96 per barrel, and the average price between 1926 and 1980 was \$13.04 per barrel.)

⁷See "Energy Security and Policy: Analysis of the Pricing of Crude Oil and Petroleum Products", GAO/RCED-93-17, March 1993, Figure 1.6: Retail Gasoline Prices, adjusted for inflation, 1950-90, which shows retail gasoline prices have declined by over 20% in real terms from 1950 to 1990.

presumption that it will continue, an initial estimate of 5% appears reasonable. Nonetheless, given the Permanent Fund Corporations recent projections for a real return of between 4.5% and 3%, a sensitivity analysis would be appropriate to check the robustness of the "least-cost" alternative to a slightly lower discount rate.

4. Copper Valley Intertie Alternative

a. Capital Cost

- 1) CVEA has expressed concern to the feasibility study team that the capital costs were too high. CVEA "implied that they would consider unreasonable any design selections which are a matter of philosophical differences and which cost more but buy nothing, e.g., longevity, lower maintenance costs, reliability."⁸

Unfortunately, CVEA's views, if accurately reflected in the summary, reveal what might be characterized generously as a misunderstanding of the underlying purpose of a feasibility study. The purpose of a feasibility study is to identify a least cost alternative with a consistent basis of comparison between the alternatives. CVEA appears to believe that the intertie is their best alternative and the feasibility study should be manipulated (by lowering capital costs and ignoring the operating and maintenance implications) to reach this result. Consequently, any assumptions that CVEA has supplied for the purposes of determining Intertie feasibility must be reviewed in light of this bias.

- 2) It appears that the feasibility study team has ceded to CVEA's desire to lower the capital cost in several intertie design decisions which should result in higher operations and maintenance costs for the intertie alternative compared to industry standards. The impact of these design decisions does not appear to be reflected in an appropriate upward adjustment in the O&M allowances in the economic analysis.

Ice and snow design loading conditions have been reduced from the original recommendation without adequate empirical evidence. It appears to be a "compromise" between more conservative margins of safety and a desire to keep costs down⁹. In addition, Power Engineers Inc. suggest that maintenance is a factor to consider in deciding whether to accept lower loading criteria and reliability. This

⁸See DFS, Appendix E: Technical Review Meeting Summary, page 1.

⁹See DFS, Appendix E, Technical Review Meeting Summary, pages 2 and 3 regarding extreme loading criterion.

additional exposure to risk does not appear to be factored into cost estimates for operations and maintenance. The O&M estimates appear to be on the low end of the range of comparables presented in the study. Given these additional measures to keep cost down, it would appear an O&M estimate from the mid range of empirical evidence may be too low. No explicit adjustment has been made. O&M is varied from the DFS estimates in the medium, and high cost intertie scenarios as a percentage of the transmission line construction cost.

- 3) Engineers recommended a standard communications link to assist with clearing faults. CVEA requested that no dedicated communications system be included. This will either reduce reliability or require some additional capital expenditure to compensate. A capital cost element of \$250,000 has been added to the medium and high cost intertie scenarios.
- 4) No condemnation proceedings have been included in right-of-way acquisition costs despite acknowledgment at technical meeting in July that Chickaloon acquisition "may not be easy." Right-of-way acquisitions may be under reported in the DFS. No explicit adjustment has been made in this review.
- 5) The DFS used:

...a median 40% overhead [rate for labor] largely based on discussions with the prospective owner, CVEA, that streamlined contracting would be the rule, but tempered by the fact that the rate would be pushed up if schedule and bonding requirements dictated a joint venture or multiple subcontracts.¹⁰

Given that the overhead rate on the Bradley Lake Transmission Line was close to 50% and the projection of "streamlined contracting" may not prevail, it seems appropriate to test the sensitivity of this assumption. An increase in overhead from 40% to 45% appears to increase the average fully loaded labor rate by approximately 2%¹¹. No explicit adjustment has been made in this review.

- 6) The DFS indicates that it performed a reasonableness check on total labor effort by consulting two line contractors for an independent estimate:
 - a) These estimates varied widely:
 - i) 110,000 - 140,000 person hours (820 ph/mile - 1045 ph/mile)

¹⁰See DFS, page VI-8.

¹¹In the medium construction cost case, this would increase labor by approximately \$656,000 and total project cost by \$740,000.

- ii) 250,000 person hours (1866 ph/mile).¹²
 - b) The estimate used in the DFS is roughly 136,000 person hours (1015 ph/mile).
 - c) Especially in light of the wide variation of the independent estimates, it may be more appropriate to take a mid-point of the estimates of labor effort and vary them as part of the sensitivity analysis to get a less biased picture. Otherwise, use of the DFS figure of 136,000 person hours effectively ignores the second estimate and relies upon the lowest quote as a reasonableness check. Furthermore, the wide variation of the independent estimates would suggest a substantial and increased labor contingency would be in order.
- 7) The per mile estimated cost of the CV Intertie for Route Alternative D is **\$254,000/mile** including clearing and contingencies. This compares with the mileage weighted average for the sample of projects contained in Table VI-6 (which presumably contain no owner contingency) of: **\$409,000/mile**. (See Schedule Review Construction Cost for Reasonableness; Review Table VI-6, attached).

DFS Table VI-5 compares cost components across "recent Alaskan projects." Presumably these projects were selected for some comparability. The mileage weighted average for the Table VI-5 projects is \$514,000/mile, more than twice as much as the DFS estimate for the intertie.

The DFS states "this [\$254K/mile] unit cost is in line with escalated historical costs¹³. It appears more accurate to say that this represents the low end of the historic experience...and 62% as much as the average of Alaskan projects listed in Table VI-6.

Both the per mile construction cost and the labor hours reasonableness checks suggest the construction cost estimate provided in the DFS represents the lower end of the continuum of likely construction costs. It would appear appropriate to provide a "medium" construction cost estimate based on average independent labor estimates and average historic costs for comparable projects.

Please see schedule INT-1 for a summary of the Low, Medium, and High project cost estimates.

The project cost estimate provided in the DFS is used in Revision 1.1 to DFS.

¹²See DFS, page VI-10.

¹³See DFS, page VI-12.

In Revision 1.0, the DFS estimate is termed the "low cost inertie" and the medium and high inertie project cost figures are included in scenarios to test the sensitivity of the modeling exercise to those parameter.

The Medium project cost estimate uses the following assumptions:

1. Labor Hours = average of independent quotes
2. Heavy Helicopter Hours = increased from DFS Exhibit C-1 in proportion with labor hours
3. Fully Loaded Labor Rate = \$125/hr
4. Fully Loaded Heavy Helicopter Rate = \$3341/hr
5. Include \$250K for communications system
6. Engineering calculated at 3% of Transmission Line Construction total (line C4).
7. Construction Management at 6%.
8. Owner Costs at 4%

b. Operations & Maintenance Costs

- 1) *Static VAR Compensator (SVC)*: An SVC has been indicated as necessary to permit reliable transfers in excess of about 15MW. The cost of such an addition would appear as an O&M expenditure in roughly the year when 15MW of load transfer is forecast. This cost (around \$5.6 million in 1993) has not been included in the O&M Stream at this juncture because of "the uncertainty of the date at which it would be required." **Ironically, the high demand scenarios which appear to support the inertie may require the SVC, but its cost has not been included in a feasibility study that runs to 2047 because of "uncertainty."**
- 2) The DFS uses Table VI-8: Annual Operation and Maintenance Costs, Steel H-Frame Construction Alternative, (1993 dollars) as the basis for the numbers in the economic analysis.
 - a) This schedule assumes that the Steel H-Frames will be replaced at the average rate of two per year for years 1- 20 and one per year thereafter. There is no evidence presented to support a contention that the rate of replacement should decline. For the purposes of this review, replacements are held constant at \$50,000 per year over the life of the line in the low cost inertie case.
 - b) **The economic analysis presented in Appendix J appears to contain a numerical error. It uses a figure of \$269K for inertie O&M in the year 2017. Table VI-8 suggests that this figure should be \$346K.**
 - c) The DFS economic analysis projects the incorrect figure of \$269K out to 2047. The DFS analysis thus projects an average annual O&M of \$255K over the 50 year life of the line. Substituting what appears to be the correct figure \$346K and projecting that out from 2018-2047, the average annual O&M over the life of the line would be \$314K.

- d) Finally, given that O&M is projected to increase over the life of the line, the DFS flat projection from year 2017 through 2047 under reports the O&M costs developed in Table VI-8. Projecting the trend of increasing O&M over the 2017-2047 time period, the average annual O&M would be around \$329. Thus these two adjustments would increase the O&M by 22% over what is included in the DFS economic analysis.
- 3) The DFS suggests its O&M estimates are reasonable given a sample which includes Tyee Lake, Swan Lake, and discussions with HEA¹⁴.
- a) Tyee Lake O&M is estimated at 1.1% of construction cost. Construction cost was \$438K/mile. Access is poor, terrain is mountainous.
O&M per mile = 4.8K.
 - b) Swan Lake O&M is estimated at 0.3% of construction cost. Construction cost was \$667K/mile. Access is poor, terrain is rolling.
O&M per mile = 2.0K.
 - c) HEA estimates O&M between 0.5% and 1.0% of construction cost for lines in its area. Construction cost for the Bradley Lake was \$530K/mile. Access is poor, terrain is mountainous.
O&M per mile = 4.0K.
 - d) The DFS Copper Valley Intertie O&M per mile = 2.3K, clearly at the low end of the sample range cited for support. The average O&M per mile for the sample cited is roughly 3.6K. For this intertie, that would suggest a mid-range estimate for O&M would average around \$482K/year (3.6K/mile * 134 miles; approx.. 54% higher than the DFS estimate of an average of \$314K/year).

Thus, this review has adjusted the O&M estimates of DFS Table VI-8 based on the following annual average O&M costs over the life of the line (all 50 years) as a percentage of the transmission line construction cost:

Low Intertie Cost:	Adjust DFS for math error (0.97% over 50 year life of line)
Medium Intertie Cost:	Use 1.0%
High Intertie Cost:	Use 1.0%

- 4) The Intertie case assumes that CVEA will reduce its labor costs by \$560,000 each year once the intertie is built (6 full time positions). Unable to independently verify this estimate. This adjustment has been accepted without modification in this review. It is important to note that this single assumption decreases the Intertie present value by approximately \$8,010,000.

¹⁴See DFS, page VI -18.

c. Purchased Power

Need to verify whether economy energy sales figures are reasonable. (25.8 mills per kWh in 1998 for fuel + O&M component).

d. Probability of Diesel Generation under Intertie Alternative

The DFS assumes that once the intertie is operational (1998) there will be no more diesel generation. This assumes that the intertie between Glennallen and Valdez performs without failure. This intertie has experienced outages over its life, at least one lasting several months.

It appears that if some diesel generation were to be included in the Intertie case, after the intertie is operational, as is likely to occur given historical evidence, the intertie alternative may become even more expensive relative to the other alternatives.

Other alternatives may require an adjustment in the amount of diesel generation as well to account for the probabilities that the Glennallen-Valdez intertie may experience outages.

5. Diesel Alternative

- a. Unable to independently verify that CVEA will need an additional 3 full time positions (\$291,000) for the diesel scenario for an additional shift. It appears this may be double counting the labor required for diesel operations. Recommend that R.W. Back review whether the "fixed operating costs, including labor" of \$12 per kW per year for the new diesel generators includes this particular labor component or not¹⁵. This adjustment represents a present value increase in the Diesel Alternative of \$3,945,000.
- b. DFS assumes an installed cost of \$820/kW for a 2200 kW unit based on vendor quotes. Given the relatively widespread installation of Cat generators in Alaska, the use of a 15% contingency appears high. Furthermore, this estimate appears high compared to recent installations and recent studies in Alaska.

The 1990 Least Cost Plan for Copper Valley Electric Association used a figure of \$470/kW. Even if escalated at 5% per year to 1993, the estimate becomes \$544/kW, 2/3rds of the figure used in the DFS.

¹⁵See DFS, page IX-12.

Nome installed a 3.7 MW Cat 3616 generator, including building and switchgear, for \$740/kW in 1991¹⁶. Escalated at 5% per year to 1993, the estimate (including building) becomes \$816/kW. The comparable DFS estimate is roughly \$1029/kW (\$1,765K for 2200kW +\$500K for bldg). Even given the difference in the size of the units under consideration, it appears that the DFS may be overestimating the installed cost of new diesel generators, particularly given that installations in Glennallen and Valdez should be less costly than those in Nome due to differences in road and port access.

The comparisons presented in this review will use the relatively high DFS diesel capital costs.

Assuming the Cat 3608 Generator capital cost is \$745 per kW of rated output (use a 5% contingency instead of 15%) will result in a reduction in present value for the medium demand cases roughly as follows:

All diesel case =	\$612,000.
Allison Lake case =	\$599,000.

- c. The DFS uses O&M figures for diesel generators which appear high compared to other Alaskan utilities. The DFS used a figure for variable O&M of \$0.01 per kWh. (Assumed to be non-labor)

Nome Joint Utilities has had variable Non-labor O&M estimated between 6 and 7 mills/kWh¹⁷. Adjusting to 1993 dollars, variable O&M will be in the range of 6.6 to 7.7 mills/kWh. The scenarios presented in this review will use 7.5 mills/kWh as a reasonable estimate.

- d. DFS assumes that the existing units will be replaced as they are scheduled for their next overhaul. This introduces a bias against diesel generation as this approach replaces the most efficient units first, leaving the least efficient units as part of the diesel generation mix against which the other alternatives will be compared.

For the purposes of this review, the diesel alternative developed in the DFS will be used.

However, it would be appropriate to evaluate the economics of the retirement of inefficient diesel units prior to retiring the more efficient units.

¹⁶See "Economic Analysis of Coal-Fired Power Plants to Serve Nome, Kotzebue, and the Red Dog Mine" by Analysis North, 1991, pages 5-40, 5-41.

¹⁷See "Economic Analysis of Coal-Fired Power Plants to Serve Nome, Kotzebue, and the Red Dog Mine" by Analysis North, 1991, page 5-37.

6. Coal Alternative

The coal alternative has not been reviewed.

7. Allison Lake Alternative

- a. As in the diesel alternatives, the DFS assumes that the existing diesel units will be replaced as they are scheduled for their next overhaul. This introduces a bias against this alternative as it relies in part upon diesel generation. This approach replaces the most efficient units first, leaving the least efficient units as part of the diesel generation mix against which the other alternatives will be compared.

For the purposes of this review, the diesel retirements and dispatch developed in the DFS will be used.

However, it would be appropriate to evaluate the economics of the retirement of inefficient diesel units prior to retiring the more efficient units.

- b. In the DFS low and medium-low demand growth cases, a labor deduction of \$146,000 is taken when Allison Lake comes on line. It is unclear why this deduction is not also taken for the DFS medium-high case. This appears to represent a present value difference of \$1,875,000.

8. Silver Lake Hydroelectric

The Silver Lake Alternatives have not been reviewed.

9. Other Alternatives

The 1990 Least Cost Plan for Copper Valley Electric Association found that some alternatives to expand the capacity of Solomon Gulch appeared attractive. They did not appear to receive any mention in the DFS. At the very least, the list of prior preferred alternatives should at least get some mention under a discussion of preliminary screening to explain why they looked good in 1990 but do not even warrant a mention in 1993, let alone development into an alternative to consider in this study.

One example of a project that should at least be discussed is the proposal contained in the 1990 Stone & Webster Study to add an inflatable rubber dam to the existing Solomon Gulch dam.

Utility Rates:

The electric rates that will result from each of the alternatives should generally reflect their relative cost in the economic analysis of present values. If, however, one alternative has access to lower cost financing relative to other alternatives, the lower cost financing will drive the rate projections lower for that alternative compared to the others. The other exception is that the rates in the Intertie case for purchasing power from the Railbelt are somewhat higher to reflect the overheads and profits that the Railbelt utilities will assign to their sales of energy.

All other things being equal, it appears that the Allison Lake project in combination with the use of more efficient diesels will result in lower rates compared to other alternatives.

Related Issues:

1. Some have argued that the proposed Intertie will result in lower rates than the other alternatives due to the State of Alaska donation of a \$35 million, 50 year, no interest "loan."

Adding or withholding a \$35 million, 50 year, no interest "loan" is equivalent to giving or withholding a \$27 million grant from your favorite charity.¹⁸ With the grant, your charity will be a stunning success. Without it, it ceases to function. This is simply a self-fulfilling prophecy.

In effect, if one gives the \$27 million grant to one alternative and not the others in a comparison, one is simply arbitrarily picking the winner for considerations which are not related to the underlying economics of the project. Such an argument generally eviscerates the reason to conduct a feasibility study in the first instance.

The DFS appropriately provides a rate comparison between the Intertie and the Allison Lake Project which reflects both projects having access to this state grant.

Since the Allison Lake Project is likely to require considerably less additional capital beyond the no interest "loan" compared to the proposed Intertie, **the state grant is more effectively leveraged if applied to the**

¹⁸See the attached schedule entitled "Copper Valley Intertie: Analysis of \$35 million, 50 year, no interest 'loan'". Essentially the so-called "no interest loan" is equivalent to a \$35 million, 50 year loan at an interest rate of 8.5% plus a grant of \$27 million.

In annual payment terms the difference is over \$2 million a year.

Allison Lake Project. That is, the Allison Lake Project will result in even lower rates to CVEA customers than the Intertie alternative even if both projects are essentially equal in a "least cost" level comparison.

2. Some have argued that the Allison Lake Alternative has been undervalued in comparisons that do not include the 6.4¢/kWh payments for energy generated from the Solomon Gulch Project (pursuant to the Four Dam Pool Power Sales Agreement).

This argument is not persuasive due to the new circumstances that arise from the Allison Lake Hydroelectric project.

If AIDEA sought to have the Four Dam Pool charge apply, it would simply represent a transfer payment from Copper Valley Electric Association customers to AIDEA which would not represent any net change in value to the State of Alaska or its citizens. It basically amounts to a surcharge on CVEA customers simply for the privilege of pouring *more* water through Solomon Gulch. Under this circumstance, the CVEA customers could pay for Solomon Gulch several times over the course of the Four Dam Pool Power Sales Agreement.

CVEA should be arguing (both on legal and public policy grounds) that the water from Allison Lake is not part of the original project and that changed circumstances warrant a separate treatment of the power generated from Solomon Gulch as a result of projects which supplement its water supply.

Mid Range Scenario:

Based on the preceding review of the Draft Feasibility Study, a mid range scenario was developed around which additional scenarios and sensitivity analyses are presented. The summary of results is presented in **CVEA, Summary of Economic Analysis Results, Revision 1.1 to DFS**, attached.

The Economic Assumptions for the mid range scenario are summarized below:

1. The expected initial year of commercial operation for the Intertie is 1998.
2. The study period begins in 1993 and extends through 2017. Costs are then projected through an extended study period from 2018 through

2047 to cover the expected economic life of the intertie. Costs are held constant after the initial 20-year study period.

3. All costs are stated in 1993 dollars. Fuel costs are assumed to escalate at real rates corresponding to the price projections indicated.
4. The discount rate of 5% is used consistent with the DFS.
5. The base price of #2 diesel fuel is based on CVEA's December 1993 reported purchase price:

Valdez	\$0.6123/gallon
Glennallen	\$0.6423/gallon
6. The average annual rates of increase for fuel are:

0.03%	Medium
1.73%	High
7. The economic lives for the alternatives are:

Intertie	50 years
Base Load Diesel	20 years
New Hydro	50 years
Coal-Fired Power Plant	30 years
Buildings, Switchgear	30 years
8. Capital costs are assumed to be recovered over the economic life of the investment at an annual interest rate equivalent to the assumed discount rate.
9. The capital and operations and maintenance costs of the DFS, adjusted to reflect corrections to numerical errors, are included as the **low cost intertie case** (Capital = \$45,930,519, O&M average = \$329,000/year) which is reflected in the Schedule entitled "Revision 1.1 to the DFS."

Sensitivity Analysis:

The medium estimated cost of the Intertie, as shown in Schedule INT-1, is **\$61,948,830** in 1993 dollars. Annual operations and maintenance costs of the Intertie are as shown in Schedule I-2 and average 0.75% of construction costs, or an annual average of \$ per year over the life of the line. The high cost case is **\$74,377,775** with an operations and maintenance average of 1% of construction costs, or an annual average of \$ per year over the life of the line.

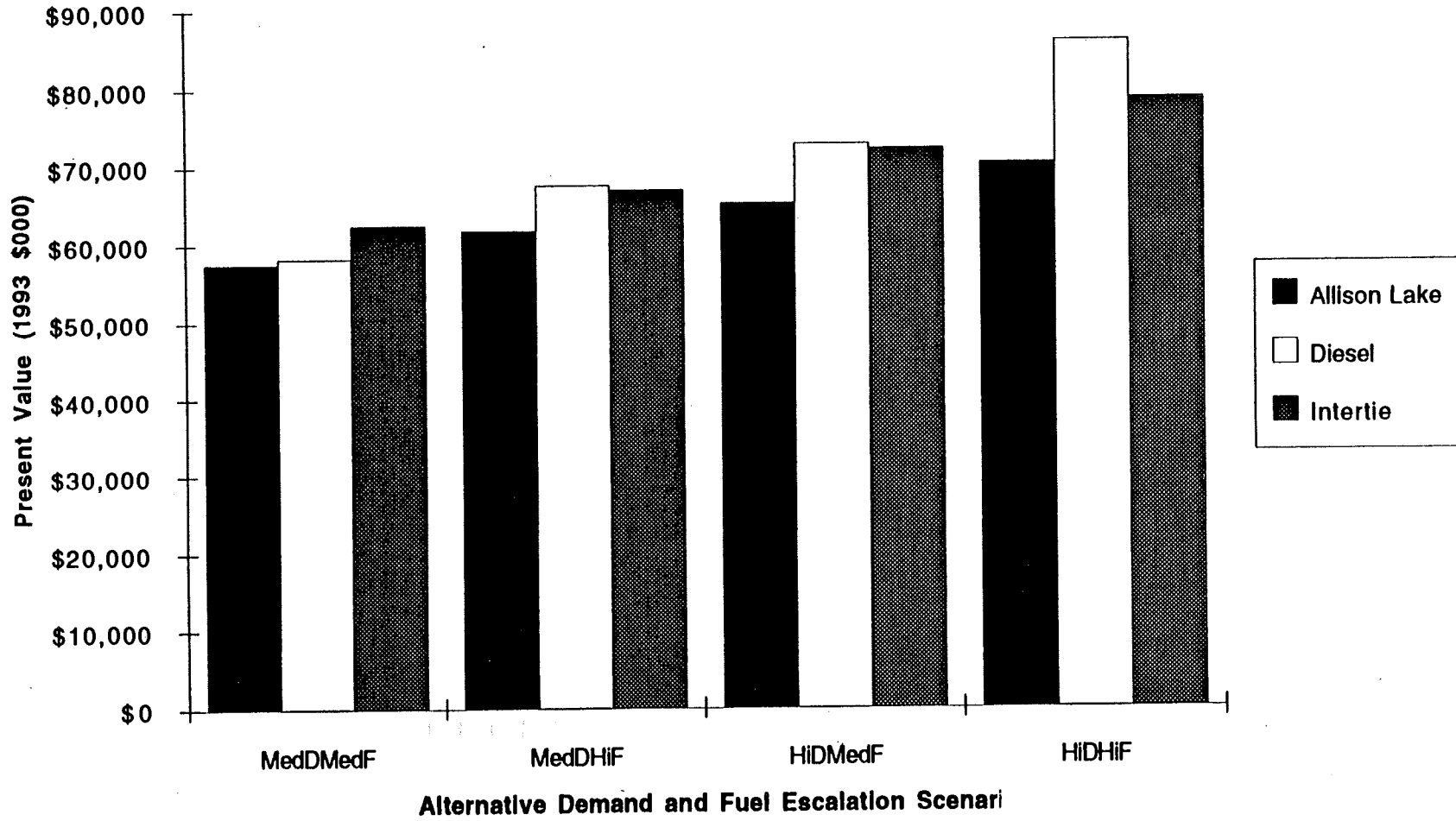
The DFS capital and O&M estimates are used in the Summary of Economics Analysis Results, Revision 1.1 to DFS. The sensitivity analysis is contained in Summary of Analysis Results, Revision 1.0 to DFS.

10. A Static VAR Compensator should be included in the sensitivity analysis of the intertie cases as a "supplemental capital project" at a price of \$5.6 million. If one assumes this is added in 2016 for example, it would add roughly \$1,737,000 to the present value of the intertie cases. This has not been included in any scenarios in this review.
11. The estimated capacity, energy generation capability, installed cost and annual operation and maintenance costs for each of the alternative generating resources are summarized in Schedule C-1.
12. Existing diesel generators are replaced per the DFS. Fixed operation and maintenance costs associated with diesel generation do not change when a diesel generator is replaced.
13. Station use power requirements for diesel generating plants is estimated to be 3.66% of net diesel generation.
14. This review has been unable to independently verify the staffing level changes assumed by the DFS based on CVEA's advice. Those assumptions are retained here.
15. Variable operations and maintenance expenses for diesel generators is 30 mills/kWh for existing diesel generators and 7.5 mills/kWh for new diesel generators. Fixed operations and maintenance expenses for new diesel generators is \$12 per kW-year.
16. Transmission losses over the intertie and the existing Valdez to Glennallen transmission line are 3% of the power transmitted over each line.
17. Energy purchased from the Anchorage area by CVEA is priced at an economy energy rate of 25.6 mills per kWh¹⁹ in 1998 and is assumed to escalate at the same rate as diesel fuel. A capital depreciation component of 3 mills/kWh is added to the economy energy rate beginning in 2005.
18. The analysis is prepared from the overall perspective of the State of Alaska. Transfer payments between utilities, such as for wheeling the power over MEA lines to CVEA from the Anchorage area are not included in the economic analysis portion of the study. Transfer payments are considered in the Estimate Price of Power discussion. This is consistent with the appropriate framework established in the DFS.

¹⁹This economy energy rate includes a fuel and an operations & maintenance component. It does not contain margins.

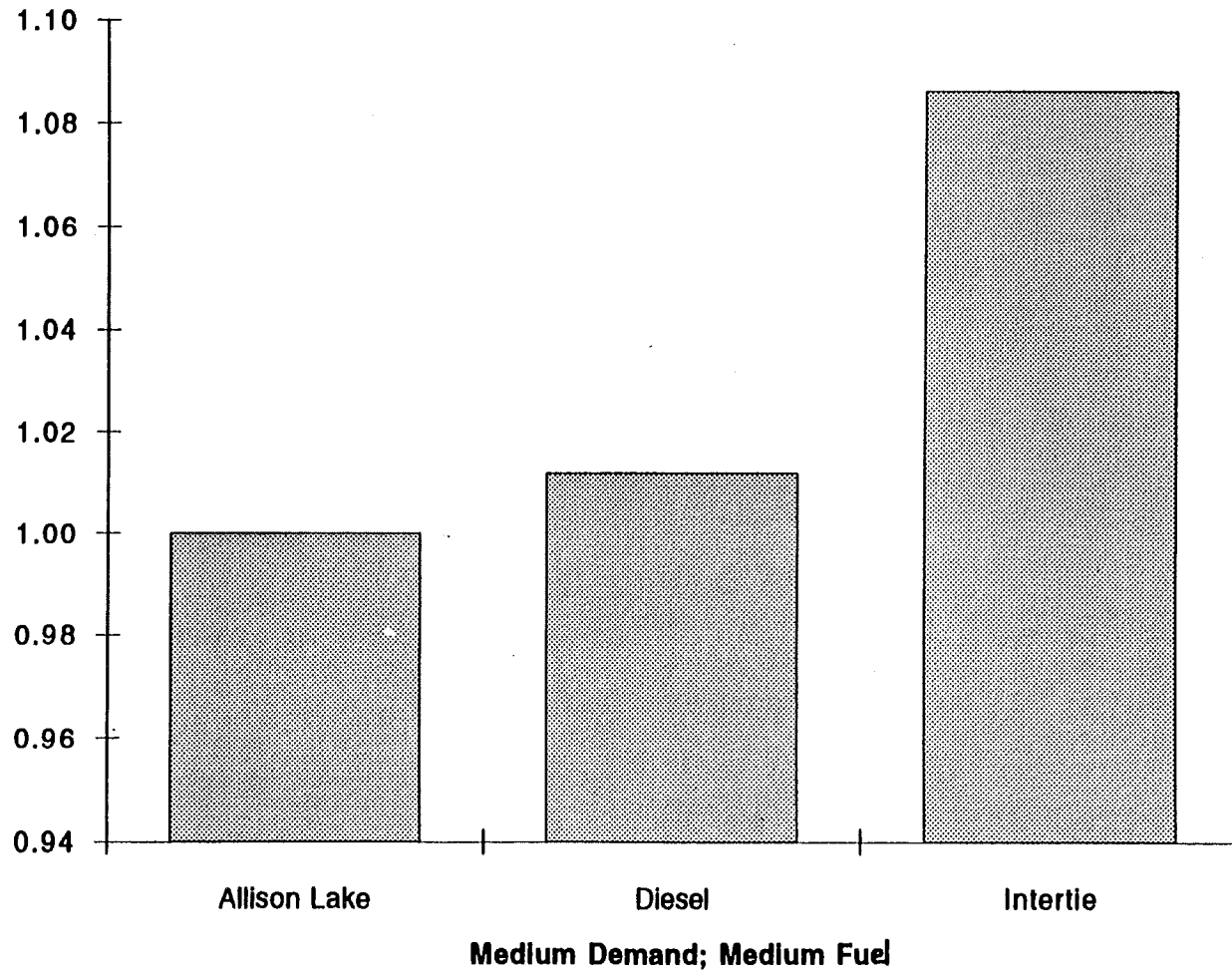
CVEA				
Summary of Economic Analysis Results				
Revision 1.1 to the DFS				
Cummulative Present Value of Comparable System Costs (1993 \$000)				
Scenario		Diesel	Intertie	Allison Lake
Low Load Growth				
	Medium Fuel	\$31,329	\$54,955	
	High Fuel	\$35,588	\$57,731	
Medium Load Growth				
	Medium Fuel	\$58,142	\$62,404	\$57,449
	High Fuel	\$67,496	\$66,912	\$61,714
High Load Growth				
	Medium Fuel	\$72,774	\$72,151	\$65,098
	High Fuel	\$85,871	\$78,517	\$70,180
Index Present Values to Medium Load Growth, Medium Fuel Least Cost Plan				
			DFS	
Scenario		DFS Diesel	Intertie	Allison Lake
Low Load Growth				
	Medium Fuel	0.55	0.96	
	High Fuel	0.62	1.00	
Medium Load Growth				
	Medium Fuel	1.01	1.09	1.00
	High Fuel	1.17	1.16	1.07
High Load Growth				
	Medium Fuel	1.27	1.26	1.13
	High Fuel	1.49	1.37	1.22

CVEA Intertie Feasibility Review



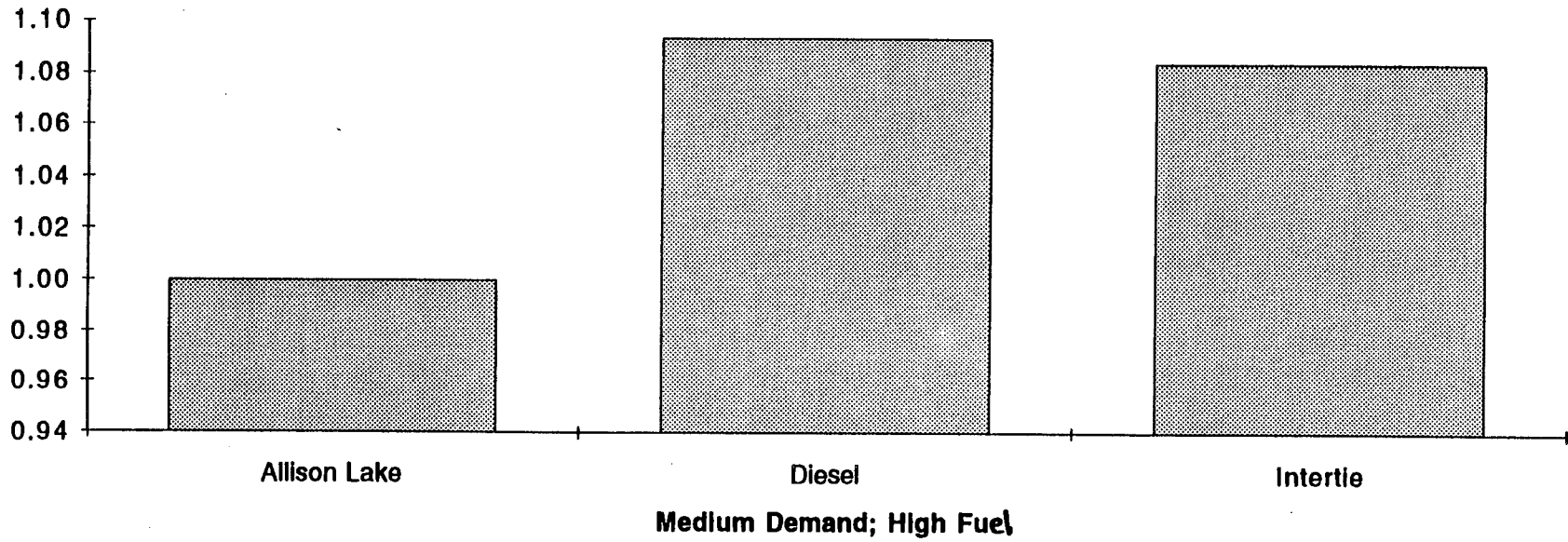
CVEA Intertie Feasibility

Present Value Comparison



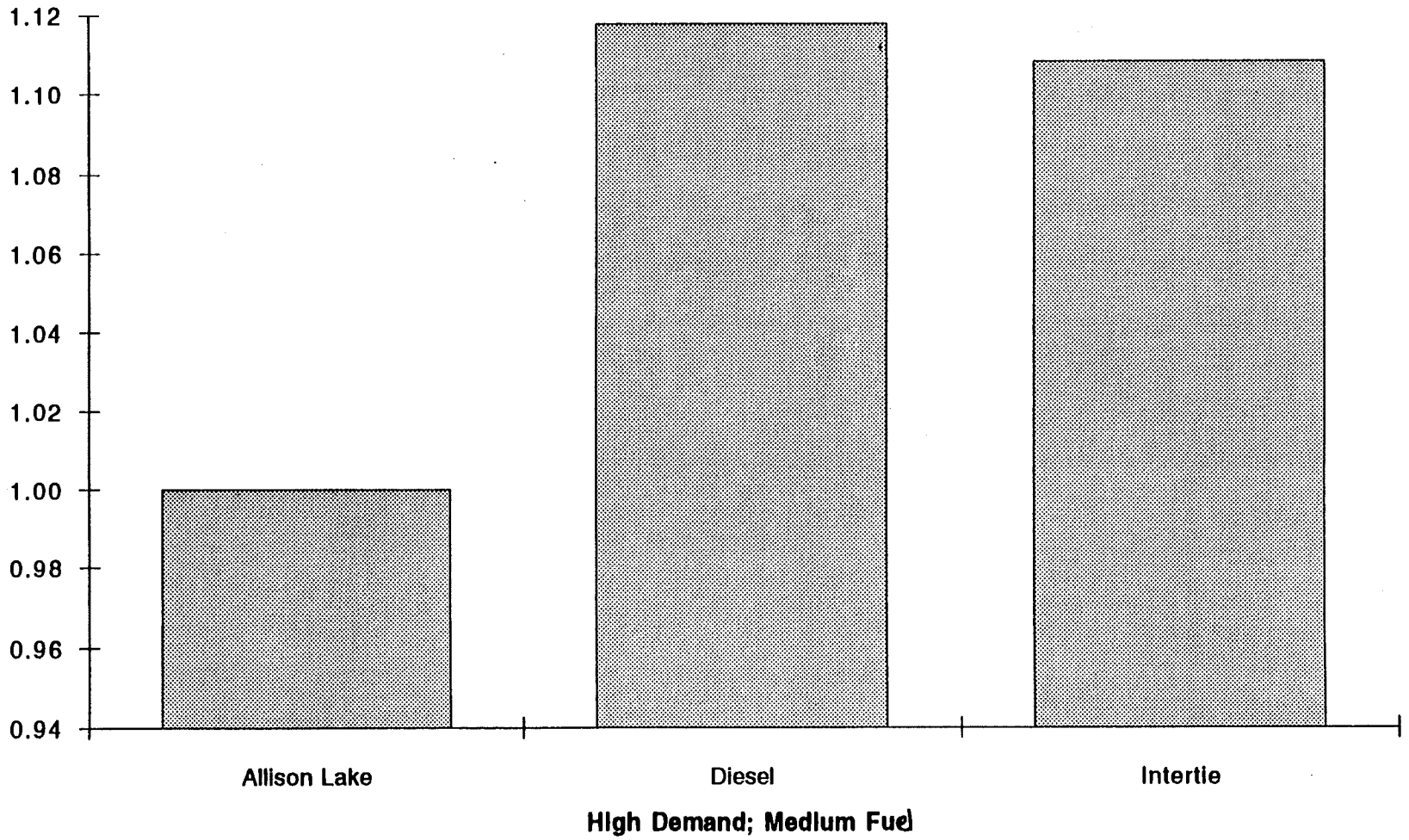
CVEA Intertie Feasibility

Present Value Comparison



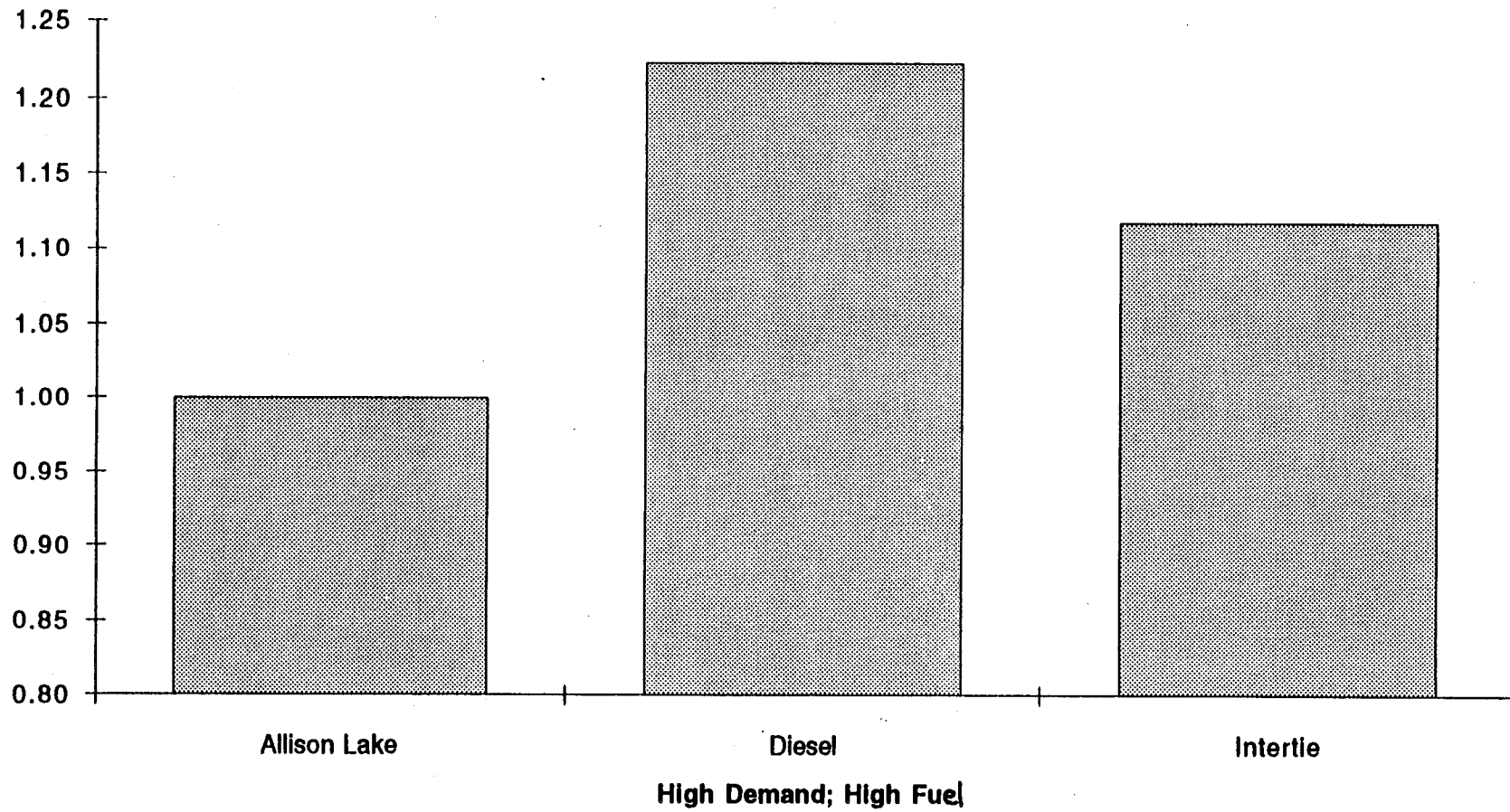
CVEA Intertie Feasibility

Present Value Comparison

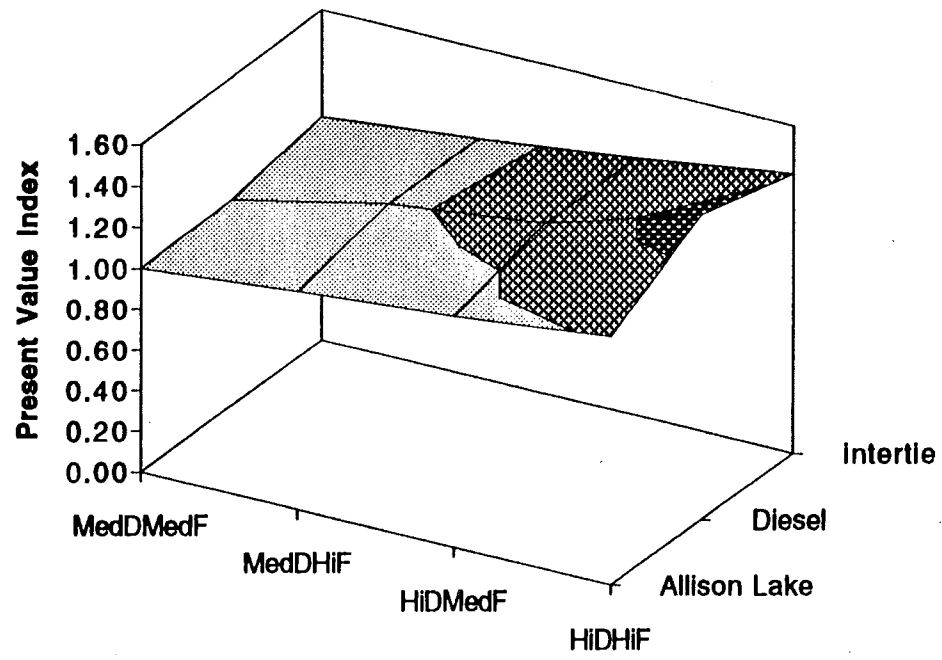


CVEA Intertie Feasibility

Present Value Comparison



CVEA Intertie Feasibility



Economic Assumption Summary			
Discount Rate	5.00%		
Base Price of Diesel			
Valdez	\$0.6123	[December 1993]	
Glennallen	\$0.6423	[December 1993]	
Real Escalation in Fuel & Purchase Power (above inflation)			
Medium	0.03%	per year	
High	1.73%	per year	
Intertie Project Cost [See schedule INT-1]		O&M	
Low	\$45,930,519	\$329,000	
Medium	\$61,948,830	\$471,000	
High	\$74,337,775	\$581,000	
Existing Diesel Generators			
Variable O&M	\$0.0300	kWh	
New Diesel Generators			
Variable O&M	\$0.0075	kWh	
Fixed O&M	\$12	kW-yr	
Net Output	96.34%	Station Use	3.66%
Purchase Power (1993\$)			
Initial Cost	\$0.0254	per kWh (in 1998)	[See Schedule P-1]
Capital Depreciation	\$0.0030	per kWh (in 2005)	
Estimated Economic Life			
Intertie	50	years	
New Diesel Generators	20	years	
Tank Farm	30	years	
Buildings	30	years	
Hydroelectric	50	years	
Coal-fired PP	30	years	

Economic Assumption Summary			
Discount Rate	5.00%		
Base Price of Diesel			
Valdez	\$0.6123	[December 1993]	
Glennallen	\$0.6423	[December 1993]	
Real Escalation in Fuel & Purchase Power (above inflation)			
Medium	0.03%	per year	
High	1.73%	per year	
Allison Lake Project Cost		O&M	
Low	\$29,016,000	\$255,600	
Medium	\$32,240,000	\$284,000	
High	\$40,300,000	\$355,000	
Existing Diesel Generators			
Variable O&M	\$0.0300	kWh	
New Diesel Generators			
Variable O&M	\$0.0075	kWh	
Fixed O&M	\$12	kW-yr	
Net Output	96.34%	Station Use	3.66%
Purchase Power (1993\$)			
Initial Cost	\$0.0254	per kWh (in 1998)	[See Schedule P-1]
Capital Depreciation	\$0.0030	per kWh (in 2005)	
Estimated Economic Life			
Intertie	50	years	
New Diesel Generators	20	years	
Tank Farm	30	years	
Buildings	30	years	
Hydroelectric	50	years	
Coal-fired PP	30	years	

Schedule C-1							
Estimated Costs and Operating Characteristics							
of Resource Options							
Resource	Available Capacity (kW)		Annual Energy Capability (MWh)			Installed Cost	Annual O&M Costs
	Summer	Winter	Summer	Winter	Total	(1993 \$000)	(1993 \$000)
Diesel Generator (DFS)	2,150	2,150	4,520	10,547	15,067	\$1,765	\$176
Diesel Generator (Nome Data)	2,150	2,150	4,520	10,547	15,067	\$1,639	\$139
Diesel Generator	3,650	3,650	7,674	17,905	25,579	\$2,520	\$236
Sutton-Glennallen Intertie	15,000	15,000	31,536	73,584	105,120	\$56,200	\$337
Allison Lake	0	6,255	0	27,396	27,396	\$32,240	\$284
Silver Lake - Option A	0	15,000	1,176	43,576	44,752	\$54,185	\$593
- Option B	0	14,000	2,378	46,376	48,752	\$60,703	\$593
Coal Facility	0	11,000	0	46,376	46,376	\$23,500	\$1,730
Solomon Gulch Expansion							
Notes:							
1	Summer period is part of June through September (2628 hours)						
2	Winter period is slightly more than October through May (6132 hours)						
3	Diesel energy generation is based on 80% capacity factor for illustrative purposes						
4	Allison Lake capacity includes 3045 kW from Allison Lake and 3110 kW additional capacity at Solomon Gulch						
5	Hydro MWh based on assumed average water conditions						
6	Coal Facility MWh assumes 95% availability during winter period						
7	O&M excludes fuel costs						
8	Costs shown here to not include estimated additional costs for power plant building, fuel storage tank and switchyard improvements which may be needed for increasing base load diesel generation in Valdez.						
	These costs are added directly to the economic analysis model.						
9	Base Case Scenarios run with DFS figures for Diesel Units						
10	Sensitivity Analysis run with Nome figures for Diesel Units						

Schedule P-1

Intertie					
Projected Cost of Power from CEA					
(1993\$ per MWH)					
Transmission Loss=	9.70%				
Escalation =	1.73%				
		Capital Cost			
Year	Fuel Price	Component	Margins	Subtotal	Net Delivered
1998	\$25.58	\$0.00	\$0.00	\$25.58	\$28.33
1999	\$26.02	\$0.00	\$0.00	\$26.02	\$28.82
2000	\$26.47	\$0.00	\$0.00	\$26.47	\$29.32
2001	\$26.93	\$0.00	\$0.00	\$26.93	\$29.82
2002	\$27.40	\$0.00	\$0.00	\$27.40	\$30.34
2003	\$27.87	\$0.00	\$0.00	\$27.87	\$30.86
2004	\$28.35	\$0.00	\$0.00	\$28.35	\$31.40
2005	\$28.84	\$3.00	\$0.00	\$31.84	\$35.26
2006	\$29.34	\$3.00	\$0.00	\$32.34	\$35.82
2007	\$29.85	\$3.00	\$0.00	\$32.85	\$36.38
2008	\$30.37	\$3.00	\$0.00	\$33.37	\$36.95
2009	\$30.89	\$3.00	\$0.00	\$33.89	\$37.53
2010	\$31.43	\$3.00	\$0.00	\$34.43	\$38.12
2011	\$31.97	\$3.00	\$0.00	\$34.97	\$38.73
2012	\$32.52	\$3.00	\$0.00	\$35.52	\$39.34
2013	\$33.09	\$3.00	\$0.00	\$36.09	\$39.96
2014	\$33.66	\$3.00	\$0.00	\$36.66	\$40.60
2015	\$34.24	\$3.00	\$0.00	\$37.24	\$41.24
2016	\$34.83	\$3.00	\$0.00	\$37.83	\$41.90
2017	\$35.43	\$3.00	\$0.00	\$38.43	\$42.56
2018	\$36.05	\$3.00	\$0.00	\$39.05	\$43.24
2019	\$36.67	\$3.00	\$0.00	\$39.67	\$43.93
2020	\$37.31	\$3.00	\$0.00	\$40.31	\$44.64
2021	\$37.95	\$3.00	\$0.00	\$40.95	\$45.35
2022	\$38.61	\$3.00	\$0.00	\$41.61	\$46.08
2023	\$39.28	\$3.00	\$0.00	\$42.28	\$46.82
2024	\$39.96	\$3.00	\$0.00	\$42.96	\$47.57
2025	\$40.65	\$3.00	\$0.00	\$43.65	\$48.34
2026	\$41.35	\$3.00	\$0.00	\$44.35	\$49.11
2027	\$42.07	\$3.00	\$0.00	\$45.07	\$49.91
2028	\$42.79	\$3.00	\$0.00	\$45.79	\$50.71
2029	\$43.53	\$3.00	\$0.00	\$46.53	\$51.53
2030	\$44.29	\$3.00	\$0.00	\$47.29	\$52.37
2031	\$45.05	\$3.00	\$0.00	\$48.05	\$53.21
2032	\$45.83	\$3.00	\$0.00	\$48.83	\$54.08
2033	\$46.62	\$3.00	\$0.00	\$49.62	\$54.96
2034	\$47.43	\$3.00	\$0.00	\$50.43	\$55.85
2035	\$48.25	\$3.00	\$0.00	\$51.25	\$56.76
2036	\$49.09	\$3.00	\$0.00	\$52.09	\$57.68
2037	\$49.94	\$3.00	\$0.00	\$52.94	\$58.62
2038	\$50.80	\$3.00	\$0.00	\$53.80	\$59.58
2039	\$51.68	\$3.00	\$0.00	\$54.68	\$60.55
2040	\$52.57	\$3.00	\$0.00	\$55.57	\$61.54
2041	\$53.48	\$3.00	\$0.00	\$56.48	\$62.55
2042	\$54.41	\$3.00	\$0.00	\$57.41	\$63.57
2043	\$55.35	\$3.00	\$0.00	\$58.35	\$64.62
2044	\$56.31	\$3.00	\$0.00	\$59.31	\$65.68
2045	\$57.28	\$3.00	\$0.00	\$60.28	\$66.76
2046	\$58.27	\$3.00	\$0.00	\$61.27	\$67.85
2047	\$59.28	\$3.00	\$0.00	\$62.28	\$68.97

Schedule P-2

Intertie					
Projected Cost of Power from CEA					
(1993\$ per MWH)					
Real Escalation=	0.03%				
Transmission Loss=	9.70%				
		Capital Cost			
Year	Fuel Price	Component	Margins	Subtotal	Net Delivered
1998	\$25.58	\$0.00	\$0.00	\$25.58	\$28.33
1999	\$25.59	\$0.00	\$0.00	\$25.59	\$28.34
2000	\$25.60	\$0.00	\$0.00	\$25.60	\$28.34
2001	\$25.60	\$0.00	\$0.00	\$25.60	\$28.35
2002	\$25.61	\$0.00	\$0.00	\$25.61	\$28.36
2003	\$25.62	\$0.00	\$0.00	\$25.62	\$28.37
2004	\$25.63	\$0.00	\$0.00	\$25.63	\$28.38
2005	\$25.63	\$3.00	\$0.00	\$28.63	\$31.71
2006	\$25.64	\$3.00	\$0.00	\$28.64	\$31.72
2007	\$25.65	\$3.00	\$0.00	\$28.65	\$31.73
2008	\$25.66	\$3.00	\$0.00	\$28.66	\$31.74
2009	\$25.66	\$3.00	\$0.00	\$28.66	\$31.74
2010	\$25.67	\$3.00	\$0.00	\$28.67	\$31.75
2011	\$25.68	\$3.00	\$0.00	\$28.68	\$31.76
2012	\$25.69	\$3.00	\$0.00	\$28.69	\$31.77
2013	\$25.70	\$3.00	\$0.00	\$28.70	\$31.78
2014	\$25.70	\$3.00	\$0.00	\$28.70	\$31.79
2015	\$25.71	\$3.00	\$0.00	\$28.71	\$31.79
2016	\$25.72	\$3.00	\$0.00	\$28.72	\$31.80
2017	\$25.73	\$3.00	\$0.00	\$28.73	\$31.81
2018	\$25.73	\$3.00	\$0.00	\$28.73	\$31.82
2019	\$25.74	\$3.00	\$0.00	\$28.74	\$31.83
2020	\$25.75	\$3.00	\$0.00	\$28.75	\$31.84
2021	\$25.76	\$3.00	\$0.00	\$28.76	\$31.85
2022	\$25.76	\$3.00	\$0.00	\$28.76	\$31.85
2023	\$25.77	\$3.00	\$0.00	\$28.77	\$31.86
2024	\$25.78	\$3.00	\$0.00	\$28.78	\$31.87
2025	\$25.79	\$3.00	\$0.00	\$28.79	\$31.88
2026	\$25.80	\$3.00	\$0.00	\$28.80	\$31.89
2027	\$25.80	\$3.00	\$0.00	\$28.80	\$31.90
2028	\$25.81	\$3.00	\$0.00	\$28.81	\$31.91
2029	\$25.82	\$3.00	\$0.00	\$28.82	\$31.91
2030	\$25.83	\$3.00	\$0.00	\$28.83	\$31.92
2031	\$25.83	\$3.00	\$0.00	\$28.83	\$31.93
2032	\$25.84	\$3.00	\$0.00	\$28.84	\$31.94
2033	\$25.85	\$3.00	\$0.00	\$28.85	\$31.95
2034	\$25.86	\$3.00	\$0.00	\$28.86	\$31.96
2035	\$25.87	\$3.00	\$0.00	\$28.87	\$31.97
2036	\$25.87	\$3.00	\$0.00	\$28.87	\$31.97
2037	\$25.88	\$3.00	\$0.00	\$28.88	\$31.98
2038	\$25.89	\$3.00	\$0.00	\$28.89	\$31.99
2039	\$25.90	\$3.00	\$0.00	\$28.90	\$32.00
2040	\$25.90	\$3.00	\$0.00	\$28.90	\$32.01
2041	\$25.91	\$3.00	\$0.00	\$28.91	\$32.02
2042	\$25.92	\$3.00	\$0.00	\$28.92	\$32.03
2043	\$25.93	\$3.00	\$0.00	\$28.93	\$32.04
2044	\$25.94	\$3.00	\$0.00	\$28.94	\$32.04
2045	\$25.94	\$3.00	\$0.00	\$28.94	\$32.05
2046	\$25.95	\$3.00	\$0.00	\$28.95	\$32.06
2047	\$25.96	\$3.00	\$0.00	\$28.96	\$32.07

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel												
Low Load; Medium Fuel												
Diesel Costs												
Fuel	\$1,131	\$1,210	\$1,413	\$1,374	\$1,096	\$1,154	\$1,151	\$1,149	\$1,148	\$1,144	\$1,139	\$1,135
Variable O&M	\$745	\$797	\$916	\$888	\$206	\$218	\$217	\$217	\$217	\$216	\$215	\$214
Existing Diesel O&M Adjustment												
Additional Building & Equipment												
New Diesel Fixed O&M					\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs					\$283	\$283	\$425	\$425	\$425	\$425	\$425	\$425
Total Diesel Costs	\$1,876	\$2,007	\$2,329	\$2,261	\$1,611	\$1,680	\$1,819	\$1,817	\$1,815	\$1,810	\$1,805	\$1,800
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,876	\$2,007	\$2,329	\$2,261	\$1,611	\$1,680	\$1,819	\$1,817	\$1,815	\$1,810	\$1,805	\$1,800
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,876	\$2,007	\$2,329	\$2,261	\$1,611	\$1,680	\$1,819	\$1,817	\$1,815	\$1,810	\$1,805	\$1,800
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$25,334	(In thousands)					
30 year (2018-2047) with "no additional growth"						\$5,995	(In thousands)					
Total Net Present Value						\$31,329	(In thousands)					

DFS Diesel Case													
Medium Demand; High Fuel													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$2,131	\$2,199	\$2,269	\$2,341	\$2,416	\$2,492	\$2,571	\$2,652	\$2,737	\$2,823	\$2,912	\$3,002	\$3,098
Variable O&M	\$354	\$359	\$364	\$369	\$374	\$380	\$385	\$391	\$398	\$402	\$407	\$413	\$418
Existing Diesel O&M Adjustment	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291
Additional Building & Equipment	\$168	\$166	\$166	\$166	\$168	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708	\$708
Total Diesel Costs	\$3,675	\$3,749	\$3,824	\$3,901	\$3,981	\$4,063	\$4,147	\$4,234	\$4,324	\$4,416	\$4,510	\$4,605	\$4,705
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$3,675	\$3,749	\$3,824	\$3,901	\$3,981	\$4,063	\$4,147	\$4,234	\$4,324	\$4,416	\$4,510	\$4,605	\$4,705
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,675	\$3,749	\$3,824	\$3,901	\$3,981	\$4,063	\$4,147	\$4,234	\$4,324	\$4,416	\$4,510	\$4,605	\$4,705

DFS Diesel Case	DCRA - Division of Energy: Copper Valley Intertie Feasibility Study											
High Demand; Medium Fuel	Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,144	\$1,271	\$1,512	\$1,582	\$1,602	\$1,659	\$1,790	\$1,948	\$2,106	\$2,256	\$2,431	\$2,547
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$457	\$365	\$397	\$430	\$461	\$548	\$520
Existing Diesel O&M Adjustment							\$291	\$291	\$291	\$291	\$291	\$291
Additional Building & Equipment							\$133	\$133	\$133	\$133	\$133	\$166
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$52
New Diesel Capital Costs				\$142	\$283	\$425	\$708	\$708	\$708	\$708	\$708	\$850
Total Diesel Costs	\$1,898	\$2,106	\$2,496	\$2,549	\$2,544	\$2,566	\$3,313	\$3,503	\$3,694	\$3,876	\$4,137	\$4,425
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,898	\$2,106	\$2,496	\$2,549	\$2,544	\$2,566	\$3,313	\$3,503	\$3,694	\$3,876	\$4,137	\$4,425
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,106	\$2,496	\$2,549	\$2,544	\$2,566	\$3,313	\$3,503	\$3,694	\$3,876	\$4,137	\$4,425
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$50,552	(In thousands)					
30 year (2018-2047) with "no additional growth"						\$22,223	(In thousands)					
Total Net Present Value						\$72,774	(In thousands)					

DFS Diesel Case													
High Demand; Medium Fuel													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$2,573	\$2,600	\$2,627	\$2,654	\$2,681	\$2,709	\$2,737	\$2,766	\$2,794	\$2,823	\$2,852	\$2,881	\$2,912
Variable O&M	\$525	\$534	\$542	\$549	\$557	\$565	\$573	\$581	\$589	\$597	\$605	\$613	\$625
Existing Diesel O&M Adjustment	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291
Additional Building & Equipment	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166
New Diesel Fixed O&M	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52
New Diesel Capital Costs	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850
Total Diesel Costs	\$4,458	\$4,493	\$4,527	\$4,561	\$4,596	\$4,632	\$4,668	\$4,705	\$4,741	\$4,778	\$4,815	\$4,852	\$4,895
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$4,458	\$4,493	\$4,527	\$4,561	\$4,596	\$4,632	\$4,668	\$4,705	\$4,741	\$4,778	\$4,815	\$4,852	\$4,895
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$4,458	\$4,493	\$4,527	\$4,561	\$4,596	\$4,632	\$4,668	\$4,705	\$4,741	\$4,778	\$4,815	\$4,852	\$4,895

DFS Diesel Case		DCRA - Division of Energy: Copper Valley Intertie Feasibility Study										
High Demand; High Fuel		Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)										
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,144	\$1,292	\$1,564	\$1,665	\$1,713	\$1,805	\$1,980	\$2,191	\$2,409	\$2,626	\$2,877	\$3,085
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$457	\$365	\$397	\$430	\$461	\$548	\$520
Existing Diesel O&M Adjustment							\$291	\$291	\$291	\$291	\$291	\$291
Additional Building & Equipment							\$133	\$133	\$133	\$133	\$133	\$166
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$52
New Diesel Capital Costs				\$142	\$283	\$425	\$708	\$708	\$708	\$708	\$708	\$850
Total Diesel Costs	\$1,898	\$2,128	\$2,548	\$2,631	\$2,656	\$2,712	\$3,504	\$3,747	\$3,997	\$4,245	\$4,583	\$4,944
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,898	\$2,128	\$2,548	\$2,631	\$2,656	\$2,712	\$3,504	\$3,747	\$3,997	\$4,245	\$4,583	\$4,944
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,128	\$2,548	\$2,631	\$2,656	\$2,712	\$3,504	\$3,747	\$3,997	\$4,245	\$4,583	\$4,944
Present Value in 1993 Dollars												
Cummulative (1993-2017)							\$57,059	(in thousands)				
30 year (2018-2047) with "no additional growth"							\$28,812	(in thousands)				
Total Net Present Value							\$85,871	(in thousands)				

DFS Diesel Case													
High Demand; High Fuel													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$3,149	\$3,237	\$3,328	\$3,417	\$3,511	\$3,608	\$3,707	\$3,810	\$3,914	\$4,022	\$4,132	\$4,244	\$4,363
Variable O&M	\$625	\$634	\$642	\$649	\$657	\$665	\$673	\$681	\$689	\$697	\$705	\$713	\$725
Existing Diesel O&M Adjustment	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291	\$291
Additional Building & Equipment	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166	\$166
New Diesel Fixed O&M	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52
New Diesel Capital Costs	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850	\$850
Total Diesel Costs	\$5,033	\$5,129	\$5,226	\$5,324	\$5,426	\$5,531	\$5,638	\$5,749	\$5,861	\$5,977	\$6,095	\$6,216	\$6,347
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$5,033	\$5,129	\$5,226	\$5,324	\$5,426	\$5,531	\$5,638	\$5,749	\$5,861	\$5,977	\$6,095	\$6,216	\$6,347
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$5,033	\$5,129	\$5,226	\$5,324	\$5,426	\$5,531	\$5,638	\$5,749	\$5,861	\$5,977	\$6,095	\$6,216	\$6,347

Intertie	DCRA - Division of Energy: Copper Valley Intertie Feasibility Study											
Low Load; Medium Fuel	Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)											
Low Intertie Construction	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,131	\$1,210	\$1,413	\$1,374	\$1,261	\$0						
Variable O&M	\$745	\$797	\$916	\$888	\$826	\$0						
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment												
New Diesel Fixed O&M												
New Diesel Capital Costs												
Total Diesel Costs	\$1,876	\$2,007	\$2,329	\$2,261	\$2,086	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207
Economy Energy						\$929	\$976	\$1,005	\$1,034	\$1,059	\$1,083	\$1,107
Total Intertie Costs						\$3,652	\$3,699	\$3,728	\$3,756	\$3,857	\$3,806	\$3,830
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,876	\$2,007	\$2,329	\$2,261	\$2,086	\$3,092	\$3,139	\$3,168	\$3,196	\$3,297	\$3,246	\$3,270
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,876	\$2,007	\$2,329	\$2,261	\$2,086	\$3,092	\$3,139	\$3,168	\$3,196	\$3,297	\$3,246	\$3,270
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$40,767	(in thousands)					
30 year (2018-2047) with "no additional growth"						\$14,189	(in thousands)					
Total Net Present Value						\$54,954	(in thousands)					

Intertie													
Low Load; Medium Fuel													
Low Intertie Construction													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel													
Variable O&M													
Existing Diesel O&M Adjustment	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment													
New Diesel Fixed O&M													
New Diesel Capital Costs													
Total Diesel Costs	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$1,237	\$1,236	\$1,232	\$1,228	\$1,223	\$1,217	\$1,123	\$1,075	\$820	\$816	\$812	\$808	\$804
Total Intertie Costs	\$3,960	\$3,959	\$4,029	\$3,965	\$3,960	\$3,954	\$3,860	\$3,937	\$3,576	\$3,572	\$3,568	\$3,564	\$3,685
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$3,400	\$3,399	\$3,469	\$3,405	\$3,400	\$3,394	\$3,300	\$3,377	\$3,016	\$3,012	\$3,008	\$3,004	\$3,125
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,400	\$3,399	\$3,469	\$3,405	\$3,400	\$3,394	\$3,300	\$3,377	\$3,016	\$3,012	\$3,008	\$3,004	\$3,125

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Intertie												
Low Load; High Fuel												
Low Intertie Construction												
Diesel Costs												
Fuel	\$1,131	\$1,231	\$1,462	\$1,445	\$1,349	\$0						
Variable O&M	\$745	\$797	\$916	\$888	\$826	\$0						
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment												
New Diesel Fixed O&M												
New Diesel Capital Costs												
Total Diesel Costs	\$1,876	\$2,028	\$2,377	\$2,333	\$2,174	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207
Economy Energy						\$929	\$993	\$1,039	\$1,087	\$1,133	\$1,179	\$1,225
Total Intertie Costs						\$3,652	\$3,716	\$3,762	\$3,810	\$3,931	\$3,901	\$3,948
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,876	\$2,028	\$2,377	\$2,333	\$2,174	\$3,092	\$3,156	\$3,202	\$3,250	\$3,371	\$3,341	\$3,388
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,876	\$2,028	\$2,377	\$2,333	\$2,174	\$3,092	\$3,156	\$3,202	\$3,250	\$3,371	\$3,341	\$3,388
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$42,309	(in thousands)					
30 year (2018-2047) with "no additional growth"						\$15,422	(in thousands)					
Total Net Present Value						\$57,730	(in thousands)					

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intertie													
Low Load, High Fuel													
Low Intertie Construction													
Diesel Costs													
Fuel													
Variable O&M													
Existing Diesel O&M Adjustment	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment													
New Diesel Fixed O&M													
New Diesel Capital Costs													
Total Diesel Costs	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$1,376	\$1,398	\$1,413	\$1,429	\$1,446	\$1,461	\$1,370	\$1,332	\$1,031	\$1,042	\$1,053	\$1,064	\$1,076
Total Intertie Costs	\$4,098	\$4,119	\$4,210	\$4,166	\$4,183	\$4,198	\$4,107	\$4,194	\$3,787	\$3,798	\$3,809	\$3,821	\$3,957
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$3,538	\$3,559	\$3,650	\$3,606	\$3,623	\$3,638	\$3,547	\$3,634	\$3,227	\$3,238	\$3,249	\$3,261	\$3,397
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,538	\$3,559	\$3,650	\$3,606	\$3,623	\$3,638	\$3,547	\$3,634	\$3,227	\$3,238	\$3,249	\$3,261	\$3,397

Intertie Case		DCRA - Division of Energy: Copper Valley Intertie Feasibility Study											
Medium Load; Medium Fuel		Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)											
Low Construction		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs													
Fuel	\$1,144	\$1,271	\$1,596	\$1,888	\$2,072	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	\$754	\$835	\$985	\$1,063	\$1,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment													
New Diesel Fixed O&M													
New Diesel Capital Costs													
Total Diesel Costs	\$1,898	\$2,106	\$2,580	\$2,951	\$3,208	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207	\$207
Economy Energy						\$1,051	\$1,070	\$1,088	\$1,109	\$1,130	\$1,148	\$1,168	\$1,168
Total Intertie Costs						\$3,774	\$3,792	\$3,811	\$3,831	\$3,928	\$3,871	\$3,889	\$3,889
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$1,898	\$2,106	\$2,580	\$2,951	\$3,208	\$3,214	\$3,232	\$3,251	\$3,271	\$3,368	\$3,311	\$3,329	\$3,329
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$1,898	\$2,106	\$2,580	\$2,951	\$3,208	\$3,214	\$3,232	\$3,251	\$3,271	\$3,368	\$3,311	\$3,329	\$3,329
Present Value in 1993 Dollars													
Cumulative (1993-2017)							\$44,743	(in thousands)					
30 year (2018-2047) with "no additional growth"							\$17,660	(in thousands)					
Total Net Present Value							\$62,404	(in thousands)					

Intertie Case													
Medium Load; Medium Fuel													
Low Construction													
	2005	2006	2007	2008	2008	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Existing Diesel O&M Adjustment	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment													
New Diesel Fixed O&M													
New Diesel Capital Costs													
Total Diesel Costs	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$1,322	\$1,342	\$1,361	\$1,381	\$1,401	\$1,421	\$1,442	\$1,463	\$1,484	\$1,505	\$1,526	\$1,548	\$1,569
Total Intertie Costs	\$4,045	\$4,064	\$4,159	\$4,118	\$4,138	\$4,158	\$4,179	\$4,325	\$4,240	\$4,261	\$4,282	\$4,304	\$4,450
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$3,485	\$3,504	\$3,599	\$3,558	\$3,578	\$3,598	\$3,619	\$3,765	\$3,680	\$3,701	\$3,722	\$3,744	\$3,890
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,485	\$3,504	\$3,599	\$3,558	\$3,578	\$3,598	\$3,619	\$3,765	\$3,680	\$3,701	\$3,722	\$3,744	\$3,890

Interlie Case	DCRA - Division of Energy: Copper Valley Interlie Feasibility Study											
Medium Load; High Fuel	Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)											
Low Construction	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,144	\$1,292	\$1,650	\$1,985	\$2,216	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	\$754	\$835	\$985	\$1,063	\$1,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment												
New Diesel Fixed O&M												
New Diesel Capital Costs												
Total Diesel Costs	\$1,898	\$2,128	\$2,635	\$3,049	\$3,352	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost												
Interlie Cost												
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207
Economy Energy						\$1,051	\$1,088	\$1,126	\$1,166	\$1,209	\$1,249	\$1,290
Total Interlie Costs						\$3,774	\$3,810	\$3,848	\$3,889	\$4,006	\$3,972	\$4,013
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,898	\$2,128	\$2,635	\$3,049	\$3,352	\$3,214	\$3,250	\$3,288	\$3,329	\$3,446	\$3,412	\$3,453
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,128	\$2,635	\$3,049	\$3,352	\$3,214	\$3,250	\$3,288	\$3,329	\$3,446	\$3,412	\$3,453
Present Value in 1993 Dollars												
Cumulative (1993-2017)						\$46,845	(in thousands)					
30 year (2018-2047) with "no additional growth"						\$20,088	(in thousands)					
Total Net Present Value						\$66,912	(in thousands)					

Intertie Case													
Medium Load; High Fuel													
Low Construction													
	2005	2006	2007	2008	2008	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Existing Diesel O&M Adjustment	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment													
New Diesel Fixed O&M													
New Diesel Capital Costs													
Total Diesel Costs	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$1,470	\$1,515	\$1,561	\$1,608	\$1,657	\$1,707	\$1,758	\$1,811	\$1,866	\$1,922	\$1,980	\$2,039	\$2,099
Total Intertie Costs	\$4,193	\$4,238	\$4,358	\$4,345	\$4,394	\$4,444	\$4,495	\$4,673	\$4,622	\$4,678	\$4,736	\$4,795	\$4,981
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$3,633	\$3,678	\$3,798	\$3,785	\$3,834	\$3,884	\$3,935	\$4,113	\$4,062	\$4,118	\$4,176	\$4,235	\$4,421
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,633	\$3,678	\$3,798	\$3,785	\$3,834	\$3,884	\$3,935	\$4,113	\$4,062	\$4,118	\$4,176	\$4,235	\$4,421

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Intertie												
High Load; Medium Fuel												
Low Intertie Construction												
Diesel Costs												
Fuel	\$1,144	\$1,271	\$1,513	\$1,672	\$1,857	\$0						
Variable O&M	\$754	\$835	\$985	\$1,063	\$1,136	\$0						
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment												\$33
New Diesel Fixed O&M												\$26
New Diesel Capital Costs												\$142
Total Diesel Costs	\$1,898	\$2,106	\$2,497	\$2,736	\$2,993	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$360)
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207
Economy Energy						\$1,131	\$1,240	\$1,349	\$1,459	\$1,563	\$1,665	\$1,766
Total Intertie Costs						\$3,854	\$3,963	\$4,072	\$4,182	\$4,361	\$4,387	\$4,468
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,898	\$2,106	\$2,497	\$2,736	\$2,993	\$3,294	\$3,403	\$3,512	\$3,622	\$3,801	\$3,827	\$4,128
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,106	\$2,497	\$2,736	\$2,993	\$3,294	\$3,403	\$3,512	\$3,622	\$3,801	\$3,827	\$4,128
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$50,496	(in thousands)					
30 year (2018-2047) with "no additional growth"						\$21,654	(in thousands)					
Total Net Present Value						\$72,151	(in thousands)					

Intertie													
High Load; Medium Fuel													
Low Intertie Construction													
	2005	2006	2007	2008	2008	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel													
Variable O&M													
Existing Diesel O&M Adjustment	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142
Total Diesel Costs	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$1,992	\$2,013	\$2,033	\$2,054	\$2,075	\$2,096	\$2,117	\$2,139	\$2,161	\$2,183	\$2,205	\$2,227	\$2,249
Total Intertie Costs	\$4,715	\$4,735	\$4,831	\$4,791	\$4,812	\$4,833	\$4,854	\$5,001	\$4,917	\$4,939	\$4,961	\$4,983	\$5,130
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$4,355	\$4,375	\$4,471	\$4,431	\$4,452	\$4,473	\$4,494	\$4,641	\$4,557	\$4,579	\$4,601	\$4,623	\$4,770
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$4,355	\$4,375	\$4,471	\$4,431	\$4,452	\$4,473	\$4,494	\$4,641	\$4,557	\$4,579	\$4,601	\$4,623	\$4,770

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Intertie												
High Load; High Fuel												
Low Intertie Construction												
Diesel Costs												
Fuel	\$1,144	\$1,292	\$1,564	\$1,759	\$1,986	\$0						
Variable O&M	\$754	\$835	\$985	\$1,063	\$1,136	\$0						
Existing Diesel O&M Adjustment						(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)
Additional Building & Equipment												\$33
New Diesel Fixed O&M												\$26
New Diesel Capital Costs												\$142
Total Diesel Costs	\$1,898	\$2,128	\$2,549	\$2,822	\$3,122	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$560)	(\$360)
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge						\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs						\$207	\$207	\$207	\$207	\$282	\$207	\$207
Economy Energy						\$1,131	\$1,261	\$1,398	\$1,535	\$1,672	\$1,811	\$1,954
Total Intertie Costs						\$3,854	\$3,984	\$4,118	\$4,257	\$4,470	\$4,534	\$4,676
Other												
Annual Carrying Charge												
Annual O&M Costs												
Total Other Costs												
Total Cost of Power	\$1,898	\$2,128	\$2,549	\$2,822	\$3,122	\$3,294	\$3,424	\$3,558	\$3,697	\$3,910	\$3,974	\$4,316
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,128	\$2,549	\$2,822	\$3,122	\$3,294	\$3,424	\$3,558	\$3,697	\$3,910	\$3,974	\$4,316
	Present Value in 1993 Dollars											
	Cummulative (1993-2017)					\$53,412	(in thousands)					
	30 year (2018-2047) with "no additional growth"					\$25,105	(in thousands)					
	Total Net Present Value					\$78,517	(in thousands)					

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intertie													
High Load; High Fuel													
Low Intertie Construction													
Diesel Costs													
Fuel													
Variable O&M													
Existing Diesel O&M Adjustment	(\$560)	(\$580)	(\$580)	(\$560)	(\$580)	(\$560)	(\$560)	(\$580)	(\$580)	(\$580)	(\$580)	(\$580)	(\$560)
Additional Building & Equipment	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33	\$33
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142
Total Diesel Costs	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)	(\$360)
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516	\$2,516
Annual O&M Costs	\$207	\$207	\$282	\$221	\$221	\$221	\$221	\$346	\$240	\$240	\$240	\$240	\$365
Economy Energy	\$2,216	\$2,273	\$2,331	\$2,391	\$2,453	\$2,516	\$2,581	\$2,649	\$2,717	\$2,788	\$2,860	\$2,933	\$3,009
Total Intertie Costs	\$4,938	\$4,995	\$5,129	\$5,128	\$5,190	\$5,253	\$5,318	\$5,510	\$5,474	\$5,544	\$5,616	\$5,690	\$5,890
Other													
Annual Carrying Charge													
Annual O&M Costs													
Total Other Costs													
Total Cost of Power	\$4,578	\$4,635	\$4,769	\$4,768	\$4,830	\$4,893	\$4,958	\$5,150	\$5,114	\$5,184	\$5,266	\$5,330	\$5,530
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$4,578	\$4,635	\$4,769	\$4,768	\$4,830	\$4,893	\$4,958	\$5,150	\$5,114	\$5,184	\$5,266	\$5,330	\$5,530

Allison Lake													
Medium Load; Medium Fuel													
Medium Construction													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$629	\$654	\$679	\$704	\$730	\$758	\$782	\$809	\$836	\$863	\$890	\$917	\$945
Variable O&M	\$117	\$122	\$126	\$131	\$136	\$141	\$146	\$151	\$157	\$162	\$168	\$174	\$179
Existing Diesel O&M Adjustment	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)
Additional Building & Equipment													
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,192	\$1,222	\$1,252	\$1,282	\$1,312	\$1,345	\$1,375	\$1,407	\$1,440	\$1,472	\$1,504	\$1,537	\$1,570
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284
Total Other Costs	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$3,242	\$3,272	\$3,302	\$3,332	\$3,362	\$3,395	\$3,425	\$3,457	\$3,490	\$3,522	\$3,554	\$3,587	\$3,620
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,242	\$3,272	\$3,302	\$3,332	\$3,362	\$3,395	\$3,425	\$3,457	\$3,490	\$3,522	\$3,554	\$3,587	\$3,620

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
Medium Construction	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Diesel Costs												
Fuel	\$1,144	\$1,292	\$1,565	\$1,675	\$1,709	\$1,681	\$1,720	\$554	\$597	\$642	\$685	\$727
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$409	\$320	\$92	\$97	\$103	\$108	\$112
Existing Diesel O&M Adjustment								(\$146)	(\$146)	(\$146)	(\$146)	(\$146)
Additional Building & Equipment												
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs				\$142	\$283	\$425	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,541	\$2,633	\$1,093	\$1,141	\$1,192	\$1,239	\$1,286
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Allison Lake								\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual Carrying Charge								\$284	\$284	\$284	\$284	\$284
Annual O&M Costs								\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Other Costs												
Total Cost of Power	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,541	\$2,633	\$3,143	\$3,191	\$3,242	\$3,289	\$3,336
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,541	\$2,633	\$3,143	\$3,191	\$3,242	\$3,289	\$3,336
Present Value in 1993 Dollars												
Cummulative (1993-2017)							\$43,142	(In thousands)				
30 year (2018-2047) with "no additional growth"							\$18,572	(In thousands)				
Total Net Present Value							\$61,714	(In thousands)				

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Allison Lake													
Medium Load; High Fuel													
Medium Construction													
Diesel Costs													
Fuel	\$770	\$814	\$860	\$907	\$956	\$1,009	\$1,060	\$1,114	\$1,171	\$1,229	\$1,289	\$1,351	\$1,415
Variable O&M	\$117	\$122	\$126	\$131	\$136	\$141	\$146	\$151	\$157	\$162	\$168	\$174	\$179
Existing Diesel O&M Adjustment	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)	(\$146)
Additional Building & Equipment													
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,333	\$1,382	\$1,433	\$1,485	\$1,538	\$1,597	\$1,652	\$1,712	\$1,775	\$1,838	\$1,904	\$1,971	\$2,041
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284
Total Other Costs	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$3,383	\$3,432	\$3,483	\$3,535	\$3,588	\$3,647	\$3,702	\$3,762	\$3,825	\$3,888	\$3,954	\$4,021	\$4,091
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,383	\$3,432	\$3,483	\$3,535	\$3,588	\$3,647	\$3,702	\$3,762	\$3,825	\$3,888	\$3,954	\$4,021	\$4,091

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Allison Lake												
High Load; Medium Fuel												
Medium Construction												
Diesel Costs												
Fuel	\$1,144	\$1,271	\$1,513	\$1,592	\$1,597	\$1,638	\$1,792	\$833	\$989	\$1,136	\$1,280	\$1,423
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$457	\$452	\$158	\$191	\$221	\$251	\$281
Existing Diesel O&M Adjustment												
Additional Building & Equipment												
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs				\$142	\$283	\$425	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$1,584	\$1,772	\$1,950	\$2,124	\$2,297
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Allison Lake												
Annual Carrying Charge								\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs								\$284	\$284	\$284	\$284	\$284
Total Other Costs								\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$3,634	\$3,822	\$4,000	\$4,174	\$4,347
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$3,634	\$3,822	\$4,000	\$4,174	\$4,347
Present Value in 1993 Dollars												
Cummulative (1993-2017)						\$46,771	(In thousands)					
30 year (2018-2047) with "no additional growth"						\$18,327	(In thousands)					
Total Net Present Value						\$65,098	(In thousands)					

Allison Lake													
High Load, Medium Fuel													
Medium Construction													
	2005	2006	2007	2008	2008	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$942	\$953	\$958	\$964	\$969	\$974	\$980	\$985	\$991	\$996	\$1,002	\$1,007	\$1,013
Variable O&M	\$288	\$295	\$303	\$310	\$318	\$326	\$334	\$341	\$350	\$358	\$366	\$374	\$382
Exiting Diesel O&M Adjustment													
Additional Building & Equipment													
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,821	\$1,841	\$1,854	\$1,866	\$1,879	\$1,893	\$1,906	\$1,919	\$1,933	\$1,946	\$1,960	\$1,974	\$1,987
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284
Total Other Costs	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$3,871	\$3,891	\$3,904	\$3,916	\$3,929	\$3,943	\$3,956	\$3,969	\$3,983	\$3,996	\$4,010	\$4,024	\$4,037
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$3,871	\$3,891	\$3,904	\$3,916	\$3,929	\$3,943	\$3,956	\$3,969	\$3,983	\$3,996	\$4,010	\$4,024	\$4,037

DCRA - Division of Energy: Copper Valley Intertie Feasibility Study												
Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Allison Lake												
High Load; High Fuel												
Medium Construction												
Diesel Costs												
Fuel	\$1,144	\$1,292	\$1,565	\$1,675	\$1,709	\$1,782	\$1,983	\$937	\$1,131	\$1,322	\$1,515	\$1,713
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$457	\$452	\$158	\$191	\$221	\$251	\$281
Existing Diesel O&M Adjustment												
Additional Building & Equipment												
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs				\$142	\$283	\$425	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,689	\$3,028	\$1,688	\$1,914	\$2,136	\$2,359	\$2,587
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Allison Lake												
Annual Carrying Charge								\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs								\$284	\$284	\$284	\$284	\$284
Total Other Costs								\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,689	\$3,028	\$3,738	\$3,984	\$4,186	\$4,409	\$4,637
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,128	\$2,549	\$2,642	\$2,651	\$2,689	\$3,028	\$3,738	\$3,984	\$4,186	\$4,409	\$4,637
Present Value in 1993 Dollars												
Cumulative (1993-2017)						\$49,561	(in thousands)					
30 year (2018-2047) with "no additional growth"						\$20,619	(in thousands)					
Total Net Present Value						\$70,180	(in thousands)					

Allison Lake													
High Load, High Fuel													
Medium Construction													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diesel Costs													
Fuel	\$1,153	\$1,187	\$1,213	\$1,241	\$1,269	\$1,298	\$1,327	\$1,357	\$1,388	\$1,419	\$1,451	\$1,484	\$1,518
Variable O&M	\$286	\$295	\$303	\$310	\$318	\$326	\$334	\$341	\$350	\$358	\$366	\$374	\$382
Existing Diesel O&M Adjustment													
Additional Building & Equipment													
New Diesel Fixed O&M	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$2,032	\$2,074	\$2,109	\$2,144	\$2,179	\$2,216	\$2,253	\$2,291	\$2,330	\$2,369	\$2,409	\$2,450	\$2,492
Total Conservation Cost													
Intertie Cost													
Annual Carrying Charge													
Annual O&M Costs													
Economy Energy													
Total Intertie Costs													
Allison Lake													
Annual Carrying Charge	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284	\$284
Total Other Costs	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$4,082	\$4,124	\$4,159	\$4,194	\$4,229	\$4,266	\$4,303	\$4,341	\$4,380	\$4,419	\$4,459	\$4,500	\$4,542
Sale of Surplus Solomon Gulch Energy													
Surplus Energy													
Revenues from Sale													
District Heat Net Revenue (Coal Case)													
Net Annual Cost of Power	\$4,082	\$4,124	\$4,159	\$4,194	\$4,229	\$4,266	\$4,303	\$4,341	\$4,380	\$4,419	\$4,459	\$4,500	\$4,542

CVEA					
Summary of Economic Analysis Results					
Revision 1.0 to DFS					
Cummulative Present Value of Comparable System Costs (1993 \$000)					
				Medium Cost	High Cost
Scenario		DFS Diesel	Intertie	Allison Lake	Allison Lake
Low Load Growth					
	Medium Fuel	\$31,329	\$69,198		
	High Fuel	\$35,588	\$71,974		
Medium Load Growth					
	Medium Fuel	\$58,142		\$57,449	\$64,033
	Low Cost Int.		\$62,404		
	Med Cost Int.		\$76,647		
	High Cost Int.		\$87,659		
	High Fuel	\$67,496		\$61,714	\$68,298
	Low Cost Int.		\$66,912		
	Med Cost Int.		\$81,156		
High Load Growth					
	Medium Fuel	\$72,774		\$65,098	\$71,682
	Low Cost Int.		\$72,151		
	Med Cost Int.		\$86,394		
	High Fuel	\$85,871		\$70,180	\$76,764
	Low Cost Int.		\$78,517		
	Med Cost Int.		\$92,761		

Schedule INT-1

CVEA Intertie				
Summary of Project Cost Estimates				
		Transmission	Transmission	
		Line	Line	
		Construction	Construction	
	Labor	Cost/Mile	Cost	Project Cost
Scenario:	Hours	(1993\$000)	(1993\$)	(1993\$)
Low	136,000	\$255	\$34,112,928	\$45,930,519
Medium	187,500	\$351	\$47,133,175	\$61,948,830
High	250,000	\$433	\$58,074,148	\$74,377,775
Notes:				
Low	Draft Feasibility Study Estimate			
Medium	Adjust labor hours to middle of independent estimates			
	Adjust helicopter hours same proportion as labor hours			
	Fully Loaded labor = \$125/hr			
	Heavy Helicopter = \$3341/hour			
	B3 Substation - include 250K for Communications Systems			
	C4 Engineering at 3% of Transmission Line Construction			
	Construction Management at 6%			
	Owner Costs at 4%			
High	Adjust labor hours to high end of independent estimates			
	Adjust helicopter hours same proportion as labor hours			
	Fully Loaded labor = \$125/hr			
	Heavy Helicopter = \$3341/hour			
	B3 Substation - include 250K for Communications Systems			
	C4 Engineering at 3% of Transmission Line Construction			
	Construction Management at 6%			
	Owner Costs at 4%			

CVEA Intertie - Project Cost Estimates

CVEA Intertie						
Review Construction Cost for Reasonableness						
2 Breakdown Route D Estimate from Exhibit C-1						
		Material	Installation			
Zone 1		\$2,960,598	\$5,408,080			
Zone 2		\$5,374,186	\$8,172,386			
Zone 3		\$2,679,760	\$5,217,691			
Zone 4		\$502,752	\$1,004,515			
		\$11,517,296	\$19,802,672			
	Subtotal=	\$31,319,968				
	ROW=	\$2,792,960				
	Total =	\$34,112,928	ck			
3 Adjust labor to average fully loaded labor rates						
Adjust hours to mid range of estimates						
		Cost	P&LH Hours	HH Hours	P&LH Rate	HH Rate
M	Material	\$11,517,296				
R	ROW	\$2,792,960				
	Helicopter	\$2,612,436		782		\$3,341
	Labor	\$23,437,500	187500		\$125	
	Heli+Labor	\$26,049,936				
5%	Mobilization	\$1,302,497				
	Subtotal	\$27,352,433				
20%	Contingency	\$5,470,487				
TI	Total Installation	\$32,822,919				
A.	Transmission Const.	\$47,133,175	[M+R+TI]			
	Per Mile =	\$351,740	1,399	6		
	Substations					
	B1	\$1,824,316				
	B2	\$1,793,903				
	B3	\$250,000	Communications System			
	Engineering					
	C1	\$1,339,900				
	C2	\$700,000				
	C3	\$35,000				
3%	C4	\$1,413,995				
	C5	\$350,500				
	Environ, ROW & Permitting					
	D1	\$125,000				
	D2	\$10,000				
	D3	\$100,000				
	D4	\$40,000				
	D5	\$65,000				
	D6	\$371,000				
	SUBTOTAL=>		\$55,551,789			
	Construction Management		\$3,333,107	6%		
	Owner Costs		\$2,222,072	4%		
	Contingency on Non-Construction		\$841,861	10%		
	TOTAL Project Cost Estimate		\$61,948,830			

Labor Hour Review

CVEA Intertie			
Transmission Line Installation			
Review reasonable fully loaded labor			
1	Use hour estimates provided in Exhibit C-1		
2	Separate hours into two categories: 1) Personnel & Light Heli; 2) Heavy Heli		
3	Multiply those categories by "typical fully loaded labor rates"		
4	Total hours do not match DFS totals.		
		Personnel &	Heavy
		Light Heli	Heli
Description		Hours	Hours
1			
A		10187	59
B		14219	27
C		1642	12
D		3886	0
E		8747	39
Subtotal		38681	137
2			
A		14651	79
B		17351	41
C		1840	11
D		5785	0
E		16203	128
Subtotal		55830	259
3			
A		9529	64
B		12308	24
C		1979	16
D		3414	0
E		9285	41
Subtotal		36515	145
4			
A		1542	13
B		2079	12
C		110	1
D		238	0
E		2353	6
Subtotal		6322	32
	TOTAL HOURS	137,348	573
	Avg. Rate	\$125	\$3,341
	Installation	\$17,168,500	\$1,914,393
	5% Mobilization	\$858,425	\$95,720
	Subtotal	\$18,026,925	\$2,010,113
	20% Contingency	\$3,605,385	\$402,023
			TOTAL
			INSTALLATION
	TOTAL INSTALLATION	\$21,632,310	\$2,412,135
			\$24,044,445

CVEA Intertie - Construction Costs

CVEA Intertie						
Review Construction Cost for Reasonableness						
1 Review Table VI-6: Tabulation of Historic Transmission Line Construction Costs						
Projects	Cost/Mile (1993\$000)	Approx. Length (mi.)	Approx. Const. Cost (1993\$000)	Table VI-5 Selected Comparison		
1	\$123	17.7	\$2,177			
2	\$113	3.9	\$441			
3	\$180	6.5	\$1,170			
4	\$142	4.2	\$596			
5	\$155	20.5	\$3,178			
6	\$667	30.5	\$20,344	\$667	30.5	\$20,344
7	\$187	12.5	\$2,338			
8	\$147	7.4	\$1,088			
9	\$144	24.0	\$3,456			
10	\$163	26.2	\$4,271			
11	\$222	55.8	\$12,388			
12	\$453	50.1	\$22,695			
13	\$438	68.2	\$29,872	\$438	68.2	\$29,872
14	\$983	17.4	\$17,104			
15	\$571	11.0	\$6,281			
16	\$251	20.1	\$5,045			
17	\$568	97.0	\$55,096			
18	\$563	72.0	\$40,536			
19	\$530	34.0	\$18,020	\$530	34.0	\$18,020
20	\$257	60.0	\$15,420			
Mile Wtd Average =	\$409	639	\$261,514	\$514	132.7	\$68,235
DFS estimate=	\$254	134	\$34,113	\$254	134	\$34,113
Variance =	(\$155)			(\$260)		
	-38%			-51%		
DFS Estimates appear considerably lower than average of sample provided						

Economic Analysis (Constant 1993 Dollars - All Costs in Thousands of Dollars)												
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
High Load; Medium Fuel												
Medium Construction												
Diesel Costs												
Fuel	\$1,144	\$1,271	\$1,513	\$1,592	\$1,597	\$1,638	\$1,702	\$833	\$989	\$1,138	\$1,280	\$1,423
Variable O&M	\$754	\$835	\$985	\$799	\$633	\$457	\$452	\$158	\$101	\$221	\$251	\$281
Existing Diesel O&M Adjustment												
Additional Building & Equipment												
New Diesel Fixed O&M				\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26
New Diesel Capital Costs				\$142	\$283	\$425	\$567	\$567	\$567	\$567	\$567	\$567
Total Diesel Costs	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$1,584	\$1,772	\$1,050	\$2,124	\$2,207
Total Conservation Cost												
Intertie Cost												
Annual Carrying Charge												
Annual O&M Costs												
Economy Energy												
Total Intertie Costs												
Allison Lake												
Annual Carrying Charge								\$1,766	\$1,766	\$1,766	\$1,766	\$1,766
Annual O&M Costs								\$284	\$284	\$284	\$284	\$284
Total Other Costs								\$2,050	\$2,050	\$2,050	\$2,050	\$2,050
Total Cost of Power	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$3,634	\$3,822	\$4,000	\$4,174	\$4,347
Sale of Surplus Solomon Gulch Energy												
Surplus Energy												
Revenues from Sale												
District Heat Net Revenue (Coal Case)												
Net Annual Cost of Power	\$1,898	\$2,106	\$2,497	\$2,559	\$2,540	\$2,545	\$2,837	\$3,634	\$3,822	\$4,000	\$4,174	\$4,347
Present Value in 1993 Dollars												
Cumulative (1993-2017)								\$46,771	(In thousands)			
30 year (2018-2047) with "no additional growth"								\$18,327	(In thousands)			
Total Net Present Value								\$65,098	(In thousands)			

CVEA Intertie - Construction Costs

CVEA Intertie							
Review Construction Cost for Reasonableness							
1 Review Table VI-6: Tabulation of Historic Transmission Line Construction Costs							
Projects	Cost/Mile (1993\$000)	Approx. Length (mi.)	Approx. Const. Cost (1993\$000)	Table VI-5 Selected Comparison			
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Mile W't'd Average =	\$409	639	\$261,514	\$514	132.7	\$68,235	
DFS estimate=	\$254	134	\$34,113	\$254	134	\$34,113	
Variance =	(\$155)			(\$260)			
	-38%			-51%			
DFS Estimates appear considerably lower than average of sample provided							

Commissioner Edgar Blackford, February 19, 1994

The draft report for the Copper Valley Intertie is out. As a big game guide dependent on tourist dollars, and a resident of Chickaloon, I'm not satisfied with R.W. Beck And Associates' conclusions. The intertie cost analysis makes many assumptions which reports of this nature must, the question is, are they accurate? We residents of Chickaloon and Sutton have reason to believe they aren't.

The report gives short thrift to the alternatives which appear to be mere straw men.

The helicopter dependent construction costs are estimated to be only half what the Bradly Lake helicopter dependent costs were "without" adding in clearing costs.

Right of way acquisition costs are clearly underestimated since the original Athabascan hunter-gatherer land owners are adamantly against the project.

Of the six scenarios looked at in the report only one - the intertie - affects the upper Matanuska valley. The other five impact only the Copper valley where the power would be used. This is an important factor not adequately addressed in the report.

Interestingly, the effects of promoting conservation through energy efficiency were only applied to their present power generation system. Conservation measures "weren't" applied to the others. This is significant when the report can only show clear intertie superiority for high electrical loads. These high loads also depend on a huge increase in electrical needs by the Petro Star Refinery in Valdez. Petro Star could, and quite possibly will, produce their own power cheaper just as Alyeska already does at the Valdez Terminal.

The intertie doesn't promise lower electrical rates for Copper Valley customers, and it also doesn't promise that MEAs' customer rates wouldn't end up higher because of it.

There is, however, one promise. If the intertie is boondoggled through, the upper Matanuska valley / Chickaloon Pass highlands will be visually and culturally compromised for our lifetimes.

Sincerely,

Karl Braundel
Norma D. Braundel

P.O. Box 1148
Chickaloon, Alaska 99674

RECEIVED

MAR 03 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIR

VERONICA SLAJER
P.O. BOX 101293, ANCHORAGE, AK 99510
WORK PHONE: 272-3034 • HOME PHONE: 274-9974

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MAR 03 1993

February 25, 1994

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Herv Hensley
Acting Director, Division of Energy
Department of Community and Regional Affairs
333 West Fourth Avenue, Suite 220
Anchorage, Alaska 99501

Dear Mr. Hensley:

As a lifelong Alaskan, I'm concerned about Alaska's financial future and feel we need to avoid spending state money on more capital projects without adequate assurances of viability. I believe all state-funded projects need to be based on conservative growth and demand projections, especially with state revenues dropping in the future. The recently released draft Copper Valley Intertie Study has its demand alternatives skewed to inappropriately high levels. Substantial growth in the Petro Star refinery load over the next 50 years should only be represented in the highest-case alternatives, as their source of raw material is the same declining oil resource.

The alternative of the Allison Lake project needs to be further investigated. It would produce clean energy with much less impact on the residents of the Copper Valley region. It would be a relatively affordable project more likely to meet the realistic energy demands of the region. Residents of the Copper Valley area want more affordable electricity; they don't care which project it comes from. The political support generated for the Copper Valley Intertie is based on the misperception that the funding will be lost if the intertie isn't built. Of course, the money could be reappropriated to the most cost-efficient alternative.

I hope you will remain diligent in pursuing the most cost-effective alternative to achieving our state's energy goals. Thank you for considering my comments in your final report.

Sincerely,



Veronica Slajer

cc: Honorable Walter J. Hickel, Governor of Alaska
Honorable Edgar Blatchford, Commissioner, DCRA
Honorable Cynthia Toohey, Representative, Alaska State Legislature
Honorable Loren Leman, Senator, Alaska State Legislature

Ray Cammisa
310 Stewart St.
Anch. AK. 99508

Director
Division of Energy,
Dept. of Community & Regional Affairs
333 W.4th Avenue, Suite 220
Anchorage, AK 99501

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MAR 31 1994

DIVISION OF ENERGY/DCRA

The issue of the Sutton to Glennallen Intertie, seems pretty simple. It is simply not cost effective for the consumer, or for the people of Alaska.

The intertie's entire economic feasibility depends on the assumed massive increases in the load of a single industrial customer, Petro Star Refinery. There is no substantial proof that there will be that growth. The refinery would have to quadruple its power needs for the intertie to become the most economical way to support power. It is shocking that there is no justification given to support Petro Star's load growth.

If this project were being built by the private sector, P.S. would be required to sign a "take or pay" contract with builders of the line for the amount of electricity it claims it will need. Shouldn't the citizens of Alaska demand the same protection.

Most importantly is that the people of Alaska cannot afford to subsidize an oil refinery's electric needs, especially in light of the States \$2.2 billion budget crisis. The \$35 million, 0-interest 50-year loan basically amounts to a \$76 million give-away program. This is unacceptable to me as it should be to you.

Thank-you

Ray Cammisa

Mar, 12, 1994

Good day,

I feel the Sutton - Glennallen electric intertie is a bad idea. Running lines along the Glenn Highway will destroy the beauty which really makes Alaska unique. It is the lack of interties, industry and development that keeps tourists coming to our state. I personally am willing to pay more to preserve the beauty of our state. Also, I feel this project is unfair to property owners along the route. I feel it is always prudent to ask, "Would

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MAR 16 1994

DIVISION OF ENERGY/DCRA

DIVISION OF ENERGY
MAR 18 1984
I want my family living in proximity to
such high power lines." For me the answer
is definitely NO. Please OPPOSE the Sutton -
Glennallen intertie.

Thank-you

Linda Rutledge

Box 91

Copper Center AK.

99573

Copper Valley Electric Association Member

CARD-#D

JULIAN L. MASON III

1130 WEST SIXTH AVENUE, SUITE 100
ANCHORAGE, ALASKA 99501
(907) 276-4331

February 17, 1994

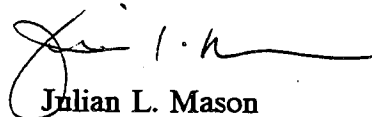
The Honorable Walter J. Hickel
P. O. Box 110001
Juneau, Alaska 99811-0001

Dear Governor Hickel:

Please do what you can to stop the Sutton to Glennallen intertie. The intertie does not make economic sense.

Copper Valley Electric has about 3,000 customers. If the construction cost per mile is the same as the cost for the Bradley Lake line, the cost will be at least \$120 million -- \$40,000 per customer! This cost is enough to pay the average residential bill for 30 years or more. This is not a sound investment of the State's scarce economic development dollars.

Very truly yours,


Julian L. Mason

JLM:sjw

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FEB 25 1994

GOVERNOR'S OFFICE

CFR

Paul F. Twardock
1237 W 11th
Anchorage AK 99501
907-279-0409

2-20-94

Gov. Wally Hickel
PO Box 110001
Juneau AK 99811-0001

Dear Gov. Hickel,

I would like to express my displeasure of the Sutton to Glennallen Intertie Draft Feasibility Study. The preferred alternative in the draft should not be picked because:

1. Economic Unfeasibility: The intertie option has costs which have not been included in the draft feasibility study. Economic costs such as lost tourism business, health costs, loss of subsistence hunting/fishing with increase pressure on fish/wildlife, and maintenance costs. Furthermore social costs have also been ignored, costs such as disruption of communities along the route.

Based on the report itself the intertie is only justified if power quadruples at Petrostar. The whole project's rationale according to your representatives at public meetings is based on Petrostar's needs. I object to such a project being pushed through at the public's expense for one commercial venture. CVEA ought to be required to factor paying the whole costs of the project, including interest on the approved loan.

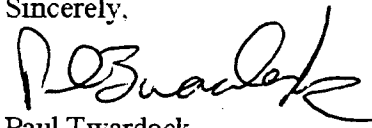
Finally I wonder are the costs of the study realistic? I am quite familiar with the area and wonder why snow avalanches are not mentioned in the report as a hazard which will cost significant amounts to study, plan for, and build adequate structures to withstand. That is the only cost I am familiar with, but wonder why the Bradley Lake project cost so much more per mile than this study indicates this intertie will cost?

2. Environmentally Unfeasibility: The intertie goes through some of the most scenic country in this state which is accessible without having to fly to. The communities along the road have every right to object to such an eyesore through their backyards. I object to having the same eyesore through the mountains which are an important area to me, both recreationally and as a professional guide. The health concerns of local residents reflect my concerns as I lead groups in and around the proposed route. The disturbances to wildlife, both by the project itself and increased access it will provide, will also ruin the area in my eyes.

3. Reasonable Alternatives: The plan does have alternatives to the intertie which make sense for this state. Petrostar, like Alyeska, should be asked to provide its own power. (It seems ludicrous to me that in N. America's richest petroleum city they cannot do this). Then the conservation alternative ought to be considered in conjunction to the Allison Lake project and/or new diesel generators.

I urge you to reject this study and go back to the drawing board. I cannot stress how strongly I feel that an intertie is not wanted or needed.

Sincerely,


Paul Twardock

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FEB 24 1994

GOVERNOR'S OFFICE

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MAR 11 1994

DIVISION OF ENERGY/DCRA

March 9, 1994

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
State of Alaska
333 W. 4 th Avenue, Suite 220
Anchorage, AK 99501-2341

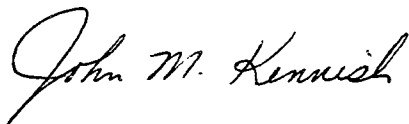
Dear Mr. Harris:

I am writing to you to voice my concerns about the proposed Copper Valley Intertie. I am very concerned about the number of development proposals being put forward by the State of Alaska, local government bodies and politically connected groups throughout the state. My concern stems from the long term economic costs of such projects. Many appear to be very positive projects from the point of view of easy state funding for construction. However, the long term costs to the average citizen are rarely addressed. In the case of this proposed Copper Valley Intertie project, it seems obvious to me that the citizens who are linked to the Intertie will bear the substantial burden of subsidizing isolated users for many, many years. I believe these cost are grossly underestimated in this case.

I also believe that the environmental impacts are much too great for the small number of users. In all probability this Intertie will have a significant negative impact on one of the most beautiful sections of the limit highway system while requiring public subsidy. This is a lose-lose situation. Especially since these environmental impacts will eventually impact tourism dollars.

Thank you for this opportunity to respond to your study. Please notify me of any future meeting or reports concerning this proposed project.

Sincerely,



John M. Kennish
12821 Chapel Drive
Anchorage AK 99516-2614

ALASKA COGENERATION SYSTEMS, INC.

February 7, 1994

Mr. Robert E. Harris
Executive Director
Division of Energy
Department of Community
and Regional Affairs (DCRA)

RE: Comments - Draft Report, Copper Valley Intertie Feasibility Study

I have reviewed the draft report of the Copper Valley Intertie Feasibility Study and find the study either fails to address or inadequately addresses the following items:

1. Table I-1, Page I-7, Substations - No contingency for substation construction is included. A 10% contingency for substations would increase cost by approximately \$360,000.
2. Table I-1, Page I-7, Right-of-Way Acquisition - The \$371,000 the study included for right-of-way acquisition is totally inadequate. A more realistic figure would be 2-1/2 to 3 times that amount. Also, I don't believe there is any right of imminent domain across native lands. Acquisition of native lands, private lands and mining claims could significantly increase the cost of the right of way, especially in light of recent court rulings which allow increased recovery by land owners for fear of EMF, even when the perceived fear of EMF is irrational and not supported by scientific evidence (See attached case law) .
3. Table I-1, Page I-7, add new line item titled Legal Fees - Several groups have already threatened law suits to block construction of the line. It is only appropriate some reasonable amount be included to cover this contingency.
4. Table I-1, Page I-7, add new line item titled SVC station - The results of the electrical study indicate an SVC station must be constructed for the transmission line to operate properly and provide reliable and quality electrical service to CVEA consumers. Even if the SVC station is not constructed for a few years, the cost should be included in the overall cost of the transmission line. To do otherwise would amount to an **intentional misrepresentation** of the total cost of the line and the corresponding cost of power to CVEA consumers. An SVC station would probably add another 4-5 million to the overall cost of the transmission line.
5. HAARP Load - CVEA has argued the transmission line is needed to serve the HAARP project, should it ever become fully operational. However, after reviewing the electrical studies it would appear the transmission line could not adequately serve

Comments - Copper Valley Intertie

Page 2 of 3

the 4-5 megawatt load swing associated with the fully operational HAARP project, even with the addition of an SVC system.

6. Reliability - The subject of reliability has not been adequately addressed. The Glennallen to Valdez transmission line has been out of service for a cumulative period of approximately one year since its construction due to avalanche damage. This represents an average forced outage rate of 7-8 percent. Additional forced outages will occur on the Sutton-Glennallen section of the line, further increasing the overall forced outage rate experienced by CVEA consumers. A reasonable availability factor should be assigned to the transmission line and used when calculating the cost of the transmission line alternatives in the same manner a plant availability factor was used in calculating the cost of the coal plant alternative.
7. Avalanche Hazard and Mitigation Measures - This item and its impacts on cost and reliability have been inadequately addressed.
8. Estimated Cost of Power, Table X-5, Page X-17 - It is not possible to determine how these numbers were derived from the information contained in the report. A detailed explanation should be included.
9. Is the cost of power in the intertie alternatives based on the purchase of firm or non-firm power from the railbelt?
10. Appendix H, Review of Glennallen Coal-Fired Generation Plant - R.W. Beck has overstated the cost of the coal plant by approximately 10 percent and overstated the number of plant personnel required to operate the plant by four. Only 12 people would be required to operate the plant since all administrative and management functions would be performed by the Owners of the plant.
11. Valdez Clean Coal Project - The proposed coal plant is being relocated from Glennallen to Valdez. A short report which describes the Valdez Clean Coal Project, construction cost estimates and operating costs associated with the relocated plant will be provided for input into the final report. A executive summary of the report is attached and shows the Valdez Clean Coal Project can provide the lowest cost power to CVEA.
12. Appendix J, Resource Model Outputs - These models do not represent the "true" present value cost of the alternative investigated. The models apply a \$560,000 a year credit in the intertie alternatives as an offset for not operating the diesel plants. There should not be a credit offset included in the models, as no one is paying CVEA \$560,000 a year not to operate its diesel power plants. This credit offset should be set at zero and all other models adjusted appropriately. Using such an offset under estimates the present value of the intertie by the present worth value of \$560,000 multiplied by the length of the study period. Furthermore, applying a \$560,000 a year credit will understate the cost of power for the intertie cases as listed in Table X-5, Page X-17 by approximately one cent per kwh.

13. Lake Louise Road Viewshed - The visual impact of the line on the viewshed along the Lake Louise Road has been underestimated. The line could be visible for miles in either direction of travel on the road, and if not carefully sited, skylighted against the Chugach Mountains when travelling south on the roadway. At certain points along the Lake Louise road, four mountain ranges are visible, the Chugach, Talkeetna, Wrangell and Alaska Range. As a previous resident of Glennallen I can assure you the view from the Lake Louise road is one of the most spectacular and unblemished views in the Copper River Basin, if not in Alaska. It would indeed be an insult to our social conscious to spoil this spectacular view by an ill placed powerline.
14. DCRA should not recommend the construction of the intertie if it is only economically feasible at the high load growth scenario. If the high load growth does not materialize, CVEA consumers will be forced to pay higher rates for their power than necessary.

Sincerely,



Frank J. Bettine, P.E., J.D.
President

Encl. (2)

PROPOSAL

for the

VALDEZ CLEAN COAL PROJECT

offered as

A Resource Option

for

COPPER VALLEY ELECTRIC ASSOCIATION

for evaluation by

**Division of Energy
Department of Community
and Regional Affairs (DCRA)
Mr. Robert E. Harris
Executive Director**

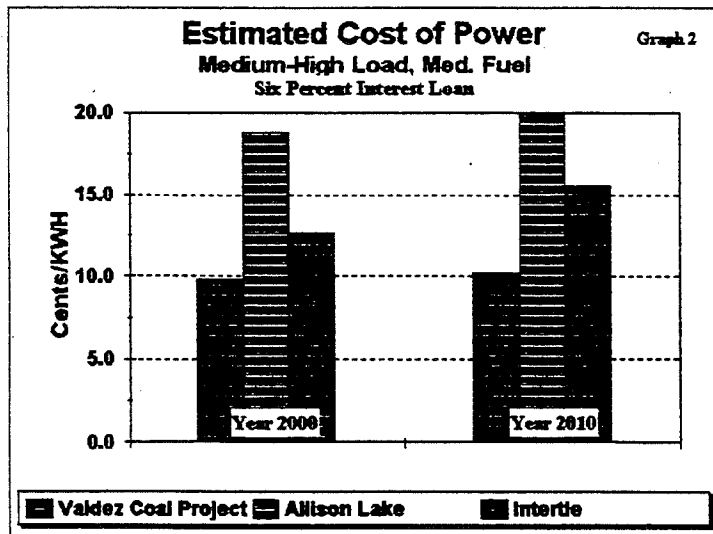
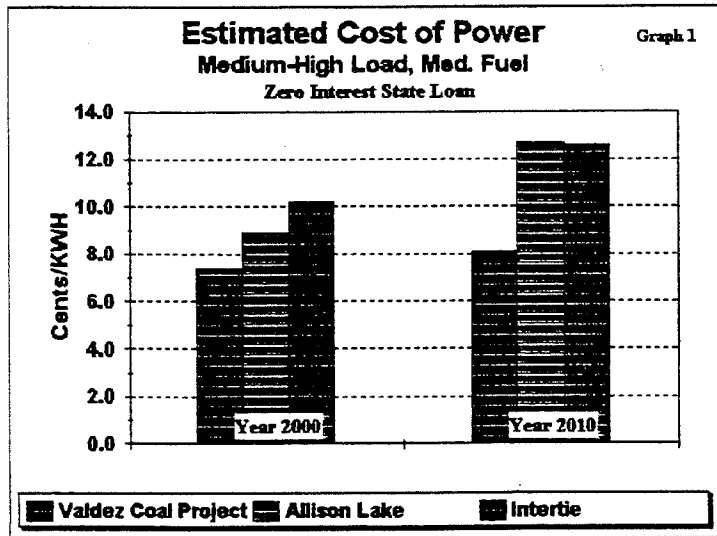
&

**R.W. Beck and Associates
Mr. John L. Heberling
Principal Engineer**

February 1994

Executive Summary

Hobbs Industries, Inc. ("Hobbs") had originally proposed to construct and operate an 11 MW coal-fired generation project in Glennallen, as a resource option, for meeting the long term power needs of Copper Valley Electric Association (CVEA). However, after joining with other experienced utility and generation engineers to form Alaska Cogeneration Systems, Inc. (ACSI) specifically for the purpose of developing Alaska Cogeneration project opportunities, we determined through review and evaluation of recent studies that siting the Project in Valdez, CVEA's major load center, produced a substantial economic advantage over other potential resource options, including the CVEA/MEA Intertie. ACSI has also determined that by relocating the Project to Valdez, it can construct a plant with an installed generation capacity of 22 megawatts for basically the same cost of constructing a 11 megawatt plant in Glennallen. This is directly attributable to stable sub-soil conditions and high quality water which will substantially reduce the Project's foundation costs and water treatment equipment costs.



ACSI has computed the cost of electrical energy for the Valdez Coal Project based on the economic assumptions and parameters contained in the Copper Valley Intertie Feasibility Study, prepared by R.W. Beck and dated January 1994. The results of the calculations are graphically illustrated in Graphs 1 and 2. The graphs compare the cost of power for the Valdez Coal Project with Allison Lake and the Intertie for a zero interest state loan,

and at an interest rate of six percent, for the Med-High Load, Med. Fuel scenario contained in the feasibility study. The costs of power for Allison Lake and the Intertie were obtained from the Intertie Feasibility study. The graphs clearly show the Valdez Coal Plant to be the least cost option for supplying the future power needs of CVEA. A comparison of Graphs 1 and 2, also reveals the Valdez Coal Plant can provide lower cost power at a six percent financing rate than the Intertie can provide with a zero interest state loan. Although not shown, the Valdez Coal Project is also the least cost option for the Med-Low Load, Med. Fuel scenario.

Accordingly, ACSI is proceeded aggressively with efforts aimed at confirming the feasibility and financibility of our Valdez Clean Coal Project while meeting the criteria of a Qualifying Facility (QF) under sections 201 and 210 of the Public Utilities Regulatory Policies Act (PURPA). ACSI has also approached the City of Valdez, several Valdez area fish processors, the U.S. Coast Guard, the Department of Transportation and others to confirm the need and willingness of large energy consumers to purchase the Project's waste energy through a hot water and/or steam district heating system on a long term contractual basis. In fact, the potential Valdez area district heating load is more than adequate to ensure that the Project will operate at an optimum overall plant efficiency rate approaching 60-65% net thermal efficiency, which is approximately twice the typical efficiency of other electrical generating plants in the state.

ACSI has identify several distinct economic advantages that our Valdez Clean Coal Project has over the other identified resource options, as follows:

**Economic Advantages Associated
with the
Valdez Clean Coal Project
offered by ACSI**

1. Power generation capacity located at CVEA's major load center, thereby reducing losses and increasing reliability.
2. Reliance on an abundant clean Alaska energy resource, not subject to oil and/or gas price escalations, with excellent port facilities capable of economically receiving/handling coal in several bulk commodity forms.
3. Apparent least cost option for CVEA consumers.

**Economic Advantages Associated
with the
Valdez Clean Coal Project
offered by ACSI Cont'd.**

4. Offers significant energy savings as well as reduced environmental risk for large waste heat consumers. Waste heat sales are estimated to save large waste heat consumer approximately 5 million dollars over a 25 year period.
5. Provides highest degree of reliability to CVEA consumers with close integration with existing Solomon Gulch Hydroelectric Project and CVEA's Valdez Diesel Plant.
6. Provides twelve long term plant operator jobs in Valdez.
7. Reliable labor base to support the Project's long term operation and maintenance needs.
8. Excellent City water and waste-water resources.
9. Excellent potential opportunity for consuming the City's solid wastes, which could eliminate the need to permit/operate a new City land fill.
10. Excellent potential opportunity for consuming the area's used oils and/or recovered pipeline vapors in an environmentally clean and acceptable manner.
11. Excellent construction sites available with competent and stable sub-soil conditions that will substantially reduce the Project foundation costs.
12. Moderate Winter climate that will eliminate plant cooling problems and associated operating costs.
13. Unique opportunity to provide the entire energy needs of PetroStar or the Alyeska terminal, as an independent third party cogeneration facility, while simultaneously supplying the entire electrical power requirements of CVEA.

ACSI already owns and/or has a significant portion of the primary power generation components committed to this project and, subject to financing, is capable and prepared to construct and commission this project by January 1997. ACSI also has secured firm commitments from at least two Alaska coal producers to provide the Project's life cycle energy needs.

ACSI has demanded that CVEA provide ACSI with its firm avoided power costs pursuant to Alaska Statute 3AAC 50.790(d). ACSI intends to pursue its legal right through the Alaska Public Utility Commission, as a Qualifying Facility (QF) under State and Federal regulations, to supply CVEA's need for new power generation capacity at or below its firm avoided cost. Essentially, the construction of our Valdez Clean Coal Project, as a QF, will eliminate any need for CVEA and/or the State to construct the Glennallen to Sutton Transmission Intertie.

At a time when the State of Alaska is facing a budget crisis, it does not seem prudent to ask our legislators to subsidize a major capital project, such as the CVEA/MEA Transmission Intertie, to compete with a private sector project that is offering to provide a greater benefit/value at a lower true economic as well as environmental cost to the consumers of CVEA and the citizens of Alaska.

To: FRANK BETTINE

---N.E.2d---

1993 WL 403914 (N.Y.), 62 USLW 2237

(Publication page references are not available for this document.)
THIS DECISION IS UNCORRECTED AND SUBJECT TO REVISION BEFORE
PUBLICATION IN THE

NEW YORK REPORTS.

Joseph CRISCUOLA et al., Appellants,

v.

POWER AUTHORITY of the State of New York et al., Respondents.

No. 172.

Court of Appeals of New York.

Oct. 12, 1993.

BELLACOSA.

Appellants are claimants who seek direct and consequential market value damages for a high voltage power line easement acquired by the Power Authority of the State of New York ("PASNY") over their Delaware County property. The only issue before us centers on the claim for consequential damages, based on the claimants' assertion that "cancerphobia" and the public's perception of a health risk from exposure to electromagnetic emissions from power lines negatively impact upon the market value of their property and "will render the remainder valueless". They argue that they should not have to prove the "reasonableness" of this perception as a separate, additional component of diminished market value. We agree and reverse the order of the Appellate Division.

A bit of procedural context is necessary. For purposes of establishing consequential damages from "cancerphobia," claimants here successfully moved to have their claim tried together with 47 other similar claims in a case with the lead title of Zappavigna v. State of New York. The Court of Claims in Zappavigna, as affirmed by the Appellate Division (186 A.D.2d 557), held, inter alia, that claimants had not met their burden of proving that the "cancerphobia" was reasonable, and therefore denied consequential damages. Nonetheless, claimants-appellants here are not precluded from raising the issue of whether reasonableness of a perceived danger must be proven in an eminent domain proceeding. The determination of the reasonableness aspect of the evidentiary issue in Zappavigna became an integral part of each claimant's case. It does not bind and bar the present claimants-appellants because of the limited purpose of the joint trial arrangement and because the claimants-appellants here had no independent right to appeal and seek discrete review of the evidentiary issue.

Thus, we conclude that the evidentiary issue is before us pursuant to this Court's grant of leave to appeal. We must thus resolve whether proof of reasonableness is required before a claimant can recover consequential damages for an eminent domain taking of property, whose value may be affected by a perceived public fear of danger or of health risks.

We are satisfied that there should be no requirement that the claimant, as a separate and higher component of its market value proofs, must establish the reasonableness of a fear or perception

of danger or of health risks from exposure to high voltage power lines. The issue in a just compensation proceeding is whether or not the market value has been adversely affected (see, San Diego Gas & Electric Co. v Daley, 205 Cal App 3d 1334; see generally, 4A Nichols on Eminent Domain, s 14.02[1][b] at 14.30 [3d ed Sackman 1993]). This consequence may be present even if the public's fear is unreasonable. Whether the danger is a scientifically genuine or verifiable fact should be irrelevant to the central issue of its market value impact. Genuineness and proportionate dollar effects are relevant factors, to be sure, but in the usual evidentiary framework. Such factors should be left to the contest between the parties' market value experts, not magnified and escalated by a whole new battery of electromagnetic power engineers, scientists or medical experts. "Adverse health effects vel non is not the issue in eminent domain proceedings: full compensation to the landowner for property taken is" (Florida Power & Light Co. v Jennings, 518 So.2d, 895, 897). As the Court of Appeals of Kansas has noted: Logic and fairness * * * dictate that any loss of market value proven with a reasonable degree of probability should be compensable, regardless of its source. If no one will buy a residential lot because it has a high voltage line across it, the lot is a total loss even though the owner has the legal right to build a house on it. If buyers can be found, but only at half the value it had before the line was installed, the owner has suffered a 50% loss (Willsey v. Kansas City Power, 631 P.2d 268, 277-278). Thus, relying on Willsey, the Supreme Court of Kansas concluded, and we agree, that "evidence of fear in the marketplace is admissible with respect to the value of property taken without proof of the reasonableness of the fear" (Ryan v. Kansas Power & Light Co., 815 P.2d 528, 533).

Although this issue is a matter of first impression in this Court, it has been well ventilated in sibling jurisdictions whose precedents offer some useful instruction. The Court of Appeals of Kansas summarized the three prevailing views as of 1981 in Willsey v. Kansas City Power (631 P.2d 268, supra). The Willsey court noted that the characterizations and labels attached to the varieties of test are inaccurate. Thus, the so-called "majority" view, in which evidence of the effect on market value of a fear of danger from power lines was unequivocally rejected, was actually followed by only four states in 1981 (id., at 273-274 [Ala, Fla, Ill, W.Va]). In contrast, the "minority" view, in which such evidence is routinely admitted on a simple showing that the fear exists and affects market value, was followed by eleven states and the Sixth Circuit (id., at 274 [Ak, Cal, In, Iowa, LA, NC, Ohio, Okla, SD, Va, Wash]). In these jurisdictions, the reasonableness of the fear is either assumed or deemed irrelevant or collateral to the market value issue and the considerations that customarily pertain to its just resolution. Although it preferred the so-called "minority rule," the Willsey Court held it was unnecessary to determine whether to adopt that rule since, on the facts of that case, the "intermediate" test, "the most stringent rule which can justifiably be applied," was met (Willsey v. Kansas City Power, 631 P.2d, supra, at 278).

Recently, Florida, California and Kansas reaffirmed that

reasonableness is not a factor in determining whether consequential damages may be awarded for a diminution or elimination of market value due to a fear of health risks from exposure to power lines. In *Florida Power & Light Co. v. Jennings* (518 So.2d 895, supra), the Supreme Court of Florida held the "public's 'fear' as a factor which may be relevant to the issue of just compensation may be utilized as a basis for an expert's evaluation opinion regardless of whether this fear is objectively reasonable." In *San Diego Gas & Electric Co. v. Daley* (205 Cal App 3d 1334, supra), the California Court of Appeals added that "the question was whether the fear of the danger existed and would affect market value" in holding that reasonableness is not a factor that need be considered.

We, of course, do not hold that claimants are relieved from giving any proof to establish their claims and just compensation damages. Rather, claimants must still establish some prevalent perception of a danger emanating from the objectionable condition. As the Ryan court noted, "no witness, whether expert or non-expert, may use his or her personal fear as a basis for testifying about fear in the marketplace. However, any other evidence that fear exists in the public about the dangers of high voltage is admissible" (*Ryan v. Kansas Power & Light Co.*, 815 P.2d 528, supra, at 533-534). This standard protects, as a countermeasure, the legitimate municipal concern against spurious claims and unjust encroachments against the public treasury. Some credible, tangible evidence that a fear is prevalent must be presented to prove the adverse market value impact. Claimants should have to connect the market value diminution of the property to the particular fear in much the same manner that any other adverse market effects are shown, e.g., by proffering evidence that the market value of property across which power lines have been built has been negatively affected in relation to comparable properties across which no power lines have been built (see generally, 4 Nichols on Eminent Domain, § 12.02 [3d ed Sackman, 1993]).

To add the extra component of reasonableness, as PASNY urges, because the condition may not be something within common knowledge or experience, like an obliterated lovely landscape view, is not supportable or necessary. Thus, while a personal or quirky fear or perception is not proof enough, the public's or the market's relatively more prevalent perception should suffice, scientific certitude or reasonableness notwithstanding.

Accordingly, the order of the Appellate Division should be reversed, with costs, and the case remitted to the Court of Claims for further proceedings in accordance with this Opinion.

Order reversed, with costs, and case remitted to the Court of Claims for further proceedings in accordance with the opinion herein.

KAYE, C.J., and SIMONS, TITONE, HANCOCK and SMITH, JJ.,
concur.

LEVINE, J., took no part.
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DIVISION OF ENERGY/DCRA

TO

Herv Hensley
State Department of Community and Regional Affairs
Division of Energy

Comment on the Draft Feasibility Study
for the Proposed Sutton to Glennallen Intertie

BY

Alaska Citizens for Responsible Energy Development
February 25, 1994

I INTRODUCTION

I am writing this comment on R.W. Beck's draft feasibility study of the proposed Sutton-Glenallen intertie on behalf of members of Alaska Citizens for Responsible Energy Development (ACRED), a group composed of hundreds of citizens opposed to the Sutton-Glenallen intertie. This comment can not be exhaustive in ACRED's opposition the intertie. However, we have tried to outline ACRED's problems with the current draft feasibility study regarding the project's need, cost, impacts, and overall lack of justification.

Our analysis of the study leads us to conclude that the intertie is not the best solution for Copper Valley Electrical Association (CVEA). It is apparent from the various growth scenarios presented in the study that tremendous and unlikely growth would have to occur in CVEA's service area, particularly at the Petro Star oil refinery in Valdez, in order to justify the intertie. Instead the most likely growth scenario, based on population and industrial growth in CVEA's area and the likely life of the Trans-Alaska Oil Pipeline, dictates that CVEA's best solution is either an upgrade of diesel generators, or the Allison Lake hydro project near Valdez. Another fact evident from the study is that the intertie's cost, both in

direct dollars necessary to build the project, and in indirect costs to affected communities, is quite underestimated.

Finally, any argument CVEA makes now that the intertie is the best option because the legislature has already appropriated a \$35 million interest free loan for it is flawed. The legislature violated the intent of the statute (AS 44.83.181-189) last year by appropriating money for the intertie before the feasibility study was complete. Any attempt now to use this illegal action to justify the feasibility of the the intertie misses the point of a feasibility study requirement. That is, if the project is feasible, then it gets funded. The fact that the intertie is already funded cannot become a reason for making a project feasible.

This comment will not get into a detailed analysis of CVEA's demand, the cost of the intertie, or an analysis of the alternatives. Instead, we have attached a separate and detailed independent assessment done by Mark Foster. P.E. on those issues. We hereby incorporate by reference that assessment into this document.

II PROCESS

We would like to first discuss briefly process. After filing a formal request to see public documents associated with the study, ACRED members learned that CVEA had unrestricted access to the impartial consultant, R.W. Beck, while Beck was working on the recently released draft. This perceived unfairness has disturbed many of us. Many ACRED members have spent countless valuable hours educating themselves about the project, and involving themselves in the process. However, we had no opportunity to influence the assumptions in the draft study whatsoever. To find out that the "process" seems to allow a special relationship between CVEA and the "impartial" consultant frustrates many citizens who have been limited to this 30-day comment period to impact the study' results.

It is also clear that the lack of public meetings in Anchorage, Palmer, and Wasilla has been a flaw in the process. Not only do people in these areas use the

Matanuska Valley recreationally, many residents of these areas also own property along the intertie's route which will be directly impacted.

Regardless of any past inconsistencies in the process, the Department still has to decide which of the several scenarios presented in the feasibility study is most probable. After all, the Department's decision must be based in part on its prognostications of the future, based on information in the public record. We would like to comment briefly on the philosophy that we hope the Department will take with it when it enters its decision-making process.

PHILOSOPHY

The Department's concerns for the needs of rural Alaska are important. However, we hope that when it considers the needs of rural communities in the Copper Basin that it gives equal consideration to the people of the rural Glenn Highway communities who are near unanimously opposed to the intertie. ACRED members want to make it clear that we are not against CVEA meeting their legitimate electric needs. However, we are against the intertie because we feel it is an illegitimate solution to CVEA's needs. We are rural Alaskan communities, too. We do not want our quality of life sacrificed so that CVEA can build an intertie that can only be justified to supply the Petro Star oil refinery in Valdez.

We advocate a win-win resolution of the conflict. We believe either an upgrade of CVEA's generators, or the Allison Lake hydro project, in combination with aggressive conservation measures in the CVEA service area, is such a resolution. If, in the future Petro Star does increase its power demand beyond CVEA's capacity, we believe the solution in that unlikely case would be for Petro Star to generate its own power. Such a resolution allows all the rural communities involved to maintain their integrity.

III SOCIAL COSTS

We think it is significant that R.W. Beck places a zero dollar value on the intertie's social costs to the affected communities of Sutton, Chickaloon, and Glacier View. The study does not enter these costs into any of the cost/benefit scenarios that are presented. Putting a zero dollar value on these costs not only skews the results of the economic analysis, it ignores the outspoken and determined opposition to the powerline in these communities. In other words, by focusing entirely on the costs and benefits to the Copper Basin communities, and ignoring completely the costs to the "corridor" communities through which the intertie would pass, the study is fatally flawed.

The following are some of the specific ways the intertie would cost the people from Sutton to Sheep Mountain.

1. TOURISM

Tourism is the fastest growing industry in the state. It is also the industry with the best chance of sustaining our rural economies over the long haul. Because of the Matanuska Valley's scenic beauty and close proximity to Anchorage, the communities of Sutton, Chickaloon and Glacier View have all increasingly relied on the tourism industry in recent years. The Matanuska Valley is already a popular destination for Anchorage residents who enjoy hiking, biking, skiing, and backpacking in the area. Locally owned tourism-based businesses in the area include hiking, hunting, and fishing guides; horseback outfitters; river rafters; and campgrounds. In addition, our communities' restaurants, gift shops, grocery stores, and gas stations all benefit from recreationists and travelers who simply drive the Glenn Highway from Palmer to Sheep Mountain to enjoy the incredible scenery.

The draft study does not examine any of the adverse impacts tourism-based businesses will suffer if the intertie is built.

First, a vast percentage of tourism revenues for rafting, horseback riding, and guiding services come from "day trips". That is, trips that take tourists into the backcountry a short distance and then back out the same day. It is precisely this type of business that the intertie would affect the most. Nearly 100% of the tourism-based businesses described above operate on the north side of the Matanuska River, in the Talkeetna Mountains. This means that the one-day hiking, horseback riding, and rafting trips all take place in and around the foothills of the Talkeetna Mountains, precisely where the intertie would be routed. Because of the narrow configuration of the Matanuska Valley, all of these day trips would have to pass either under or near the powerline. Furthermore, since the Talkeetna Mountains rise abruptly above the valley, any trips that take clients up above the intertie would present those clients with a long view of the powerline and its 125 foot right-of-way.

The Matanuska Valley has potential for great growth in the visitor industry. However, local tourism-based businesses rightly fear that the intertie's presence will detract from our area's backcountry appeal. The intertie's ugly scar will discourage new tourism-based businesses from developing. The intertie's construction would also affect the growth of new service industry businesses such as lodges, bed and breakfasts, and restaurants that accompany increases in tourism. (See the attached Scenic Glenn Highway brochure to see one way local tourism-based businesses are marketing the area).

The presence of the intertie could also decrease the number of visitors who do nothing more than take a one-day drive up the Glenn highway to sight-see from the car. All routes, including preferred route (D), would make the intertie visible from points along the highway, including the dramatic view up Granite Creek toward Granite Peak from the Glenn Highway bridge across the creek. (The study notes that this sighting could be avoided if the intertie were routed behind Knob Hill). And, because CVEA ultimately has the power to route the intertie wherever it wants, there are currently no assurances the intertie would not be built right along the Glenn Highway. (This could be

the cheapest option for CVEA who wants to keep the cost of the project as low as possible). Not only would such a route inspire litigation regarding condemnation, health hazards from Electro-Magnetic Fields, and property values, it would also ruin the scenic appeal of arguably the prettiest highway in Alaska.

Furthermore, if the intertie is built, tourism businesses whose revenues actually do decline may sue either the State of Alaska and/or CVEA for damages. Neither the cost of possible litigation, nor successful recoveries, has been factored into the study's analysis of the cost of the intertie.

Having discussed the above potential impacts, local residents take great issue with the draft study's conclusion that:

Negative economic impacts to tourism related businesses in the Matanuska Valley may occur but are likely to be minimal. (Vol II, page 3-10).

All of the above mentioned costs should be assessed in the study's final draft.

2. QUALITY OF LIFE

Most of the people who live in the communities of Sutton, Chickaloon, and Glacier View do so at least in part because of the quality of life offered in these places. Residents enjoy some the most spectacular scenery in southcentral Alaska.

The presence of the intertie will adversely affect the quality of life in the communities of Sutton, Chickaloon, and Glacier View. Indeed, the study admits that:

...the transmission line is likely to have a significant impact on the scenic and recreational resources along the project corridor. (Vol. II, Page 3-10).

However, the study places no value whatsoever on these impacts in its cost-benefit analysis.

The intertie would have negative impacts on the affected communities in the following areas:

A. Economic Base

As already noted, people who already rely on tourism-based businesses could well face a decline in revenues. And, the area's hope to increase its reliance on tourism will receive a great setback.

The need to evaluate the potential economic losses to the corridor communities is underscored by the fact that the study is actually so bold to suggest a positive economic impact because of the "wages and earnings for various construction trades". (Vol.2, page 3-4). Obviously, any such impacts would be very temporary and would not begin to compare to the long term effect the intertie would have on tourism in the Valley.

B. Health Affects

The draft study has developed and examined four alternative routes where the intertie would pass. These routes all attempt to avoid placing the powerline within 600 feet of habitable structures. However, as noted above, the study is not the definitive authority on where the powerline would be eventually routed. Instead, the ultimate decision on routing will be left up to CVEA. This point is very important because it affects virtually the entire discussion of the powerline's impact on the affected communities. Perhaps the most important of these potential impacts is adverse health affects which are associated with the Electro-Magnetic Fields (EMFs). If we in the affected communities have no assurances of the intertie's route, we are unable to make any intelligent comments on these health affects. However, be assured that if the route would eventually pass near homes, a whole separate fight will ensue.

Even if the intertie was to be routed away from homes, it would still have negative health impacts. The intertie will have a 12 foot wide grubbed trail underneath it, which will remain after construction so that maintenance crews can access the line. It is safe to say that no matter how many warning signs are erected, children and some adults would still use the intertie's right-of-way as a trail. This means that hikers, horseback riders, snowmobile riders, and four wheel drivers will all be exposed to heavy doses of EMFs while passing directly underneath the powerline.

Another negative health impact which would be imposed by the intertie's construction is the unknown impact EMFs would have on wildlife. Some residents are particularly concerned about impacts on moose. It is quite conceivable that moose would also use the 12 foot trail underneath the powerline, especially when deep winter snows force moose into the lower regions of the Matanuska Valley. People who subsist on moose are concerned that the moose could develop health problems that would translate into either less moose, or possible health risks for those who eat moose shot in the area of the intertie. Although the draft study mentions some of the intertie's impacts on the Matanuska Valley Moose Range, this particular impact is not analyzed.

All of these health impacts should be assessed and valued in the study's final draft.

C. Visual Impacts

It is ironic that the study is concerned about whether travelers on the Glenn Highway will see the powerline while it virtually ignores the fact that many residents are being asked to deal with the violation of their beautiful area on a daily basis. People who would be able to see the powerline from their homes will constantly be offended. For some, this violation may be so strong that they will choose to move out of the area.

Again, the study should assess the real impacts to the people who will see the powerline on a daily basis.

D. Recreation

People who ski, snowmachine, hike, or bike on local trails will also have their experiences marred by the presence of the powerline. The intertie would be visible from parts of the following locally used trails: the historic Chickaloon-Knik-Nelchina trail as it runs along King River toward Castle Mountain, Hicks Creek Trail, Caribou Creek Trail, Squaw Creek Trail, Alfred Creek Trail, and the Crooked Creek Trail. If the intertie were routed up Boulder Creek, it would follow the trail used by many hunters and backpackers to reach the Chitina Pass area. (See 55 Ways to the Wilderness in Southcentral Alaska, p.145 for a description of this area which would be greatly impacted).

Regarding recreation users in these areas, the draft study notes that:

Transmission line structures would introduce structural (i.e., industrial appearing) elements into the largely undisturbed landscape of the project area degrading scenic values. The presence of transmission line structures and access roads in any of the largely barren drainages in the Talkeetna Mountains would cause high visual contrasts. Because these landscapes have little or no forest cover, there is minimal potential for screening the transmission line structures from view. (emphasis added)
(Vol. II page 3-9).

The study goes on to say that:

Potential impacts to views from recreation trails in the Talkeetna Mountains could be significant.
(Vol II, Page 3-10).

Aerial recreation in the area will also be affected by the intertie. Currently, hang gliders use a low hill just to the east of Knob Hill in the Sutton area to take off. The presence of the powerline on that hill (See preferred alternative route D) will adversely affect, if not foreclose,

this activity. (The study notes that this conflict could be avoided if the intertie were routed behind Knob Hill).

Many small planes also use this area and those users would also be impacted by the long span crossings the intertie would impose.

Finally, the study admits that the intertie could be visible from several State recreation sites. These sites include: King Mountain Recreation Area, Bonnie Lake Recreation Area, Long Lake Recreation Area, Caribou Creek Recreation Mining Area, and the Matanuska Glacier Recreation Area. (Vol.II, pages 3-7 and 3-8).

All of the above impacts on local recreation (and tourism) should be given a value in the final draft of the study.

E. Subsistence Hunting

Residents have expressed concern all along that the intertie's access roads would increase the already intense hunting pressure in the Talkeentna Mountains along the powerline's route. The more access roads into these mountains, the more hunters from the Anchorage metro area who will be able to compete with locals who depend on local wildlife to feed their families. The draft study does nothing to alleviate the concerns of local hunters. The study does not confirm where access to the intertie would be gained. Nor does the study confirm or deny that new access roads would be built. Instead, the study concludes that:

Increased road access could increase hunter numbers to the point where moose populations are adversely impacted. (Vol. II, page 3-6).

The result of the study's incomplete analysis is that the public is effectively denied the ability to intelligently comment on the impacts any new access roads would have on hunting pressure in the area.

F. Cultural Resources

While the study mentions the cost of a cultural resources survey, it does not mention any cost of mitigating or eliminating potential impact to the cultural resources the survey might identify.

There are known cultural resources along the entire base of Anthracite ridge that would be impacted if the intertie were routed there. Costs of mitigating impacts to those resources are left out of the project's budget.

G. Disruption of Normal Lifestyles

The intertie has already disrupted the lives of many local residents. Many people have donated time, energy, and money toward the effort to stop this powerline. It has been an invasion of sorts, even without the erection of one steel tower. While other interests perceive benefit from the project (CVEA wants the State's money, R.W. Beck is making money in consulting fees, the State sees "development") people in the affected Glenn Highway communities have absolutely nothing to gain, and much to lose, if the intertie is built. As long as the intertie issue is alive, residents opposed to the powerline will continue to devote efforts toward stopping it. Hence, attention is being drawn away from our normal lives today because we fear the intertie could drastically change our future.

G. Property Values

Many residents own property with spectacular views of the Talkeetna Mountains to the north. If the intertie is built, not only will the aesthetic sense of these properties be violated, but those property owners will also face difficulties in re-selling their property in the future. In other parts of the United States, plaintiff property owners have successfully recovered from parties responsible for diminishing their property values do to the presence of powerlines. See, for example, Willsey v. Kansas City Power & Light Co., 631 P2d 268 (Kan. App. 1981). Both the State of Alaska and CVEA can expect such lawsuits if the intertie

project proceeds. However, the feasibility study examines neither the cost of such litigation nor successful recoveries. See attached article EMF Radiation Revisited, Appraisal Views, Volume 6, Number 1 (1993).

Furthermore, a property's value to a homeowner can not really be fully assessed. A person's sense of place, the work they have put into a piece of property, and the expectations they have of sharing that place in the future are all intangible things that will be impacted if the intertie is built through the Matanuska Valley.

IV ENVIRONMENTAL COSTS

As with the social costs outlined above, the draft study places a \$ zero dollar value on the environmental costs the intertie would impose if it were built. Some of those costs include:

1. VISUAL IMPACTS

These impacts have already been addressed above. Some value should be assigned to these impacts.

2. WATER QUALITY

The study notes that the "surface water quality in streams, lakes, and rivers in the project area can be considered very good." (Vol. II, page 2-9). Area residents would like to keep it that way.

The draft study admits that one of the impacts which may be anticipated during construction of the intertie is "erosion and sedimentation of streams." (Vol. II, page 3-1). However the study goes no further in discussing this sedimentation's effect on anadromous fish streams or compliance with the Federal Clean Water act. The study's non-existent treatment of these issues is flawed.

Another potential impact on local water quality is erosion caused by new access roads. (This has been a major environmental problem in many forest areas where roads

are built to access timber). Nowhere in the draft study are these potential impacts discussed because, the draft study does not confirm where the access roads would be. The study merely notes that:

The effect of any such increased access would be further assessed should the project proceed to an EA or EIS, if required. (Volume II, page 3-14).

Again, this treatment is unacceptable. It is impossible for concerned citizens to intelligently comment on this important issue.

3. WILDLIFE

A value should be placed on all the following potential impacts in the final draft of the study.

A. Moose

Possible increased hunting pressure on moose in the project area due to more access roads has been addressed in the "Subsistence Hunting" section above.

B. Caribou

The Nelchina caribou herd resides in the project area, including on a portion of BLM land. The study admits that new access roads that could be associated with the intertie "could increase hunter numbers to the point where area caribou populations are adversely affected." (Vol II., page 3-6). Since the study is silent on the presence and extent of access roads necessary for the project, the public is unable to make intelligent comments on impacts to the Nelchina herd at this time. However, the final draft should include an examination of what impact a protracted EIS process will have on the project. Such an EIS is likely to be required before the BLM issues a right-of-permit.

C. Dall Sheep

Again, the issue of access roads and hunting pressure is not adequately addressed in the study. Instead, the

study merely admits that the "greatest populations of Dall sheep in the Talkeetna Mountains [live]... within the project study area," that "hunting pressure on rams in this area is already fairly heavy," and that "[i]ncreased road access could increase hunter numbers to the point where area ram populations are adversely affected." (Vol. II, page 3-6).

Additionally, the study admits that the proposed route of the intertie "passes directly over a mineral lick where it crosses Granite Creek beneath Knob Hill. [And] the northern route alignment passes within 1/4 mile of another mineral lick approximately 1/2 mile west of Young's Creek." (Vol. II, page 2-18). The study acknowledges these mineral licks are an important feature of Dall sheep habitat, providing nutrition and social interaction. Routing the intertie directly over the mineral lick near Granite Creek is clearly inappropriate, yet the study suggests no measure to mitigate this impact.

Without knowledge of the placement of access roads the public can not assess the full impact the intertie would have on Dall sheep.

D. Raptors

The study states that :

Although no eagle nests have been documented along the route, there is potential for these nests in the area.

Local residents are aware of at least one Bald eagle nest along the proposed route up Boulder Creek that has not been identified in the study .

The study fails to put a cost on compliance with the Bald Eagle Protection Act.

E. Fish

The study notes that at least fourteen anadromous fish streams would be crossed or directly downstream of potential route alignments. (Vol. II, page 2-12). However,

nowhere does the study discuss the intertie's potential impacts on these streams.

In fact, there could be significant impact to these streams. First, none of these streams has large populations of anadromous fish. Therefore, even slight impacts on water quality could be detrimental to the stock. Second, as noted above in the "Water Quality" section, the study admits that the intertie's construction would result in sedimentation of streams. Furthermore, any construction or improvement of access roads would lead to even more erosion that could affect water quality.

Water quality, in turn, is the single most important factor in maintaining healthy fish populations in area streams. It is especially important to avoid sedimentation in very small spawning streams, like Little Granite Creek where chinook salmon spawn in a wetland just south of where the intertie would pass. (Vol. II, page 2-13).

The study is very deficient in its treatment of this area of concern. A more detailed analysis needs to be done regarding the proposed intertie's impacts on fish streams.

F. Trumpeter Swans

The study notes the trumpeter swan is a "species of concern." (Vol. II, page 2-16). It also notes that "swans are particularly vulnerable to collisions with powerlines and this is a major cause of death in this species." (Vol. II, page 2-16). The study goes on to say that guidelines to minimize impacts on the swans will be used, including "special attention to the siting of the line as well as to the marking required where transmission lines cross rivers and other open areas." (Vol. II, page 3-5).

Where are the costs associated with implementing these guidelines identified? Are the costs associated with waiting for a full-blown EIS to be completed factored in the total cost of the project. It is likely that the presence of the swans will trigger such an EIS before the BLM can issue a right-of-way permit.

G. Brown Bears

Local residents know of at least one dense Brown bear habitat that would be directly impacted by the intertie's proposed route. Residents have reported many brown bear sightings on the Little Granite Creek bench, just east of Granite Creek. Bears have been seen in the wetland just below the knoll where the intertie is presently routed, opposite Knob Hill in the Sutton area.

4. NOISE POLLUTION

The study admits that construction of the intertie would result in "increased noise...in nearby areas." (Vol. II, page 3-1)
This noise would come from helicopters and other machinery.

The study does not account for the costs of nuisance lawsuits that may be filed by locals impacted by this increased noise.

5. WETLANDS

The study admits that "ground truthing will be required during the permitting process" to "determine the exact extent of the wetlands impacted." (Vol. II, page 2-3).
The study goes on to say that:

The clearing of trees and tall shrubs in the right-of-way will result in the loss of some wetland habitat but it should not significantly affect the functional value of these wetlands. Impacts to wetlands and erosion and sedimentation could be minimized through the use of best management practices (BMPs) during construction, use of helicopters rather than building access roads, and timing construction during winter months when the ground is frozen. (Vol. II. page 3-1).

The language used above is not comforting. "Should" and "could" are not the same as "will" and "shall." In fact,

the above language contrasts with the report at Vol. I, page III-10 which states that:

measures will be taken to limit disruption of wetland habitat and to restore damaged wetlands in accordance with guidelines and permit stipulations of the permitting agencies.

Well, which measures does the study mean to say will be taken? At what costs? Where are those costs accounted for? What restoration measures will be taken? At what cost? Are the costs of added helicopter time (to avoid impacts on wetlands) already included in the intertie cost? Where are those costs accounted for?

The above discussion in the study does not give any true estimation of the costs that would be associated with the construction of the intertie through wetlands-either environmental or economic.

6. AREA LAND USE PLANS

The study notes some of the land use goals for the local land use management plans in the project area. Those plans include the Matanuska Valley Moose Range Management Plan, the Nelchina Public Use Area Plan, the Copper River Basin Area Plan, the Chickaloon Special Land Use District Plan, and the Susitna Area Plan.

The intertie runs counter to many of the goals of these plans, including:

1) The intertie would cause the loss of fish and wildlife habitat. The Susitna Area Plan requires restoration and rehabilitation of impacted habitats. The study places no cost on this required restoration and rehabilitation.

2) The Susitna Area Plan also stipulates measures to be taken to preclude direct impacts on mineral licks, or compensation for their destruction. (See also Matanuska Valley Moose Range Management Plan, page 84). The study includes no cost for compensating for the loss of the mineral lick opposite Knob Hill noted above in the "Dall

sheep" section. Nor does the study mention compensation for other potential impacts to mineral licks along the route.

3) The Matanuska Valley Moose Range Management Plan calls for the protection of scenic views of Granite Peak and Castle Mountain from the Glenn Highway. The intertie (as presently routed) would ruin the scenic views of Granite Peak from:

- a) the Glenn Highway bridge over Granite Creek;
- b) the Glenn Highway and Jonesville Road in Sutton and;
- c) the Glenn Highway just east of King River, traveling west.

4) The Matanuska Valley Moose Range Management Plan states that:

All wetlands shall be preserved in the Moose Range according to existing state and federal laws and the Susitna Area Plan.

The Plan also calls for buffer zones around wetlands, including measures to reduce impacts on wetlands from development on adjacent side slopes. The 160 acre wetland on Little Granite Creek Bench is a Class I wetland. (Matanuska Valley Moose Range Management Plan, page 101, 183). The proposed route would parallel this wetland. However, the Plan states that:

"Utility systems should not be located so that they parallel wetlands." (emphasis added)
(Matanuska Valley Moose Range Management Plan, page 102).

Finally, the Talkeetna Mountain Special Use District noted in the Matanuska Valley Moose Range Management Plan is totally ignored by the study. One of the primary purposes of this Special Use District is to:

...conserve the unspoiled beauty of the mountains and the alpine region...(emphasis added)

(Matanuska Valley Moose Range Management Plan, page 4).

The Moose Range Plan also notes the area has "some of the finest [scenery] the state has to offer." (Matanuska Valley Moose Range Management Plan, page 38). The Plan's goal of preserving alpine scenery would obviously be tremendously violated by the construction of the intertie.

IV PETRO STAR LOAD FORECAST

ACRED states much of its comment on the Petro Star load forecast in Mark Foster's attached assessment. However, ACRED would like to add that the Department would be jeopardizing any rate stabilization for CVEA customers if it approves the intertie with no assurances or "take or pay contract" from Petro Star. If Petro Star begins to generate their own power, or, goes out of business, CVEA consumers will still have to pay for the intertie without the revenues from the sale of electricity to Petro Star.

ACRED believes it is likely that Petro Star will not be in business long given the projected life of the oil pipeline, the business history of Petro Star and its owners, and the growing environmental problems Petro Star is having with the EPA and the State.

It would also be outrageous for the State to spend money on the intertie to create what is, in effect, a subsidy of a private business. Finally, the image of "piping" electricity from the Beluga natural gas fields to Valdez where there is already more fossil fuel than anywhere in North America so a refinery can have electricity is ludicrous. (R.W. Beck and the State have already admitted that the intertie, as presently designed, could not form part of a state-wide power grid creating another link between Fairbanks and Anchorage).

V INTERTIE COST

It should be clear from Mark Foster's assessment of the study that the intertie's cost has been underestimated. Estimated construction and maintenance costs are very low, including the cost of helicopter time. Indeed, helicopter time is likely to be much more costly given the implication in the study that new access roads for construction and maintenance of the intertie will be kept to a minimum. There is a cost either way. Either access roads will impose the environmental costs discussed above, or, more costly helicopter time would be necessary.

Costs of right-of-way acquisition have also been grossly underestimated. In particular, the cost of obtaining right-of-way over Chickaloon Moose Creek Village lands has been completely left out of the project's cost. The Chickaloon Natives have been adamant in their opposition to the intertie and have stated that they will not sell an easement at any cost. Neither does the State have the power of eminent domain over the Chickaloon Natives.

Finally, the costs of lengthy court battles over the many intertie issues have not been factored into the project cost.

VI ALTERNATIVES

Again, ACRED concurs with the conclusions of Mark Foster regarding alternatives to the intertie. We would like to emphasize that it should be clear from Foster's comments that the diesel scenario was handicapped the way it was presented in the study. Replacing aging generators immediately, and adjusting for the true cost of diesel fuel bring the cost of the diesel scenario down significantly.

In regard to Allison Lake, just a couple of comments are in order to address CVEA's argument that Allison Lake power will cost CVEA at the same rate as Solomon Gulch. This argument is not supported. No judge would force CVEA to pay the 6.4 cent fee to the State for the added power generated as a result of the construction of Allison Lake. Allison Lake was never contemplated in the

original agreement. Nor is there evidence that the State would try to force CVEA to pay the fee. Indeed, what possible motive would the state have to do such a thing if it is trying to help CVEA solve their energy needs? Finally, for the sake of argument, if CVEA was forced to pay the 6.4 cents, those fees would be a transfer cost that would be passed on by CVEA. This is consistent with looking at the flow of costs of the project from the perspective of the entire State of Alaska.

Finally, the draft study does not include conservation measures as part of every alternative scenario. There is absolutely no reason not to include conservation measures in each scenario.

VII CONCLUSION

For all the above reasons, ACRED expects the final draft of the feasibility study to reflect the true direct and indirect costs of the proposed intertie.

However, even if this is not done, CVEA's lack of need makes the intertie an unfeasible project. The Department should disapprove the intertie's feasibility. Thank you for your consideration.



Chris Rose
ACRED Co-Chair
General Delivery
Sutton, Alaska 99674

Appraisal Views

Quarterly Newsletter of Arthur Gimmy International/VNI

1st Quarter 1993

Volume 6, Number 1

EMF Radiation Revisited

Three years ago we warned the real estate industry of a variety of real estate value problems and potential legal liability where Electro-Magnetic Fields (EMF) were present. At that time, a deluge of newspaper and magazine articles had explored and publicized approximately fifteen years of scientific work which implied a relationship between electric currents and various types of cancer, particularly those affecting children.

While the electric utilities and their research entities vocally insist that nothing has been proven, a large number of articles, stories, and studies imply the opposite. Also, the scope of concern has expanded from high voltage power lines and transformers to include electric railways, residential service-drops, electrical wiring, and common household appliances. Of great significance, the most comprehensive

the most comprehensive study undertaken anywhere worldwide...has recently concluded that there is a clear and definite relationship between electric currents and certain cancers.

sive study undertaken anywhere worldwide (by the Government of Sweden) covering 500,000 people who lived within 1,000 feet of high voltage lines over a 15 year period, has recently concluded that there is a clear and definite relationship between electric currents and certain cancers.

The Swedish Government conclusions were highly publicized throughout the United States in recent months. The standard of danger for continuous exposure adopted in Sweden is reportedly 1 milligauss for children and 2.5 milligauss

for adults. The gauss (and milligauss) is a measuring unit of magnetic field strength typically utilized in relation to EMF, although other forms of radiation not measurable in this way may also be connected with EMF.

Government Regulation

In the U.S., standards are still evolving and are being pursued on federal, state, and local government levels. The critical factors seem to be proximity and length of exposure. Therefore, residences and places of work (where people spend substantial time) are often the subject of regulation. Three basic approaches are taken in formulating regulations:

- The direct approach is to establish measurable maximum allowable levels of radiation.
- The indirect approach is to prohibit certain uses within certain distances of radiation sources.
- A collateral approach is to require full disclosure of the cancer risk to potential buyers in a sale of real estate.

Federal

At the federal level, the Department of Energy and Environmental Protection Agency are sponsoring conferences and studying the problem. They have circulated a number of draft reports and proposed standards.

State

On the state level, public utility commissions and other agencies are studying the problem and collecting information and opinions. It is reported that some states have started to legislate pertinent regulations and safety standards. In at

least two states (Michigan and Tennessee) bills were recently debated to ban the construction of high voltage lines (over 60 kilovolts) until scientific studies are completed. One Tennessee bill sought to ban high voltage lines within one half mile of any occupied dwelling.

Local

Local (city and county) ordinances and practices are having an increasing impact on owners, investors, developers, and brokers of real estate. In one county, a specific condition of a subdivision approval is that a prescribed statement of disclosure of the possible "adverse health effects" related to high voltage electric transmission lines be recorded in the title records of every lot within 300 feet of a high voltage line easement. In many counties, a high voltage line on or near a development property almost assures the need for an expensive environmental impact study should the question be raised in the process of seeking necessary permits. Special open space requirements are sometimes designed by or imposed on developers to provide a safety setback.

California recently prohibited the construction of schools within certain dis-

Continued on Page 3

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Continued From Front Page

Charles R. Baumbach

EMF Radiation Revisited

tances of high voltage transmission line easements as shown in Table 1.

Marketplace Responses

Banks & Lenders

Banks and other lenders are, reportedly, increasingly concerned both about potential future liability and the value of the real estate security. Slowly they are responding as they did in the case of toxic waste problems by

- hiring necessary experts
- requiring borrower-applicants to do a full workup of such problems and the value-reliability of the security
- refusing to become involved since there is a great deal of ambiguity involved in the subject.

Cases have been reported to us where loans were denied because of the proximity of high-voltage transmission lines.

Developers & Builders

Residential subdivision land developers report that builders who purchase approved lots in bulk will not even look at property that is crossed by a high voltage line. Residential builders working from sales of models report that the last locations sold are those nearest the high-voltage lines and prices typically are discounted to complete the project. In addition to direct discounts, it would be appropriate to discount for the additional marketing time (and carrying cost) of land near the high-voltage lines when appraising the effect of a new power installation on undeveloped land. In the pricing of homes built for sale, developers will typically make adjustments up and down for factors such as view, access and visibility, lot size, and other factors. Our research

shows that proximity of high voltage transmission lines usually triggers a markdown of about 10% and, in recent years, this has been insufficient. We note that around a 15% discount in the final package (house and lot) typically converts to about a 50% discount in the land value.

Buyers

Interviews with home buyers have convinced us that there is a high and growing degree of awareness about the EMF issue. With rare exceptions, there is a strong negative preference about purchasing a residence near a high-voltage transmission line. Price discounts may persuade some people to buy but there appears to be a growing segment of the public who would not buy a residence near high-voltage lines under any circumstances.

Investors

Investors in residential and commercial property face the same factors described above. They must also worry about resale at a planned future time against a trend toward shrinking demand for properties located near high-voltage lines. In addition, there is the increased cost of development, growing uncertainty of refinancing, and risk of future liability as laws change.

Financial Effects

While the electric utilities and their research affiliates struggle to show that electric currents do not cause cancer, the public has apparently decided not to take the risk or to wait and see what the scientists finally prove. Thus, the value of real estate near high-voltage power lines is strongly affected whether or not an analyst considers final users, investors, or both together. The trend is accelerated by the basic characteristics of the lending and development industries as they seek to minimize or avoid risk.

According to the North American Electric Reliability Council, utilities plan to add 12,600 miles of new transmission line in the decade of the 1990s. In all probability they will acquire a new right-of-way typically of 75 to 100 feet in width per line. In most cases, no offer will be made to pay for the lost value of land

nearby and no information will be provided to owners to let them know that their remaining land value is diminished. Nevertheless, EMF effects of one milligauss (the Swedish maximum radiation level for children) can reach approximately 400 meters (1,200 feet) from the line at 500 kilovolts. Only those owners who study this

Only those owners who study this subject, prepare themselves, and negotiate effectively will avoid a loss of real estate value without compensation.

subject, prepare themselves, and negotiate effectively will avoid a loss of real estate value without compensation.

The second probable financial effect of EMF is an increase in tort liability when the courts recognize EMF as the "proximate cause" of a specific cancer in a specific setting. While we have heard reports of efforts to sue power companies for damages for causing specific cancers, we have not heard of successful case-opinions, presumably because the chain of causation is difficult to prove. This may change as the scientific evidence comes in. It cannot be predicted what secondary liability may result to property owners, developers, or lenders of residences or places of work in EMF danger zones. The uncertainty is already affecting values.

The extensive Swedish studies add greatly to the clarity and definition of the EMF problem. While these results support the public fears and assist in explaining the losses in value to certain real estate, they also show a direct relationship between degree of exposure to EMF and incidence of cancer. The relationship is almost a proof of "proximate cause" sufficient to maintain a tort action. Only time and judicial decisions will tell us whether additional scientific evidence is needed or whether the burden now shifts to the utilities to show otherwise.

Quandaries and Predictions

The scientific work (especially the Swedish studies) as well as the public perception of danger seem to have brought the

Continued on Page 4

Table 1

School Proximity to High Voltage Line Easements

Voltage	Distance
100-110 Kv	100 Feet
220-230 Kv	150 Feet
Over 345 Kv	250 Feet

Viewpoint

By Webster A. Collins

Today's Buyers

In today's market the buyer must have cash. The days of "mortgaging out" were possible only when values exceeded cost. With values on the decline, no-cash buyers have evaporated from the market.

The buyer of property today is a person or enterprise who has made and saved their cash. These are the people who heeded the warnings of the mid 1980s and knew that "even in Boston, lights turn to caution." They may have participated in the market in the 1980s, but did not become over leveraged and stopped when warning signs appeared.

Today's buyers include groups formed to acquire properly priced assets. These buyers, however, are finding that owners with prime properties are holding, riding out the market downturn, and not giving way to the enticement for cash now.

What was missed in the 1980's is that, in truth, the number of buyers for a property was very small. Any one property might

have, at most, ten potential buyers. If there was a market for a property, most certainly, those buyers could readily be identified.

For example, in the 1990's the only buyers of any note in the Boston market are "box retailers." There were a certain logical number of sites for these box retailers but most have now made their moves. To perpetuate past trends and say that retail values for certain sites will continue, fails to recognize that there is a limit to the number of buyers for a property.

Buyers move in and out of markets. Box retailers who came to Boston made their move suddenly, sharply, and quickly. Their objective has been to capture 10% of the area's \$40 billion in retail sales. Like so many other buyers for real estate, their moves, once having been made, will now be limited in the future.

The buyers of property base their decision on the sense of the deal. They know that if the owner does not have to sell, price

becomes totally different than with an owner that does have to sell.

This is where institutions, with few exceptions, have failed. Buyers believe that institutions, in many cases, "have to sell." When this occurs, prices can plummet.

The institution may not even own the property, but may put pressure on the actual owners to sell as part of a workout.

Thus, the art of negotiation is a critical element. If the FDIC and certain major banks were to pull back from the market, announce their pull back, live by it, and then very quietly creep back in on little cat's feet, in my judgment, the pricing structure of real estate within this country would be on a totally different perspective.

The author, Webster A. Collins MAI, CRE, is Executive Vice President/Partner of Whittier Partners in Boston.

Continued From Page 3

related real estate situation to the verge of intense conflict and possibly litigation.

While it is clear how a situation should be handled where new power lines are to be built, there are many properties which have been affected (both recently and long ago) where promises or assertions were made regarding the safety of electric lines and their lack of effect on the value of adjoining land. In recent years there has seemingly been a studied effort to focus on the causative proof between electric lines

and cancer and rely on that position to avoid notice or payment relative to tort claims or lost value of nearby property.

Having watched this situation evolve during the last five years, it is predictable that there will be a strong increase in related litigation and probably in class actions.

The author, Charles R. Baumbach, is a licensed attorney and a Senior Appraisal Associate with Arthur Gimmy International. The firm has been involved in 11

By Charles R. Baumbach

power line cases over the last two years concerning EMI.

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Matanuska Glacier

Photo by Darel Wentworth



Photo by R.J. Hayes

S/Y CERAMICS. Stock's Yard makes an extensive line of handcrafted ceramics. Made right here in the Upper Matanuska Valley. Look for the S/Y tag at Valley gift and souvenir shops.

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minute needs. Everything from ice cream to hardware. Meals to go if you are on the run. Pop, candy, cigarettes and souvenirs. Alaska made crafts and jewelry. Bargain table. (907) 746-7461.

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Photo by Lynne Woods

In One Day!

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MP 102.2
Long Rifle Lodge

MP 102
Glacier Park Resort

MP 76
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MP 76
King Mt. Lodge

MP 69.7
Pinnacle Mountain
Recreation Center

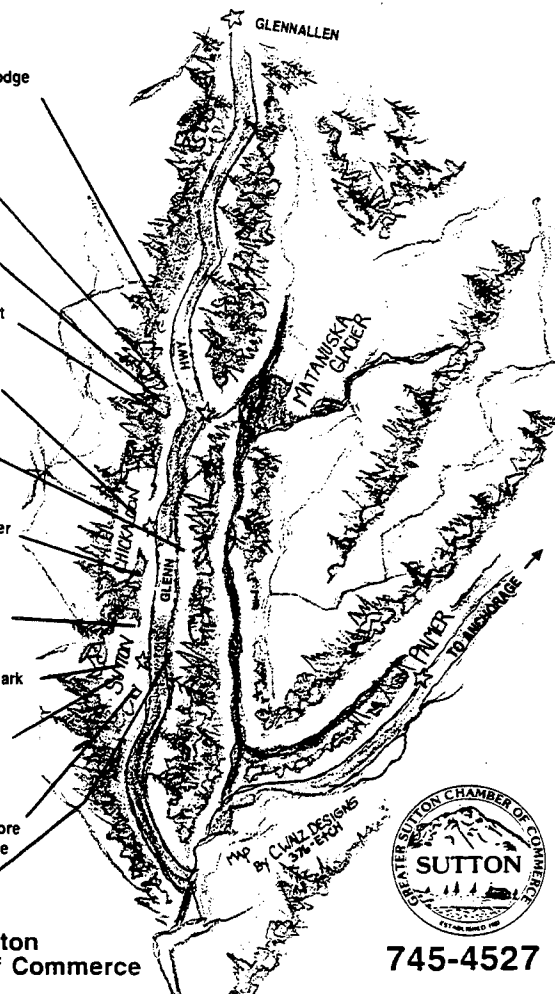
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MP 61.6
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MP 61.5
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& Souvenirs

MP 61
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& Jonesville Cafe

MP 61
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Photo by Linda Ketchum

MP 76 NOVA RIVERRUNNERS. Alaska's Guides to Alaska's Rivers since 1975. Class I to V. Day trips near Anchorage. 2 to 7 day trips statewide, kayak trips with raft support. Thrill to the whitewater of "Lionshead" Trip or just relax on the "Matanuska" Trip. Box 1129, Chickaloon, AK 99674. Phone (907) 745-5753.

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February 8, 1994

Robert E. Harris
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

RECEIVED
FEB 14 1994
DIVISION OF ENERGY/DCRA

Dear Mr. Harris:

I would like to comment on the proposed Copper Valley Intertie which would run from Sutton to Valdez.

I am a Sutton resident who has been actively involved in opposing the construction of this line. It became apparent to me at the beginning that political deals had been made in Juneau long before this project became known to the public. The citizens along the Glenn Highway, those whose lives would be most negatively affected by this fiscally irresponsible project, and who are going to have to live with it on a daily basis have been told by their legislator that "he" is not concerned with what or how his constituents on this end of the district feel about the construction of this line.

Perhaps Mr. Olberg should be more concerned about what we "think" given the fiscal crisis this state is facing. Can this state afford to fund pork barrel projects such as this when viable alternative are available? I think not.

The intertie becomes feasible only if the power demands of the Copper Basin increase at a "high to medium high" growth rate. Population of the Copper Valley has increased at a relatively low rate. The construction of this line is not based on the power demands of the residents of the Copper Valley but on the "projected" power demands of Petro Star refinery in Valdez. Petro Star would have to more than triple its power demands for the intertie to become more feasible than the Allison Lake alternative. The Copper Valley Draft Feasibility Study does not even address the issue of co-generation of electricity from the refinery itself or from the waste gases off the Alyeska terminal. Nor does it look to the probable construction of a natural gas pipeline ending in Valdez in the near future. A line that would make cheap power a reality to the electric consumers in that area.

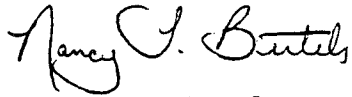
We live in small communities in Alaska, not Los Angeles or Chicago. We do not have to make the same choices as the "Lower 48" when it comes to power generation. Why is the state choosing to run an intertie through one of Alaska's most scenic valleys when other alternatives are and will be available at less cost?

We live in this area because we value our quality of life. Unfortunately, the feasibility study states that "quality of life issues are based on subjective criteria and are hard to quantify." What does this mean for us? Perhaps it means that the Alaskan

spirit is dead. The legislators of this state do not remember why they or their parents came to this state. Yes, it offered opportunity but it also offered a quality of life higher than they had found elsewhere.

Please be fiscally responsible and maintain our quality of life. Say no to this intertie project.

Sincerely,

A handwritten signature in cursive script that reads "Nancy L. Bertels". The signature is written in dark ink and is positioned above the typed name.

Nancy L. Bertels
P.O. Box 263
Sutton, AK 99674

February 7, 1994

To: Robert Harris, Director
Division of Energy

From: Charlene SchmidtKunz
P.O. Box 26 Sutton, AK.

■ Comments regarding the Copper Valley Intertie
Feasibility Study - Draft Report.

RECEIVED
FEB 14 1994

DIVISION OF ENERGY/DCRA

Listening responsibly is a learned skill. The people living in the Matanuska Valley have caught my attention, in the depth of their expression. I would like to add to that strength my own unique point of view.

The Matanuska Valley ascends 60 miles from sea level to the foot of the Matanuska Glacier. The geography alone is unparalleled anywhere. It is spectacular. The Copper Valley Intertie identified routes occupy 40 miles of this length. That 40 miles is the culmination of the essence and character of the Valley. The planning in the Draft Report is "sited to minimize visual impact...". Elimination of visual impact is not in the Executive Summary. Also "The apparent preferred route alternative would not be visible to travelers along the Glenn Highway except... Granite Creek, ... Streshla Mountain... (and) five miles west of Glennallen." p. I-4 Executive Summary. Granite and Streshla are with us here in the Mat. Valley. Consider, The Glenn Highway will not be the only vantage point in our future.

Alaska is growing. Tourism and "the draw" to these magnificent sites is a testament in itself that the Matanuska Valley's Geography must be listened to responsibly.

- Charlene

February 11, 1994

RECEIVED

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

FEB 14 1994
DIVISION OF ENERGY/DCRA

re: Intertie Feasibility Study

Dear Sir:

I was opposed to the Intertie before the feasibility study, mainly for its environmental impacts and the detrimental impact on the quality of life of the residents from Sutton to Glennallen and other residents of the state of Alaska, who use the area for recreation.

Now having read the Executive Summary of the intertie feasibility study and attended the public meeting at February 11, at Sutton, I have concluded that the intertie is likely to be an economic boondoggle. It is obvious that the costs for construction, even in '93 dollars, are going to be much greater than the cost estimate of \$45.9 million. The costs of line construction, including helicopter time are all extremely conservative estimates, and the cost of a Static Var Compensator is not included, not to mention the legal costs that will be incurred trying to obtain ROW across native lands. Who is going to pay for the added costs?

At the public meeting, Mr. Richard Emmerman admitted that without the demand for higher amounts of electricity by a commercial industry the feasibility study would not have occurred, this industry being Petro Star Refinery. I can understand the customers of Copper Valley wanting lower electrical rates, but they should not be under the illusion that lower electric rates are the main purpose for the proposed intertie and there is no guarantee that their rates will lower. Right now the customers of MEA are experiencing noticeable rate hikes. There is no guarantee that Petro Star will need or buy the electricity it claims it will need. There are too many ifs involved with the study. Giving State money to a project based on the supposed needs of one commercial interest is unfair to all the people of Alaska. This project is not being paid for by just CVEA consumers, but by all Alaskans, who are paying for it now and will be for future generations.

Sincerely yours,

Craig Baer

Craig Baer

P.O. Box 245

Sutton, AK 99674

RECEIVED

FEB 25 1994

DIVISION OF ENERGY/DCRA

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Director Harris:

I appreciate the opportunity to comment on the Copper Valley Intertie Feasibility Study draft report.

I feel strongly that the liabilities of the project outweigh any benefits. In view of the fact that the state currently faces a fiscal crisis, more economical solutions should be pursued. Much of the justification for the project appears to hinge on projected consumption rates which are not supported by realistic data. Furthermore, should Petro Star ever require the power that Copper Valley Electric Association anticipates, generation in the vicinity of the refinery should be considered.

The draft report underestimates both the direct and indirect impacts of the proposed intertie on those residing along the route as well as wildlife populations and existing user patterns of the region. As the Fairbanks intertie has shown, any such corridor produces much higher levels of ATV and snowmachine use. Consequently, the intertie would interfere with long-established hunting and trapping patterns of the region as well as diminish the scenic value along the route.

Sincerely yours,

Steve McShane

Box 87434

Wasilla, AK 99687

RECEIVED

FEB 25 1994

DIVISION OF ENERGY

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

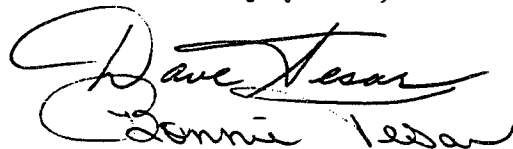
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Sincerely yours,


Donnie Tesar

P.O. Box 874875

Wasilla, Ak

99687

RECEIVED

FEB 25 1994

DIVISION OF ENERGY/DCRA

2/23/94

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Director Harris:

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Sincerely yours,

Ruth Felling
HC 3, Box 5215-F
Wasilla, AK
99654

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

Box 38
Chugiak, AK 99567
Feb. 14, 1994

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Director Harris:

I appreciate the opportunity to comment on the Copper Valley Intertie Feasibility Study draft report.

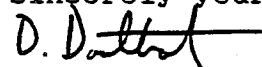
I feel strongly that the liabilities of the proposed intertie outweigh any benefits. In view of the fact that the state currently faces a fiscal crisis, more economical solutions should be pursued. Much of the justification for the project appears to hinge on projected consumption rates which are not supported by realistic data. Furthermore, should Petro Star ever require the power that Copper Valley Electric Association anticipates, generation in the vicinity of the refinery should be implemented.

The draft report underestimates both the direct and indirect negative impacts of the proposed intertie on those residing along the route as well as negative impacts on wildlife populations and existing user patterns of the region. As the Fairbanks intertie has demonstrated, any such corridor produces much higher levels of ATV and snowmachine use. Consequently, the intertie would interfere with long-established hunting and trapping patterns of the region as well as diminish the scenic value along the route.

I have a remote parcel in the Loon Lake area and use this region for hunting and trapping. The proposed route of the intertie intersects our trapline. Attempting to mitigate the visual impact by routing the intertie off the Highway only transfers the associated problems to a different group of users. The scenery in our region is spectacular and the proposed intertie would be an unwanted and ugly addition to the region.

I am not aware of any remote parcel owners in our area who support this project. Most of us were unable to testify due to the location of the public meetings. Any future hearings should include one in Anchorage.

Sincerely yours,



Daryl Douthat

cc: Gov. Hickel
Sen. Halford
Com. Blatchford
Rep. Carney

P.O. Box 111410
Anchorage, AK 99511

November 8, 1993

Commissioner Edgar Blatchford
Department of Community & Regional Affairs
P.O. Box 112100
Juneau, AK 99811-2100

Dear Commissioner Blatchford:

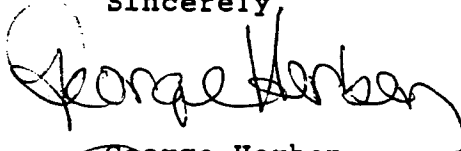
We understand that consideration is being given to a high voltage power line to be constructed between Sutton and Glennallen along the Glenn Highway.

We hope that route is not approved. A power line will have a serious effect on the visual beauty of that road. As it is the Glenn Highway is one of the most scenic routes in the state and is appreciated by residents and tourists alike.

If the power line is built, it will be just another blight on our landscape like so many in the South 48.

Isn't there a way to avoid defacing it?

Sincerely



George Herben



Priscilla Herben

RECEIVED

NOV 12 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

1040 Meadow Mouse Rd
Fairbanks, Alaska 99709
November 13, 1993

RECEIVED

NOV 15 1993

Edgar Blatchford
P.O. Box 112100
Juneau, Alaska
99811-2100

COMMUNITY & REGIONAL AFFAIRS

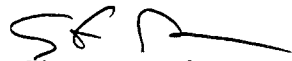
Dear Mr. Blatchford:

This is regarding the proposed electrical power line from Sutton to Glennallen.

It is hard to believe that such a project has even been proposed.

Obviously, the view and the wilderness are one of the major attractions and reasons for being in Alaska. How does one enjoy it if one sees powerlines for one hundred and twenty five miles? This kind of visual pollution is unnecessary, destructive, and damaging to the soul of Alaska.

Please keep me informed of any hearings or material on this proposed development.


Steve Parker, Ph.D.
Clinical Psychologist

11/7/93

RECEIVED

Dear Commission Blatchford

NOV 12 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

I am writing in opposition to the Sutton - Glenallen Inter-tie. I live & work in the Valley. I am intimately familiar with the area through which the Inter-tie would run since I have hiked, & skied in this area for years.

This is far too beautiful an area to seriously consider this sort of a visual blight. I am not aware of any evidence that it would lower or stabilize electric rates for CVEA customers. Further, there will be habitat displacement through right-of-way & access roads will ruin the wilderness character of this area. Its development isn't fair to those who live in this area. (I live across the valley) It isn't worth it. Please don't pursue it.

Sincerely
David Holladay MD
P.O. Box 1814 Palmer, AK 99611

November 15, 1993

Department of Community
and Regional Affairs Commissioner
Attention: Edgar Blatchford
P.O. Box 112100
Juneau, AK 99811-2100

Dear Mr. Blatchford:

I want you and your committee to know that I am against the funding and building of the intertie to Glenallen. I intend to vote against all legislators who voted for this project unless this unnecessary project is turned around. I believe it is a result of strong lobbyist funded by the electrical companies who want a free ride. Of course, their excuse is "the electrical power is necessary."

The area where the intertie is slated is pristine country and a national treasure like many parts of Alaska. We have a chance to "do it right" here in this state--we should not let greed get in the way.

Remind the legislators-- many people will vote the walk in November.

Sincerely,

Bev Grafel

Bev Grafel
10443 High Bluff
Eagle River, AK 99577

Box 38
Chugiak, AK 99567
Feb. 14, 1994

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

RECEIVED

FEB 15 1994

DIVISION OF ENERGY/DCRA

Dear Director Harris:

I appreciate the opportunity to comment on the Copper Valley Intertie Feasibility Study draft report.

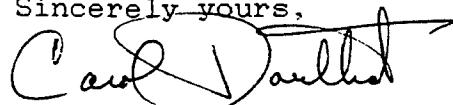
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I have a remote parcel in the Loon Lake area and use this region for hunting and trapping. The proposed route of the intertie intersects our trapline. Attempting to mitigate the visual impact by routing the intertie off the Highway only transfers the associated problems to a different group of users. The scenery in our region is spectacular and the proposed intertie would be an unwanted and ugly addition to the region.

I am not aware of any remote parcel owners in our area who support this project. Most of us were unable to testify due to the location of the public meetings. Any future hearings should include one in Anchorage.

Sincerely yours,



Carol Douthat

7806 Linda Lane
Anchorage, AK 99518
Feb. 13, 1994

Herb Hensley, Acting Director
Div. of Energy, Dept. of Community
and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

RECEIVED

FEB 15 1994

DIVISION OF ENERGY/DCRA

Dear Mr. Hensley:

I am writing to express my strong OPPOSITION to the proposed Sutton to Glennallen Intertie. I urge you to cut this from the budget. I offer the following concerns and arguments to support my opposition:

- 1) There is strong local opposition to this project as well as opposition by numerous outdoor groups.
- 2) The project would mar the beauty of the Glenn Highway-Talkeetna Mountain corridor, a major gateway for tourists in and out of our state.
- 3) Also impacted would be the quality of life, and in some cases, the economic base of the local residents who depend on unspoiled wilderness and wildlife for their livelihood.
- 4) The environmental impact of associated road construction has not been adequately addressed.
- 5) The huge cost cannot be justified with the budget short-falls the state is facing.
- 6) Alternatives such as a hydro project at Allison Lake, self-generation by Petro Star, co-generation from gases at Alyeska, or use of more efficient generators have to be more seriously evaluated.
- 7) The feasibility seems to depend on a huge increase in demand from Petro Star, which may not be realistic.

In summary, I urge you to REJECT the Sutton-to-Glennallen Intertie. Thank you for your consideration on this issue.

Sincerely,

William M Cox M.D.

William M. Cox M.D.

NOV. 6, '93

To: Edgar Blatchford

DEAR SIR, I, AS A RESIDENT OF THE
TALKEETNA AREA & USER OF THE TALKEETNA
MOUNTAIN RANGE FIND THE PROPOSED
POWER LINE PROJECT FROM SUTTON TO
GLEW ALLEN TO BE A TOTAL WASTE OF OUR
PRISTINE MTL. RANGE, AND SHOULD, COULD
& WILL BE BETTER SUITED TO GO A DIFFERENT
WAY-

PERHAPS A BURIED CABLE - ALONGSIDE
THE HIGHWAY. IT WOULD TAKE JUST AS
LONG, NOT BE AS EXPENSIVE PLUS
SAVE OUR NATURAL WILDLIFE AREA.

NOT TO MENTION DO SOME GOOD
FOR NECESSARY HIGHWAY IMPROVEMENTS
WHICH ARE DESPERATELY NEEDED AS WELL
AS PUT MORE RESIDENTS TO WORK.

RECEIVED

NOV 12 1993

COMMISSIONER OF
COMMUNITY & REGIONAL AFFAIRS

THANKS

Tom Busby
P.O. Box 522

TALKEETNA, ALASKA

99676

MICHAEL KOEHMSTEDT
PO BOX 1238
CHICKALDON, AK 99674

DCRA COMMISSIONER
EDGAR BLATCHFORD
P.O. BOX 112100
JUNEAU, ALASKA 99811-2100

RECEIVED

JAN 11 1994

DIVISION OF ENERGY/DCRA

I AM WRITING TO VOICE MY OPPOSITION TO
THE PROPOSED POWER LINE INTER-TIE THAT WILL RUN
THROUGH THE MATANUSKA VALLEY.

ALASKA IS THE ONLY STATE IN THE UNION THAT
STILL HAS HONEST-TO-GOODNESS WILDERNESS. EVEN
THOUGH THE MATANUSKA VALLEY HAS A HIGHWAY AND
SOME MINOR DEVELOPMENT IT IS STILL ON THE EDGE
OF VAST AMOUNTS OF WILD COUNTRY.

I FEEL THAT THIS POWER LINE WILL SEVERELY
DEGRADE THE VALLEY THAT I CALL HOME. I LIVE HERE
BECAUSE OF THE QUALITY OF LIFE AND THE BEAUTIFUL
SURROUNDINGS. BUT MOST OF ALL I LIVE HERE BECAUSE
IT DOESN'T RESEMBLE ANYWHERE I'VE BEEN IN THE
LOWER 48. IT IS A WILD LAND THAT I'VE ALWAYS
TREASURED. THE POWER LINE WILL BE A MAJOR
STEP IN TURNING THE MATANUSKA VALLEY INTO
JUST ANOTHER PLACE. IF YOU'VE EVER SPENT ANY
TIME AT ALL HERE YOU KNOW IT'S NOT JUST
ANOTHER PLACE. IT IS A MOST MAGNIFICENT,
MAJESTIC VALLEY.

PLEASE DO WHAT YOU CAN TO HELP FIND ANOTHER
ALTERNATIVE FOR THE PEOPLE OF THE COPPER RIVER
VALLEY TO GET THEIR ELECTRICITY. SAVE THE
~~MATANUSKA VALLEY~~ FROM A MOST TERRIBLE FATE

NOV 12 1993

THANK YOU
SINCERELY
Michael Koehmstedt

GERALD R. BROOKMAN
715 MUIR AVENUE
KENAI, ALASKA 99611

February 17, 1994

RECEIVED

FEB 18 1994

DIVISION OF ENERGY/DCRA

Dear Mr. Hensley:

I am writing to you at this time concerning the proposed Sutton to Glennallen power line Intertie project.

I believe that at a time of fiscal uncertainty and the very real need to reduce state spending, this project is unnecessary and irresponsible. The environmental effects of this project are also very real, and would argue against it's construction even if the money involved was not any problem. From any standpoint, it is a loser, and should not be built, in my opinion.

I strongly urge your decision AGAINST this proposed project.

Sincerely,

A handwritten signature in cursive script that reads "Gerald R. Brookman". The signature is written in dark ink and includes a long horizontal flourish extending to the right.

RECEIVED

FEB 18 1994

DIVISION OF ENERGY/DCRA

1540 South Chugach
Palmer Alaska 99645
February 15, 1994

Herb Hensley, Director
Division of Energy
Dept. of Community and Regional Affairs
333 West 4th Avenue, Suite 220
Anchorage AK 99501-2341

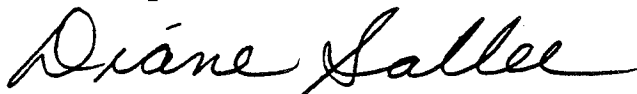
Dear Mr. Hensley:

This letter concerns the proposed Sutton to Glennallen Intertie.

As a resident of the Mat-Su Valley, I frequently drive up the Glenn Highway for recreation in the Talkeetna Mountains. The fortress-like mountain walls, the rapid-filled Matanuska River, the frozen blue glaciers, and the relatively undisturbed wilderness make this an ideal area for recreation and sightseeing. Construction of an Intertie along the Glenn Highway or in the Talkeetna Mountains would spoil this scenic byway.

I urge you find an alternative to the Intertie that will have no negative impact on the environment.

Sincerely,



Diane Sallee

HC60 Box 306T
Copper Center, AK 99573
February 15, 1994

Richard Emerman, Economist
Division of Energy
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501

RECEIVED

FEB 17 1994

Re: Copper Valley Intertie Feasibility Study - Draft Report

DIVISION OF ENERGY/DCRA

Dear Mr. Emerman:

First of all, I want to thank you for a well-run meeting in Glennallen. Following are my comments on the draft report:

- 1) The report does not indicate what CVEA customer rates might be after construction of the intertie. A CVEA representative present at the Glennallen meeting stated that CVEA had not even begun to calculate projected rates. Most people who commented in favor of the intertie at earlier stages listed reduced or stabilized rates as their main reasons for supporting the intertie, but this report does not give those people the information they need to evaluate the project.
- 2) The report does not adequately discuss factors that could work against rate stabilization if the intertie is built. One of these is the lack of a firm, long-term commitment from Petro Star. Another is the possibility that the price of Beluga power could rise.
- 3) Despite the great length of the report, very little space is given to intertie alternatives. The reader is not given enough information to evaluate factors other than cost that might make these projects more or less attractive.
- 4) Discussion of the conservation alternative is limited to technology. Habits, such as the simple act of turning off a light switch, are not discussed. Furthermore, even the technology discussion may have missed some important points. Heat tapes, and ways to reduce reliance on them, are not mentioned, yet they are commonly used in the Copper River Basin to keep wells and pipes from freezing. Did R. W. Beck survey any of the homes with high electric bills to find out why those bills were high? The report should have, but did not, discuss what services CVEA could provide to help customers identify the reasons for high energy use. Conservation will not lower energy rates, but it will lower energy bills, and that is what matters to most CVEA customers.
- 5) Opportunity costs are not discussed. It appears that the State would be foregoing average interest of \$1.5 million per year for fifty years on its \$35 million/year intertie loan. If that loan were not made, what other things could the State spend \$1.5 million for in Valdez and the Copper River Basin? More state troopers? Fire trucks? Emergency medical response vehicles? Small business loans?

The draft report, despite its great length, is inadequate and does not convince me that the intertie is a good investment for the State of Alaska or for CVEA customers.

Sincerely,



Ruth McHenry

ALASKA SURVIVAL

Box 320 Talkeetna, Alaska 99676 (907) 733-~~1448~~²¹⁷⁷ or ~~733-1448~~²⁶³⁻⁸⁷³⁹

2/13/94

RECEIVED

FEB 17 1994

DIVISION OF ENERGY/DCRA

To Herb Hensley, Acting Director
Division of Energy

This regards the Sutton to Glenallen
Intertie Draft Feasibility Study.

1. The estimated cost of construction is grossly underestimated.
2. The impacts of road construction and creating access corridors have not been evaluated.
3. It would negatively impact the environment, quality of life, hunting, fishing & recreational economies.
4. It is bad public policy to subsidize private business especially in our current budgetary crisis in the state. The Petro Star oil refinery in Valdez wants the subsidized electricity.
5. Current demand for the 8000-9000 residents is being met adequately now.
6. There are better alternatives to an intertie such as new efficient generators. Self-generation by Petro Star & co-generation from Alyeska terminal need to be studied.
7. Once an intertie is built, it changes the area forever.

Becky Long

Feb. 8, 1994
P. O. Box 2176
Palmer, Alaska

Edgar Blatchford
Commissioner
Dept. Community and Regional Affairs
Juneau, Alaska

RECEIVED

FEB 14 1994

Dear Mr. Commissioner,

DIVISION OF ENERGY/DCRA

Please consider my opposition to the proposed electrical intertie between the Copper Valley and the Matanuska Valley.

I am opposed to the project as proposed for two reasons:

First, the towers and overhead cables will be ugly as hell in a beautiful valley. Let's not impose that aesthetic cost on the Matanuska Valley residents to benefit folks in Glennallen.

Secondly, the intertie costs us more than its worth. For the cost of the intertie, estimated at \$46 million, you could buy a \$15,000 generator for each of the 3,000 current CVEA rate payers. Seen another way, the interest on that capital money could subsidize \$1,200 of the average rate payer's share of CVEA's annual operating expenses. The CVEA area users would get more electricity, and the rest of us would be saved the trouble of the powerlines.

This state cannot afford to continue subsidizing users who live in remote areas and then ask others to pay for the difference in costs attributable to their remoteness.

Perhaps the \$35 million loan to AIEDA could be rescinded by the legislature to help close this year's fiscal gap.

Thank you,


Mike Bronson

cc: Rep. Larson

RECEIVED

FEB 18 1994

DIVISION OF ENERGY/DCRA

Richard E. Harris, Director
Division of Energy
Dept. of Community & Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Feb. 16, 1994

re: proposed Sutton to Glennallen Intertie

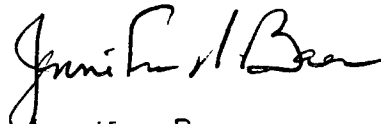
Dear Mr. Harris,

The grid system of supplying electricity to customers is not a feasible plan for Alaska's varied terrain and vast area. I feel that each area of our state, such as Copper Valley, should generate electricity for themselves, for safety and reliability factors. If Bradley Lake hydro, Healy's coal and Beluga's natural gas plants were all controlled by one switch, what would the impact be if that switch was in the hands of terrorists or a radical political party?

Petro Star Refinery - finagled a way of piping their waste into the City of Valdez. Now, Copper Valley Electric, because of the assumed need of power that Petro Star will require, is requesting state dollars to build an Intertie, to tie in with the south-central power grid. I ask, why should the State of Alaska spend between 45.9 million to 70 million dollars to provide for Petro Star Refinery? What will happen to Petro Star when oil no longer flows through the pipeline? That scenerio could happen as soon as the year 2013.

My suggestion is that CVE more fully explore the Allison Lake project, which would tunnel water from Allison Lake to the current hydroelectric plant of Solomon Gulch. The economic impact on Valdez would be positive and the environmental impact minimal. Minimal, in comparison with the environmental impact an Intertie would have on the scenic Glenn Highway.


Sincerely,



Jennifer Baer
P. O. Box 245
Sutton, Alaska 99674

2604 Fairbanks St
Anch AK 99503

2-15-94

A Sunny Day
A Solar one


Robert HARRISS Director
Division of Energy

Hello Robert,

I am a resident of the Sheep Mtn.,
Matanuska valley area of the Glenn Highway,
and wish to comment on the proposed
Copper Valley Intertie.

To begin my comment, I feel the
need to say that I am proud to be
a resident of the state of Alaska, proud
to contribute to the economy of a state
that is not bankrupt (yet) or in serious

②

economic chaos, and proud to know that I have the opportunity to co-create a future that is more self-sustaining, less polluting, and more likely to support a healthy life for future Alaskans!

Logically thinking, when one considers the dollars and cents, the needs of CUEA, and the "non-future" thinking on behalf of the management of CUEA for the past 30-40 years, the Intertie is a grand idea. In many ways, the Intertie may solve CUEA's ^{current} dilemma of ancient, dinosaur age machinery, high fuel costs, and an aging distribution network.

③ At least that is what we, the taxpayers, the people who make Alaska work, are led to believe.

Personally, I choose to not make today's decisions on information gathered in the past. "Inertie" thinking is past thinking as it utilizes no significant advances towards the use of non-polluting, no CO₂ producing, no atmospheric warming, and no use of the SUN as a source of energy.

I have been using the sun as a source of electricity for 10 years at Sheep Mtn. It is Feb 15th, my batteries are totally charged, I have not used a generator in 13 months, and I have only used my back-up

④ generator. 4 times during the last 4 years.

Solar works! This weekend I will be meeting with the inventor of a solar concentrator device that increases power production up to 10x at 1/2 the price per kilowatt. Amazing, yet true!

For this reason, I do not accept your feasibility study for anything more than the "feasibility of installing an intertie between Sutton + Glennallen at the proposed price", that can be done... at probably 2x the budget.

* What needs to happen now is that you guys make a wise investment. This time, invest the same amount of \$\$\$ and investigate the feasibility of using a combi-

⑤ nation of Solar, Wind, Hydro, and Hydrogen + Heat storage as a system that acceptably may cost more initially, and will provide far greater long range benefits, with expansion capabilities that are unlimited!

I encourage the Alaska Department of Energy to move beyond Oil + Natural Gas (+ Bradley Lake as a merit) for resource basing. We have abundant sunshine (sites could easily be sourced), wind (sites have been sourced), hydro, geothermal, and tidal. The state

⑥ ot Alaska is primed for becoming a leader in the Energy Field (mostly because we are not bankrupt as is Calif. and many other states). The "natural forces" energy systems work as well in Ak as they do elsewhere - we need to use them.

So, I insist you to conduct a feasibility study as to the possibility of so-called "alternatives" to the Interstate.

It's time Alaska emerge as an energy leader. -- not another follower.

Blessings.

P.S. I will call to arrange a meeting Tom Lee next week (TL) p.p.o. these views support my own.
Petricia Lee

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

To Whom This Concerns:

I am writing to ask you to deny the intertie construction between Sutton & Glennallen. Such an intertie would ruin the integrity of the Talkeetna mts. forever.

Please find a better way to help the Copper Valley residents. It is my understanding that the Petrostar load estimates are too high, also, that the cost estimate of the intertie may be too low anyhow.

In any regard I am not comfortable seeing the bulldozer blade moving through these mountains. There must be a better way.

Thanks for your consideration.

Sincerely,

E. Lengerich
Tim Lengerich

P.O. BOX 4037

PALMER, AK 99645

PH. 746-4037

February 16, 1994

RECEIVED

FEB 23 1994

re: CVE Intertie Feasibility Study

DIVISION OF ENERGY/DCRA

Dear MR. NARRIS

We are opposed to the Sutton to Glennallen Intertie because of environmental and quality of life issues. Now, however, it has become clear that in spite of a mighty effort by C.V.E.A. and R.W. Beck to make it so, the intertie is simply not economically feasible. In the most likely growth scenarios, other options are cheaper. Only in the most fanciful growth scenarios does the intertie become feasible.

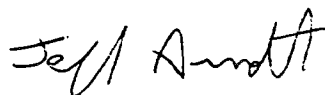
The above is true before even considering what was left out of the feasibility study:

1. An environmental impact statement.
2. Cost of litigation that is certain to come.
3. Ludicrous underpricing of various aspects of the project, as if it could be built for less than half the dollars per mile than the Bradley Lake Transmission Line, a comparable project.
4. No examination if any venture capitalists would back the proposed bonds or any inquiry into if sellable. The State could easily end up funding these undesirable bonds.

The last point illustrates the nature of the intertie proposal. Although the issue is being cast as one where a small selfish group of people along the Glenn Highway are opposing the Intertie, the truth is people know it is economically unfeasible and simply amounts to corporate welfare for one company, Petro Star Refinery. Petro Star refines oil into jet fuel - let them generate their own power. And look at the trouble that one of its partners, Neil Bergt, has already caused this state.

In his State of the State address, Governor Hickel challenged the legislators to find ways to cut the budget. We say cancel the Intertie, and spend those dollars on the existing infrastructure that are sorely in need of maintenance.

Sincerely yours,


Jeff Arndt


Mary Barrett

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

831 Jay Circle
Anchorage, AK 99504
February 18, 1994

Herb Hensley
Division of Energy,
Department of Community and Regional Affairs
333 W Forth Ave
Suite 220
Anchorage, AK 99501

Dear Mr. Hensley:

My husband, Michael Burwell, and I are strongly opposed to the construction of the Sutton-Glennallen intertie because of the destruction of pristine and valuable wilderness, because of the extraordinary cost of the project at a time of budget crisis in this state, and because alternative methods of providing energy to the Glennallen area are much more justifiable. Please contribute your energies to a reconsideration of this project.

Sincerely,



Sally J. Carricaburu

HC60 Box 306T
Copper Center, AK 99573
February 17, 1994

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FEB 23 1994

DIVISION OF ENERGY/DCRA

Richard Emerman
Division of Energy, DCRA
333 West 4th Avenue, Suite 220
Anchorage, AK 99501

Dear Mr. Emerman:

While stabilizing electric rates and providing extra power for future progress in the Copper River basin are creditable goals, CVEA's proposed Sutton-Glennallen Intertie falls short of the task. As currently designed, the intertie is a "conditionally feasible", intermediate power conveyance with a weak link at either end: the fragile 115 kV MEA system to the West and the avalanche-prone Glennallen-Valdez tie line to the South. Both will require considerable reinforcing and safeguarding to transfer the increased power loads anticipated. Paradoxically, instead of greater reliability from the proposed Intertie, CVEA will probably experience less dependability due to total or partial blackouts resulting from vagaries inherent in the Railbelt utilities and MEA systems. To build this intertie right (i.e., constructing the line with 230 kV conductors and larger transformers for an eventual link-up with Delta Junction-Fairbanks, thus 2-way transmission with the Railbelt Intertie) would be the ideal situation. However, this project would entail substantially more capital and planning based on crucial need and demonstrable demand, neither of which exist at this time.

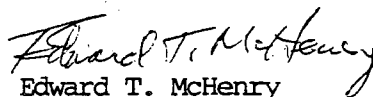
Perhaps the most regrettable aspect of the proposed intertie is that crucial need and demonstrable demand are lacking. Although CVEA argues that Petro Star's planned accelerated load demand to 5.5 MW by 2004 is justification enough to warrant building the intertie, Valdez district's 14.6 MW winter peak generating capacity now appears to be more than adequate to meet its potential medium-low growth electrical demand throughout the 20-year study period. Also, Petro Star evidently is not concerned about sufficient electricity availability from CVEA for production expansion. The refinery has the capability to co-generate its own power from waste heat and gases, but has no plans to. Or it could possibly tie in with Alyeska Pipeline Service Company's terminus power supply via a short transmission line. The fact that Petro Star's electrical contract with CVEA expires in 1998, which coincides with the end of its most rapid expansion period, suggests that they may be operating on short term only. The distinct possibility that both Alyeska and Petro Star may be gone after 2013 if the oil pipeline runs dry, should further caution CVEA against indebting itself (us!) \$60+ million for 50 years. Building the proposed Intertie on the basis that one oil industry subsidiary might stick around is not only tenuous but ludicrous!

If CVEA deems that additional power generation is imperative prior to the TAGS project start-up in 2005, it should pursue the 27.3 MW Allison Lake-Solomon Gulch hydroelectric option. This project is the lowest cost alternative for the medium-low load growth scenario, would be operational only a year or so later than the proposed Intertie, and would avoid the myriad electrical (outages, voltage and frequency fluctuations), social, economic, and environmental consequences of constructing and operating the Intertie. Strengthening the Glennallen-Valdez tie-line and/or purchasing a new 2.2 MW diesel generator for the Glennallen

distribution segment would "complete the circuit" and supply CVEA with adequate, relatively cheap, trouble-free power for the foreseeable future.

In summary, I believe CVEA would be making a colossal error in judgement by selecting the Sutton-Glennallen Intertie option. Not only would it be too expensive in the final analysis and troublesome in all respects, but there is no compelling reason (demand) to build it. The wiser choice, I think, would be to construct the Allison Lake hydropower project to accomplish the objectives of stabilizing electric rates and providing extra energy for future development. This would allow CVEA to remain separate from the attendant power distribution ills of the Railbelt utilities and MEA system, and thus retain its electrical integrity. When, and if, the TAGS mega-project is completed by 2009, there should be an abundant supply of natural gas to generate all the electrical energy that CVEA could ever use, and more. Maybe by then there will be a demonstrable demand for an intertie to the Railbelt from both ends, and sufficient capital to build it right the first time. Neither CVEA nor the State of Alaska can afford a costly boondoggle Intertie at this budget-crunching juncture.

Sincerely,


Edward T. McHenry

Mr. Robert Harris,

February 19, 1994

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

The draft report for the Copper Valley Intertie is out. As a big game guide dependent on tourist dollars, and a resident of Chickaloon, I'm not satisfied with R.W. Beck And Associates' conclusions. The intertie cost analysis makes many assumptions which reports of this nature must, the question is, are they accurate? We residents of Chickaloon and Sutton have reason to believe they aren't.

The report gives short thrift to the alternatives which appear to be mere straw men.

The helicopter dependent construction costs are estimated to be only half what the Bradley Lake helicopter dependent costs were "without" adding in clearing costs.

Right of way acquisition costs are clearly underestimated since the original Athabascan hunter-gatherer land owners are adamantly against the project.

Of the six scenarios looked at in the report only one - the intertie - affects the upper Matanuska valley. The other five impact only the Copper valley where the power would be used. This is an important factor not adequately addressed in the report.

Interestingly, the effects of promoting conservation through energy efficiency were only applied to their present power generation system. Conservation measures "weren't" applied to the others. This is significant when the report can only show clear intertie superiority for high electrical loads. These high loads also depend on a huge increase in electrical needs by the Petro Star Refinery in Valdez. Petro Star could, and quite possibly will, produce their own power cheaper just as Alyeska already does at the Valdez Terminal.

The intertie doesn't promise lower electrical rates for Copper Valley customers, and it also doesn't promise that MEAs' customer rates wouldn't end up higher because of it.

There is, however, one promise. If the intertie is boondoggled through, the upper Matanuska valley / Chickaloon Pass highlands will be visually and culturally compromised for our lifetimes.

Sincerely,

Karl Braundel
Norma D. Braundel

P.O. Box 1148
Chickaloon, Alaska 99674

Mrs. Robert Harris,

Feb 19, 1994

It was the conclusion of R.W. Beck and Associates that since Quality-of-Life cannot be quantified in dollars, it therefore has no real, intrinsic value.

I believe this value must be addressed, and very soon, before any more wild and beautiful places are lost or compromised in the name of "progress" at any cost.

In this case, the rewards of such progress are at best questionable, while the loss to our valley is great and permanent.

Please don't let Upper Matanuska Valley become one of the "lost" places; and oppose the Intertie.

Sincerely

Donna Braendel

Warren Keogh
P.O. Box 1166
Chickaloon, AK 99674

February 17, 1994

RECEIVED

FEB 23 1994

Edgar Blatchford, Commissioner
Department of Community and Regional Affairs
P.O. Box 112100
Juneau, AK 99811

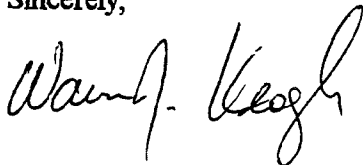
DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

Enclosed please find a copy of testimony I recently gave at a public hearing in Chickaloon, Alaska, regarding the draft economic feasibility study of the proposed electric intertie project through the Matanuska Valley. I write you to voice my views on the feasibility study and the proposed project. My purpose in writing is also to make you aware of the strong and growing opposition to this intertie project by citizens in the communities of Sutton, Chickaloon, and Glacier View. Listening to the several hours of testimony against the intertie in the recent hearings, recorded by the Division of Energy, might give you a good indication of the breadth and depth of opposition by local rural residents. There are alternatives to this proposed project that are more sound economically and that are less disruptive socially and environmentally.

Thanks very much for your attention.

Sincerely,



Warren Keogh

cc: Herv Hensley, Director, Division of Energy

P.O. Box 1166
Chickaloon, AK 99674
February 11, 1993

Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Subject: Formal Public Testimony in Chickaloon, Alaska. February 11, 1994.

Proposed Electrical Intertie through the Matanuska Valley

I am Warren Keogh, a resident and landowner in Chickaloon. I am speaking for myself and my family and I do not represent any organization. Due to difficulties obtaining a copy of the full report and without an opportunity to read it, my comments are based on the executive summary only.

I have attended previous public scoping meetings in Chickaloon or Sutton regarding the proposed Matanuska Valley Intertie. During the most recent meeting held in Chickaloon (June 2, 1993) I tried to express my feelings and concerns regarding the negative impacts of the possible construction of an intertie through this valley and through this community. Those concerns are ones of what this draft report would term "quality of life" and environmental concerns. Under the "Environmental Review" section of the report, the concluding paragraph on page I-9 states, "Potential effects on the community can be difficult to measure", and "Quality of life issues are based on subjective criteria and are hard to quantify."

It has been my impression that when I or others have raised these "quality of life" issues in meetings conducted by the State, little weight is given these concerns. Either they

are not understood or they are discounted because they are not quantifiable. There are two reasons why. The first is, as the report accurately states, that it is not easy monetarily to quantify subjective values. The second is that not one of the active proponents or evaluators of this project reside here. Thus it is difficult if not impossible for them to appreciate the magnitude of positive subjective values many Chickaloon people give to this place, as well as the magnitude of negative subjective values people ascribe to impacts of intertie construction. You cannot reside in Valdez, Glennallen, or Anchorage and really know this place and know the people who live here. Your absence does not allow you to respect, to know, and to care for this place with the same feeling that I and others do. Not only do you value it less, you devalue this valley and this community with this lack of respect. Some of you have behaved ignorantly and arrogantly by assuming that people here are weak, acquiescent, and uninformed. You assume this land has greater worth with a powerline than without it. You view this part of the Matanuska Valley as just another place on the map that the intertie will be routed through. I view Chickaloon as my home. It is a place I care for greatly, and a place where I assume the intertie will not be.

Regarding the Feasibility Study. Those funding this economic feasibility study and those conducting the study have arrived at inaccurately low cost estimates. This study is flawed in four ways. First, it appears the untoward effects intertie construction would have on land-use value, recreation value, aesthetic value and land value are considered but not entered into cost estimations because they are difficult to quantify. Since they are not easily quantifiable they are omitted from the cost estimation. This omission renders the analysis incomplete. The economic analysis methodology is inadequate, inappropriate, and may indeed be invalid.

Second, if one does assume this questionable methodology has validity, one finds omissions here that create underestimated intertie costs. An example of such omissions occurred with a powerline project in Minnesota in the late 1970s.* There, initial cost estimates were inaccurate because of inept planning and because there was a failure to perceive the extent of local opposition to powerline construction. Initial cost projection for the Minnesota energy project was \$537 million. Unanticipated expenses added \$703 million to the cost of the project, more than doubling the expected costs to over \$1.2

billion. Among other omissions, the cost analysis for "Preferred Route Alternate D" does not account for costs secondary to protracted legal action, acts of civil disobedience, acts of vandalism, and acts of sabotage. Such actions could occur and would certainly result in significant cost overruns for transmission line construction, engineering services, ROW acquisitions and permitting, construction management, owner costs, and contingency costs.

Third, projected energy requirements for CVEA customer Petro Star are highly suspect. Energy projections are based on corporation statements alone. It is my understanding that the owner of one of the two corporations controlling the Petro Star Refinery has a history of bankruptcy and insolvency. If such is the case, how much weight should be given to future projections of a previously bankrupt and potentially bankrupt owner? The credibility of speculative corporate statements is extremely questionable. These estimates of energy requirements may be inflated and certainly are tenuous.

Finally, the "Intertie" power supply scenario in Table I-5 on page I-15 of the executive summary is optimistically low. Expected maintenance, operation, and management costs due to acts of vandalism and sabotage are likely greater than CVEA expects and this report predicts. Again, the powerline through rural Minnesota is illustrative; post-construction operations and maintenance were high due to ongoing actions by angry rural citizens. Rates of load growth and fuel price escalation are only part of the equation for the "Intertie Scenario" depicted in the table representing "Cumulative Present Value of Comparable System Costs".

Thus, the draft report of the proposed intertie through the Matanuska Valley is flawed to the extent that it is unacceptable. The methodology used is inappropriate, the cost estimate for the development of the intertie is seriously underestimated, projected energy demands by Petro Star Refinery are highly suspect, the feasibility level environmental analysis is inadequate, and the costs for the proposed intertie compared to other resource alternatives is inaccurately low. When cost estimates for the intertie through the Matanuska Valley are adjusted upward to reflect a more accurate figure, other energy scenarios become significantly more feasible and economically superior. This study inaccurately describes the economic plausibility of the proposed intertie. This ill-conceived

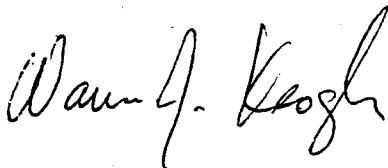
and improbable project, with its flawed economic feasibility study, is a disservice to the citizens of Alaska.

The state government is presently faced with a budget crisis and a deficit approaching one billion dollars. Moving forward with this proposed intertie project would glaringly typify the kind of economic irresponsibility and misappropriation of state revenues that leads to these kinds of Alaskan fiscal dilemmas. The proposed Northeast Intertie of 1989 was not feasible and was scrapped.** This misconceived project has surfaced again and should now have the same fate it had five years ago. Though not accurately reflected by this feasibility study, the current proposed intertie through the Matanuska Valley is economically unsound and should be terminated as soon as possible so the other Copper Valley energy options of real viability may be seriously considered.

*Barry M. Casper and Paul David Wellstone. 1981. *Powerline: The First Battle of America's Energy War*. Amherst: University of Massachusetts Press.

**Power Engineers Incorporated and Hart-Crowser Incorporated. 1989. *Railbelt Intertie Reconnaissance Study, Volume 8A and 8B, Northeast Transmission Intertie Project*. Anchorage, Alaska: Alaska Power Authority.

Sincerely,



Warren J. Keogh

cc: Chickaloon Community Council
Alpine Community Council
Glacier View Community Council
Assemblywoman Mary Geist

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FEB 23 1994

DIVISION OF ENERGY/UCRA

February 20, 1994

Herb Hensley, Acting Director
Div. of Energy, Dept. of Community & Regional Affairs
333 W. 4th Ave., Suite 220
Anchorage, AK 99501-2341

Dear Mr. Hensley,

I am writing to state my disapproval of the Sutton to Glennallen Intertie. I do not think the time is right for this expenditure and it is a very large expenditure. Why are we doing this with our current budget deficit? Who stands to benefit (in our lifetime)? I understand that Copper Valley Electric will be getting a \$35 million, interest-free, 50 year loan and Petro Star Refinery will be the principle user of the electricity. Do these businesses need subsidizing that badly?

Being an outdoor recreationist and environmentalist, I personally find the scenic and wildlife habitat values along the proposed route more valuable than the business subsidy, but even without those considerations, the project looks like pure pork.

Sincerely,

Christine Maack

Christine Maack
3522 Alexander Ave.
Anchorage, AK 99508

Herv Hensley, Acting Director,
Division of Energy, Dept. of Community and Regional Affairs
333 W 4th Ave., Suite 220
Anchorage, AK 99501

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FEB 23 1994

Re: Response to call for public comments on the Sutton to Glenallen Intertie feasibility study

DIVISION OF ENERGY/DCRA

Mr. Hensley,

The draft feasibility study for the Sutton to Glenallen Intertie hardly makes the \$35 million dollar state loan to construct this project look like a good investment. I urge you to reject the feasibility study as unsatisfactory and allow the \$35 million appropriation from the 1993 legislature to return to the state's general fund, where the money can be better spent on essential services for the people of this state, or returned to the constitutional reserve fund where it should have been placed initially.

The R. W. Beck and Associates study seemed to be tailored to one industrial consumer, Petro Star Refinery. If I were a CVEA electric consumer, I would be very concerned about the future of my rates being so dependent on the load growth of one commercial consumer. Even with the sweet deal of a 50-year, zero percent interest loan of \$35 million, if the Petro Star refinery does not increase its electric demand substantially, someone else will be left to repay this and any other debt incurred from this bloated capital project.

If Petro Star truly needs a large amount of electricity, they should be required to sign a "take-or-pay" contract with DCRA for the amount of the electricity they claim to need. The feasibility study should describe how Petro Star will stay in business until 2047 given the decreased flow in the Trans-Alaska Pipeline. The study should also address how much energy could be produced by co-generation using gases vented from the Alyeska terminal in Valdez.

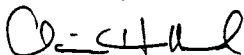
The estimated costs in the feasibility study also seem to be unrealistically low. In the preferred intertie route, the estimated cost per mile is \$254,000. In comparison, the Bradley Lake intertie cost \$505,000 per mile. I have watched both small and large capital projects grow way beyond their initial cost estimates many times. It seems that the bigger the project, the larger the margin for error in these initial estimates.

There are realistic alternatives. Petro Star could generate some or all of its own power. The Allison Lake hydro project could be chosen instead of the intertie. The diesel generators currently being used could be upgraded.

In light of the many questions unanswered by the draft feasibility study and most importantly, the need for us to reign in some of the excessive spending of the 1993 legislature, this project should not proceed any further. Please make your official finding that the study is unsatisfactory and the project is unfeasible.

Thank you for your time and consideration of my comments.

Sincerely,



Claire Holland
Star Route, Box 3800-B
Kodiak, Alaska 99615

cc: Governor Walter Hickel,
Senator Fred Zharoff
Representative Cliff Davidson

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FEB 23 1994

DIVISION OF ENERGY/DCHA

Katherine Wright
H.C.O.3 Box 8496
Via: Palmer, AK 99645

I live at Sheep Mountain and I am a Copper Valley Electric Assoc. co-op member. I am totally opposed to the Sutton to Glennallen intertie.

The feasibility study has shown that the intertie is too costly for our needs. The electrical load increase of C.V.E.A. in the last 10 years is minimal and does not warrant a project and debt of this size for our modest co-op, especially with the Aleaska Pipeline winding down.

Petro Star's claim for increased electric load for the future is ridiculous and can not be substantiated. They should be made to do a "take or pay guarantee" with C.V.E.A. and the state.

The reason that most C.V.E.A. co-op members are in support of this project is because general manager Clayton Hurlus told us this project would lower our rates and was the only solution to our problem. He convinced most members and now both claims are inaccurate.

I support the Alison Lake Project. It is alot less money and would support local economy and be sustainable energy. Then, the residents of the Glenn Highway would not be forced to ruin their main economic base, which is tourism. Our scenic resource is not to be dismissed as expendable. We have no guarantee from Mr. Hurless it will not go along the highway and, with the action he displayed with us over lower rates , he has shown he will say what he will to get his way.

Katherine Wright

Katherine Wright 2-17-94

*Give to the Public Comment portion of the Draft
Feasibility Study*

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

Thomas Wright
H.C.O.3 Box 8496
Via: Palmer, AK 99645

21 Feb. '94

I am a Copper Valley Electric Assc. co-op member. I am totally opposed to the Sutton to Glennallen intertie.

The feasibility study has shown that the intertie is too costly for our needs. The electrical load increase of C.V.E.A. in the last 10 years is minimal and does not warrant a project and debt of this size for our modest co-op, especially with the Alaska Pipeline winding down.

Petro Star's claim for increased electric load for the future is ridiculous and can not be substantiated. They should be made to do a "take or pay guarantee" with C.V.E.A. and the state.

The reason that most C.V.E.A. co-op members are in support of this project is because general manager Clayton Hurlus told us this project would lower our rates and was the only solution to our problem. He convinced most members and now both claims are inaccurate.

I support the Allison Lake Project. It is alot less money and would support local economy and be sustainable energy. Then, the residents of the Glenn Highway would not be forced to ruin their main economic base, which is tourism. Our scenic resource is not to be dismissed as expendable. We have no guarantee from Mr. Hurless it will not go along the highway and, with the action he displayed with us over lower rates , he has shown he will say what he will to get his way.

Come on folks! We're not all ignorant out here, no matter what Mr. Hurless may think. Common sense tells us that, since the state is so strapped for money right now, the intertie is going right down the highway!! Surely, with the arsenal at your disposal, you can afford to shoot straight without first laying down a smoke screen.

Thomas Wright

Thomas H. Wright

18 February 1994

RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

Herb Hensley
Acting Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Re: Sutton to Glennallen Intertie

Dear Mr. Hensley,


I am strongly opposed to construction of the Sutton to Glennallen Intertie and urge you to cancel the project and save \$60 million, which can be used to balance the existing budget shortfall, and the more than \$76 million in interest giveaway to Copper Valley Electric Association. The intertie is strongly opposed by local residents, conservationists, Native peoples, local businesses and Chambers of Commerce, and local governments. It shouldn't be difficult to cancel this project as there really seems to be little support.

And the conflicts it would produce are tremendous. The Glenn Highway is one of the most picturesque in the world. The intertie would take that view away, as well as interrupt wildlife and migratory bird life.

But most of all, the intertie is a waste of money and is not needed. From previous cost estimates on other energy projects, it is safe to conclude that the cost will exceed the current \$60 million price tag. The state will lose \$76 million in forgone interest. And the only beneficiary seems to be a proposed Petro Star refinery. What evaluation has taken place on alternatives to the intertie to support the refinery? Have you analyzed an Allison lake hydro possibility, or some kind of oil or gas generators? These seem to me, on the surface, to be much more cost-effective and would take away all the intertie conflicts.

Thank you for the opportunity to comment.

Sincerely,



Jim Stratton
12821 Mountain Place
Anchorage, AK 99516

cc: Governor Hickel, Senator Steve Rieger, Rep. Con Bunde

Ronald H. Dailey
7841 Port Orford Drive
Anchorage, AK 99516-1022
(907) 563-3066 (Day)
(907) 346-3737 (Evenings)

February 11, 1994

Mr. Richard Emerman
Senior Economist
DIVISION OF ENERGY, DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS
333 West Fourth Avenue
Anchorage, AK 99501

RE: ~~Sutton-to-Glennallen Electric Intertie~~

Dear Mr. Emerman:

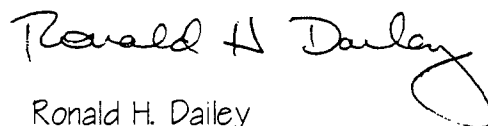
Copper Valley Electric Association is studying the concept of an Electric Intertie between Sutton and Glennallen. Since I own a cabin near Chickaloon, I am concerned that such an Intertie would effect the area around my cabin.

I reviewed the preliminary report prepared by R.W. Beck & Associates. Their estimates of future power needs vary greatly. In short, this wide variation indicates that future power needs are uncertain.

When one considers the costs and benefits of this Intertie, it is clearly a bad idea. We should not build this Intertie to satisfy UNCERTAIN future needs, while we are CERTAIN of the loss of scenic beauty and other costs.

Thank you for your consideration.

Sincerely,


Ronald H. Dailey

Art Eash
P.O. Box 240801
Anchorage, Ak 99524
907 261-2233

February 11, 1994

Mr Richard Emerman
Senior Economist
Division of Energy, DCRA
333 West Fourth Avenue
Anchorage, Ak 99501

re: Sutton to Glennallen Intertie

Dear Mr Emerman,

As a property owner in the Chickaloon area and long time user of the Chickaloon recreation areas, and also as a one-time economist who has reviewed and analyzed two major electric power projects, I am concerned about the announced intent to construct a project of this magnitude in our area.

Apart from a very suspect "preliminary report" by Beck & Associates, which uses as an essential premise and rationale a very vague and completely uncertain estimate of a SINGLE FIRM'S power demands in the future, the nature of the project needs an unbiased review. Having grown up in Washington state, I recall clearly a similar, if far larger, version of the same problem which can be summarized as follows:

A few individuals proposed to build a project which would enrich only themselves and only temporarily benefit some construction firms;

The service area's best interest was jeopardized (in that case safety from nuclear contamination, in our case destruction of exceptional scenery and possible safety issues emanating from serious questions as to electromagnetic effects on people living nearby); and

The process ignored the one factor which ultimately proved to cause a shift of the demand curve BACK, not outward, despite increased population, namely, conservation of electric energy.

This last phenomenon has reappeared in several parts of the country, and should serve as a useful example for us here. Conservation of energy has almost universally resulted in a substantial reduction of budgeted expectations by utilities. Our case appears to be no exception, and I urge you to consider the very small and temporary benefit to be had by construction of the Intertie. Save the money, save the view in Chickaloon, and resist the tremendous pressure by the very few beneficiaries who promote the project.

Sincerely,



RECEIVED

FEB 23 1994

DIVISION OF ENERGY/DCRA

Paul F. Twardock
1237 W 11th
Anchorage AK 99501
907-279-0409

2-20-94

Herb Hensley, Acting Director
Div. of Energy, Dept. of Community and Regional Affairs
333 W. 4th Ave. Suite 220
Anchorage AK 99501-2341

Dear Mr. Hensley,

I would like to express my displeasure of the Sutton to Glennallen Intertie Draft Feasibility Study. The preferred alternative in the draft should not be picked because:

1. Economic Unfeasibility: The intertie option has costs which have not been included in the draft feasibility study. Economic costs such as lost tourism business, health costs, loss of subsistence hunting/fishing with increase pressure on fish/wildlife, and maintenance costs. Furthermore social costs have also been ignored, costs such as disruption of communities along the route.

Based on the report itself the intertie is only justified if power quadruples at Petrostar. The whole project's rationale according to your representatives at public meetings is based on Petrostar's needs. I object to such a project being pushed through at the public's expense for one commercial venture. CVEA ought to be required to factor paying the whole costs of the project, including interest on the approved loan.

Finally I wonder are the costs of the study realistic? I am quite familiar with the area and wonder why snow avalanches are not mentioned in the report as a hazard which will cost significant amounts to study, plan for, and build adequate structures to withstand. That is the only cost I am familiar with, but wonder why the Bradley Lake project cost so much more per mile than this study indicates this intertie will cost?

2. Environmentally Unfeasibility: The intertie goes through some of the most scenic country in this state which is accessible without having to fly to. The communities along the road have every right to object to such an eyesore through their backyards. I object to having the same eyesore through the mountains which are an important area to me, both recreationally and as a professional guide. The health concerns of local residents reflect my concerns as I lead

groups in and around the proposed route. The disturbances to wildlife, both by the project itself and increased access it will provide, will also ruin the area in my eyes.

3. Reasonable Alternatives: The plan does have alternatives to the intertie which make sense for this state. Petrostar, like Alyeska, should be asked to provide its own power. (It seems ludicrous to me that in N. America's richest petroleum city they cannot do this). Then the conservation alternative ought to be considered in conjunction to the Allison Lake project and/or new diesel generators.

I urge you to reject this study and go back to the drawing board. I cannot stress how strongly I feel that an intertie is not wanted or needed.

Sincerely,

A handwritten signature in cursive script, appearing to read "P. Twardock". The signature is written in black ink and is positioned above the printed name.

Paul Twardock

25 FEB 94
Director
Division of Energy, DCRA
333 W. 4th Ave., #220
Anchorage, AK 99501

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FEB 25 1994
DIVISION OF ENERGY/DCRA

I am opposed to the construction of the Sutton to Glennallen Intertie:

1.) The energy demand forecast as described in the feasibility study is not based in reality. If you are going to use a huge increase in Petrostar's production as a basis for justifying the intertie, get them to sign a power agreement ahead of time. As it is, the intertie is simply a boondoggle to give Petrostar a savings in their energy costs, and it is easy to see why they would invent a last minute scheme to increase the demand - as long as they don't have to be held accountable.

2.) The costs for environmental mitigation and litigation costs are terribly underestimated. This is especially true since I believe all routes cross protected swan breeding areas, as well as the Nelchina Public Use Area, which is the home breeding grounds for the Nelchina caribou herd - all 50,000 of them. If so, construction would be impossible during the early summer weeks.

3.) The Glenn Highway / Matanuska Glacier area has long been recognized as being one of the premier locations for tourist development in Alaska. Only in the last year have access and land ownership problems been worked out so that the potential of the area can be realized. The construction of a powerline that robs the highway traveler of the incredibly beautiful vistas of the Talkeetna Mountains would be a major disincentive for the major investments being considered for this area.

4.) Other alternatives that actually produce power instead of transferring it from one place to another should have precedence if economic and environmental concerns are equal.

5.) Since construction of the intertie will end up costing about \$60 million dollars, the cost per rate payer is about \$20,000. For the residential customers who use the electricity for lighting and appliances, this probably represents 20 years worth of electric bills. Or, put the money in CD's and pay the whole of CVEA's costs from the interest. Only huge industrial users such as Petrostar stand to gain from this project.

6.) The state cannot afford a 36 million dollar boondoggle at this time. The reputation of both the Division of Energy and the Department of Community and Regional Affairs will be on the line as being responsible for this project in the minds of the citizens of Alaska.

Charles "Skip" Roy

1326 G Street
Anchorage, AK 99501
and Mile 102.5 Glenn Highway
Glacier View Alaska

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FEB 25 1994 JT

DIVISION OF ENERGY, LORA

February 24, 1994

Mr. Robert E Harris, Director
Department of Community and Regional Affairs
333 West 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Mr. Harris:

As a taxpaying resident of the state of Alaska, I'm writing to express my outrage over the proposed electric inertia between Sutton and Glennallen. This would impact everyone in the state, in Anchorage, Barrow, Craig, Homer, you name it.

At this time of fiscal crisis, this issue is economics.

- How could the state possibly consider providing \$70,000,000+ for an unnecessary power line when we are scrambling to finance our immediate budget crisis?
- Why should we subsidize a new refinery which was built to supply a bankrupt airline?
- Why haven't alternatives to this proposal been truly considered?
- Why is this proposal being rammed down our throats without studying the true costs and real environmental impacts?
- Why didn't you have a public meeting in Anchorage for interested persons?

Please reject the proposal as NOT feasible! I don't want my state money being wasted. Thank you for your consideration.

Regards,



James Armstrong
10701 Abbott Loop Road
Anchorage, Alaska 99516



The National Outdoor Leadership School

P.O. Box 981, Palmer, Alaska 99645
(907) 745-4047

Don Ford
Alaska Branch Director

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FEB 25 1994

DIVISION OF ENERGY/DCRA

2-21-94

Herv Hensley, Acting Director
Division of Energy, Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Hensley,

The National Outdoor Leadership School would like to express opposition to the preferred alternative of the Sutton to Glennallen/Copper Valley Intertie Feasibility Study.

1) Economic Unfeasibility: The intertie option has costs which have not been included in the draft feasibility study. Economic costs such as lost tourism business activity have not been adequately addressed. The National Outdoor Leadership School (NOLS) offers a number of outdoor education courses in the southern Talkeetna mountain range, location for the proposed Sutton to Glennallen/Copper Valley Intertie. Our 31 day courses begin at the Glenn Highway and backpack in the Talkeetna Mountains. Our operation spans a 10 year time frame generating revenues of over \$300,000 annually and has served hundreds of people from Alaska, outside and foreign countries. The change in the area of the proposed intertie would have a profound effect on our operations.

Based on the report itself the intertie's economic feasibility depends upon massive increases in the load of a single industrial customer, the Petro Star Refinery. NOLS objects to this project based on the level of public expense for this one customer. The Division of Energy's review of the Petro Star expansion must include the prospects for Petro Star generating its own electricity.

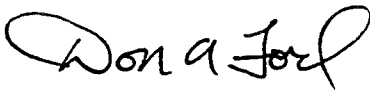
Any route through the Talkeetna Mountains would contain avalanche potential. No costs of assessing and managing this hazard are addressed.

2) Environmental Unfeasibility: The intertie goes through some of the most scenic country in the state which is accessible without having to fly to. The visual impact of this project is objectionable. The impacts of service roads and construction are not adequately addressed in the study. NOLS in particular travels in the area because of its beautiful and pristine character. Many other recreationists and hunters travel into the area for the same reason and because of it's excellent wildlife habitat. The placing of the intertie in this area would significantly damage that experience.

3) Reasonable Alternative: The plan does have alternatives to the intertie that make more sense. Petro Star, like Alyeska, should be asked to provide its own power. The Allison Lake project and/or new diesel generators seem more appropriate and cost effective alternatives to the intertie.

We stongly urge you to in good faith to review all of the factors brought out in this public process. From our review of the materials we believe the intertie is not needed and we would like to add our voice to the large number of others who do not want this project to be built. We teach our outdoor leaders that "Prior Planning Prevents Poor Performance". Spending additional effort and money to thoroughly evaluate the results of the public imput would now be prudent and wise and we believe cost effective. We implore you to take your responsibilities seriously in this analysis.

Sincerely,

A handwritten signature in cursive script that reads "Don Ford".

Don Ford
Director NOLS Alaska



Valley Alaska Center for the Environment

Lakeview Professional Building, Room 203

Mailing Address: P.O. 876161, Wasilla, Alaska 99687 Phone: 376-8223

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FEB 25 1994

Herv Hensley, Acting Director
Div. of Energy, Dept. of Community and Regional Affairs
333 W. 4th Ave. Suite #220
Anchorage, AK. 99501-2341

DIVISION OF ENERGY/DCRA

Dear Mr. Hensley,

I am writing with regard to the proposed Sutton - Glennallen intertie and the economic feasibility study which was done by R.W. Beck and Associates. I wish to inform you that as the coordinator of the Valley Alaska Center of the Environment, and as a homeowner in the Matanuska Valley, I strongly oppose the intertie for four basic reasons.

First, the feasibility study has not accurately estimated the costs of the project. The labor costs are underestimated. The ROW costs are underestimated. The study failed to even account for all the condemnation proceedings costs, or the accompanying legal costs. Public and environmental safety was neglected (ROW clearances reduced from 150 ft. to 125ft.) in order to lower the project costs and make the intertie more viable. The study also fails to take into account environmental costs - a huge factor that in the past has been eliminated in the world of economics. However, as federal Superfund expenses, the Exxon Valdez fiasco, and state of the art economic feasibility studies have demonstrated, we can and must start to account for the environmental costs.

Second, the results are biased toward the intertie by assuming an improbable moderate-high or high load growth scenario, which depends on a single private industrial user. There are many holes in the load estimates. For example, there is no independent industry analysis to assess the accuracy of Petro Star's growth claims. Even the president of the company won't stand by the outrageously overestimated numbers. Given that nearly all of the projected load growth and hence economic justification of the intertie is based on Petro Star, and that the costs of the intertie project are paid for with public dollars, it is not unreasonable that we should demand more concrete and detailed information on this matter. Why not encourage or require Petro Star to cogenerate to meet its own electricity demands. Or Petro Star should build its own diesel generators to meet its electrical demands beyond the low and moderate growth scenario levels.

Third, as a citizen of this state, I do not believe that the financial agreement - a \$25 million 50 year no interest loan - is in the best interest of the state and its people - especially given the current budget crisis. A no interest loan amounts to an additional \$76 million dollar subsidy. The high times are over for the State of Alaska. Our government must tighten its belt on ridiculous spending and start operating in a fiscally responsible

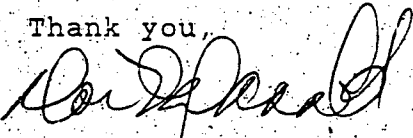
manner. State revenues in lean times can not pave the way for cheap electricity in rural Alaska or for private industry. Pork-barrel boondoggles must be chopped.

And fourth, when large scale development is proposed, I feel the negative impacts of that development should be shouldered by the same community receiving the positive benefits. The benefits are supposedly going to all CVEA members, though clearly, Petro Star will benefit far above and beyond the average consumer. Yet it is the quality of life of Matanuska Valley residents and the valley's scenic value that will be degraded. It will be the Valley's economic mainstay, tourism and remote and semi-remote recreation (hunting and guiding), that will be adversely affected. And it will be the Valley's natural environment that will be irreparably damaged. It is my hope that the Department of Community and Regional Affairs would not even consider a project that is so clearly out of balance in its effects on two distinctive separate rural communities. I believe more viable, reasonable, acceptable alternatives exists.

Mr Hensley, I encourage you to do the sensible thing: look closely and critically at the Feasibility study, and recognize its major shortcomings. It is not an accurate, reliable document where the numbers for the intertie are concerned.

A recommendation of the Allison Lake hydroelectric project or the upgrading of the diesel generators while leaving Petro Star Refinery to cogenerate its own electricity is the only sensible, responsible conclusion.

Thank you,



Dori McDannoid
Valley Coordinator
Valley Alaska Center for the Environment

February 24, 1994

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FEB 25 1994

DIVISION OF ENERGY/DOEA

Robert E. Norris, Director
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

In regards to the Glenallen Intertie, I am vehemently opposed to the intertie especially in lieu of the feasibility study which assesses the environmental and social impacts at a zero dollar cost. The study has been skewed in CVEA's interests to show the costs of construction is less costly than alternatives. Lets consider this.

Hydroelectric power (Allison Lake) is renewable, clean, and gives the area requesting the power the responsibility for proper development. It could be expandable as demands increase.

The feasibility study does not factor secondary roads to service the intertie, policing the area, wind damage, forest fires, and cost overruns. Look at the Glenallen to Valdez intertie build at approximately \$500,000 a mile. Also the environmental impacts-eagle habitat and all the wildlife habitat. How about social impacts; family health due to EMF's, business such as guiding, hunting, snowmachining, fly-in tours, backpackers and river rafters. People come here as tourists because the lower 48 has been devastated by big business demands and the untouched areas are disappearing or gone except in National Parks.

You need to fully investigate what's happening outside. Interties are being moved away from schools because a link exists between EMF's and cancer. Environmental groups and communities are banding together to stop intertie construction and their voices are being heard above those of big business. Settlements are being made to property owners for loss of property values.

We live in an age of changing focus from economic gain to conservation of priceless resources. What kind of government and political process can allow this intertie with no factored cost to social or environmental impact. Perhaps legislators are more concerned with donations to reelection campaigns than the voice of their constituents. Does our legislature want to be remembered for their disregard of the Great Land and assist big business who will pollute it? Who pays for the repercussions felt in the decades to come. Our children will say their predecessors were short sighted and greedy.

MEA and CVEA stated the project would probably not lower cost to the consumer but increase costs to help pay for financing its construction. We have listened to repeated lies to persuade the people to embrace this moronic project. Who benefits? Petro Star, who sits on one of the biggest fossil fuel deposits in the USA.

Then ask yourself, is this so worthy? If so why isn't Alyeska interested?

They want nothing to do with the intertie-perhaps an alternative is to get excess electricity from them to help power demands required as demands grow, in addition to Allison Lake and conservation program.

Lets look at all alternatives before we waste Railbelt monies on a useless project destined to cost more and more money because the feasibility study is flawed by the methodology used to figure the costs. When these aforementioned costs are appropriately figured alternatives to the intertie will be significantly more feasible and economically superior.

Heartfully felt,

Vicki L. Kindseth
P. O. Box 1200
Chickaloon, Alaska 99674

February 25, 1994

Telephone comment received by R. Emerman from Mr. Jim Williams, Valdez:

Mr. Williams stated his concern that the proposed intertie would experience cost overruns that would saddle the utility consumers with high debt. He referred to the construction of the Solomon Gulch project and the Valdez-Glennallen transmission line as evidence of the magnitude of cost overruns that could occur. He indicated his preference for the Valdez coal project proposal put forward by Randy Hobbs and Alaska Cogeneration Systems.

Telephone comment received by R. Emerman from Kevin O'Toole, Glenn Highway resident:

Mr. O'Toole stated that the intertie was an overkill solution to Copper Valley's electrical needs. He is nervous about Copper Valley Electric Association being in charge of final routing decisions, and is concerned that cost considerations will lead them to route the line close to the highway. He is concerned about tourism impact, and believes that the load growth scenarios under which the intertie is justified are unrealistically high.

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FEB 25 1994

DIVISION OF ENERGY/UCRA

Alex Harris
Lara Sox
HC04 Box 9602
Palmer, Alaska 99645

February 22, 1994

Robert Harris, Director
Div. of Energy
Dept of Community and Regional Affairs
333 W 4th Ave, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Harris

Having read the Draft Feasibility Study for the Sutton-Glennallen Intertie, we must urge you to reject both the legitimacy of the study and the project itself. We found the study was incomplete, inaccurate and misleading. Incomplete because the potential and inevitable environmental impacts of this projects were not included in the analysis. Inaccurate and inconsistent because many costs which would be incurred in high demand scenarios were omitted, even though the project only makes sense economically in those high load scenarios. And misleading because many of the assumptions used to calculate costs and benefits seem to be unrealistic and short-sighted. The study completely ignores the options of Petro Star co-generation and doesn't site the immense stupidity of sending energy hundreds of miles to the most energy rich community in North America.

We are sympathetic with the CVA's membership's need for low cost electricity. We are not convinced that the intertie will reach this goal, or if it does, it will be at the expense of the Alaska tax payers and the already pressured wilderness between Sutton and Glennallen. As a state, we should encourage and support each region to develop resources which are immediately available to it. While the immediate costs of developing one of the hydroelectric options may be slightly higher in the short term, the long term stability of hydro in the area would outweigh any additional costs (although I think the actual costs will be lower than the under-represented costs of the intertie since legal, technical, and environmental costs have been omitted).

Please notice that the costs have been underestimated and the need has been exaggerated. We are deeply opposed to this project, and would prefer to spend our time in ways other than fighting it strenuously. However, we will fight it unless it dies its overdue death soon.

Sincerely,

Lara Sox
Alex Harris

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Feb. 22, 1994

FEB 25 1994

DIVISION OF ENERGY/DCRA

Mr. Richard Emerson

Division of Energy

333 W. 4th Ave., Suite 220

Anchorage, AK. 99501-2341

Subject: Sutton to Glennallen Transmission Line Project.

Until recently, I have reserved my opinion on the above transmission line. I live at mile 113 1/2 Glenn Highway, and am a Copper Valley ^{Electric} Co-op member. I am opposed to the above project. It seems to me to be economically unjustifiable. I do not see a great industrial boom in the Copper Valley in the near future.

The study by R.W. Beck isn't really complete enough to be able to compare various alternatives. The use of unauthorized figures leaves the study suspect. My objection is primarily economic. It is a huge expenditure which will have to be paid for by co-op members, and there really aren't a great many of us.

I am in opposition to the transmission line coming down the road corridor.

Respectfully
Marileyn J. Meekin
#C03, Box 8494
Palmer, AK 99645

RECEIVED

FEB 25 1994

February 9, 1994

DIVISION OF ENERGY/CRA

Robert Harris
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Harris:

Now that the Feasibility Study for the Sutton to Glenallen intertie is available for public review I would like to bring to your attention some critical issues concerning this project.

Regardless of the fact that this boondoggle is opposed by the majority of those affected on the basis of health, environmental impact and future costs, not savings, to consumers it is also very "unfeasible" in light of Copper Valley Electric Association's own "study" and all the hidden costs incurred. Referring to the Economic Analysis of the Feasibility Study by R.W. Beck and Associates Inc., you may notice that their summary is based on an assumed and artificial growth rate of the Copper Valley and especially Valdez. Although it is public knowledge that CVEA tried to manipulate R.W. Beck during this study, they were objective enough to present the fact that diesel generation, followed by Allison Lake Hydro generation were still lower in cost during a normal load growth scenario.

But that's not all. If you dig a little deeper you'll learn that 70% of the power generated is to supply Petro Star of Valdez. So, in essence, the State of Alaska is giving away a no-interest loan (35 million) to support private industry with a very marginal growth rate. Practically speaking that money could be used to fill our budget gap or other more feasible projects. Consider the fact that with a 6% rate of interest, in ten years 35 million could more than double.

Now let's get down to "real" costs. It's almost ludicrous to accept this intertie project based on 1993 costs. If we include the actual costs beginning construction in 1996, hidden costs such as a SVC system, land acquisition (litigation costs) and even more realistic construction expenses, the total estimated costs of \$45,931,000 will be more like 60-80 million. What this means is we the consumers, will be slapped with a debt burden somewhere down the road.

There was a deliberate and obvious lack of intention to objectively analyze and compare cost economics with alternatives during this so-called study. Even the feasibility study itself states that their methodology was based on assumptions.

Unfortunately, all the issues at stake cannot be addressed in one letter. I urge you to review all the facts and try to wade through

the smokescreen CVEA is using to cover up this "deal." There are some special interests involved here including a few legislators. What we need now is someone with enough wisdom and fiscal responsibility to protect us from this force fed pork. 35 million could go a long way towards something more useful than a 135 mile piece of bacon.

Sincerely,

Mark Bertels

Mark Bertels
P.O. Box 263
Sutton, AK 99674

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FEB 25 1994

JULIAN L. MASON III

DIVISION OF ENERGY/DCRA

1130 WEST SIXTH AVENUE, SUITE 100
ANCHORAGE, ALASKA 99501
(907) 276-4331

February 23, 1994

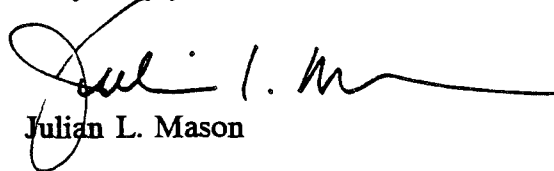
Mr. Herb Hensley, Acting Director
Department of Community and Regional Affairs
Division of Energy
333 West Fourth Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Hensley:

I oppose the Sutton to Glennallen intertie. The intertie does not make economic sense.

Copper Valley Electric has about 3,000 customers. If the construction cost per mile is the same as the cost for the Bradley Lake line, the cost will be at least \$120 million -- \$40,000 per customer! This cost is enough to pay the average residential bill for 30 years or more. This is not a sound investment of the State's scarce economic development dollars.

Very truly yours,



Julian L. Mason

JLM:sjw



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Printed On Recycled Paper

FEB 25 1994

DIVISION OF ENERGY/DCRA

ADVENTURES

23 February, 1994

Herb Hensley, Acting Director
Div. Of Energy, Dept. of Comm. and Regional Affairs
333 W. 4th Ave, Suite 220
Anch, AK 99501-2341

Dear Mr. Hensley:

Our business operates small-group, natural history oriented trips of 7 to 12 days in length throughout southcentral Alaska, including areas adjacent to the Glenn Highway near the proposed route of the Sutton to Glennallen Intertie. We appreciate this opportunity to express our opposition to the project as it appears in the draft study and respectfully question the economics of constructing the power line at this time.

Being a recreation-based business whose livelihood and longevity depends upon unhindered vistas, unspoiled wildlands and the chance of viewing wildlife in a natural setting, the suggestion of a powerline running through the Talkeetnas or along the Glenn Highway disturbs us. We employ 60 seasonal and 12 year around staff who serve nearly 4000 clients each year. At least two of our nine different 'safaris' utilize the area affected by the Intertie. We join with other ecotourism businesses in the Matanuska Valley and near Chickaloon, several of whom we subcontract with, in calling for a reassessment of this expensive and potentially unnecessary power corridor whose environmental effects have seemingly not been fully addressed in the draft study.

The Glenn epitomizes Alaska to all those who travel its length. From the grand vistas of the Chugach and Wrangells to the autumn colors at the road's edge, the highway makes a statement about the character of our state to all those who arrive by vehicle or who drive the road once here. Many of our guests have reiterated that the Glenn was the most beautiful section of their trip to Alaska. A large intertie running alongside the highway would diminish and dilute the grandure for the many visitors who cannot get into the backcountry.

If the intertie were to cut through the wilderness of the Talkeetnas the results would be even more undesirable for the users who hunt, hike, ski, snowmachine and flightsee, not to mention the environmental consequences of building and maintaining such a corridor. In your feasibility study, road construction impacts appear dismissed. Roads and their subsequent effects to the natural and human environment are far too important to overlook.

PO BOX 389 GIRDWOOD, AK 99587

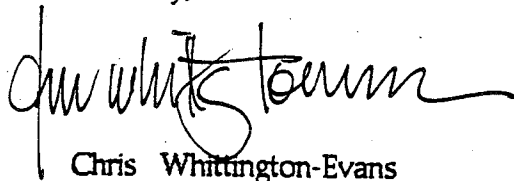
DIRECT: 907-783-2928 ■ OUTSIDE ALASKA: 800-334-8730 ■ WITHIN ALASKA: 800-478-4100 ■ FAX: 907-783-2130

We join with many others in asking the Division, our legislators and the Governor to reconsider the costs and the benefits of this project at a time when Alaska can ill afford money poorly spent. The \$60 million already slated for construction could help relieve huge cuts facing economically proven programs such as the Alaska Tourism Marketing Council. Futhermore, little study has gone toward other more efficient electric supply alternatives like cogeneration and small-scale hydropower.

We respectfully ask that you further consider the social and environmental impacts of this project, measuring if possible, the loss of world-class views and sustainable, recreation-based economies the area is dependant upon. Also, look again at whether this project is necessary now and if we are not selling other alternatives short. Alaska's future demands accountability by large investment projects whose viability is uncertain.

Thank you again for this oportunity. We look forward to being kept in touch on the progress of this study.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Whittington-Evans". The signature is fluid and cursive, with a long horizontal stroke at the end.

Chris Whittington-Evans
Program Specialist

cc: Governor Walter Hickel
Senator Judy Salo
Representative Mike Navarre

RECEIVED

FEB 25 1994

February 21, 94

DIVISION OF ENERGY/DORA

Dear Mr. Farris

I would like to let you know of my opposition to the proposed subsidy to the Copper Valley Electric Association to build an intertie.

It seems to me, from the information I've read, that Petro Star Refinery would benefit greatly from this project, yet their needs are not that great. Only if their load quadruples does the intertie become feasible.

I feel it is a waste of money at this point in time and I urge you to oppose this project.

Sincerely,
Annette Cassidy

RECEIVED

FEB 25 1994

DIVISION OF ENERGY/DCRA

1/24/94
RECEIVED

FEB 25 1994

Dear Mr. Hensley

The Sutton-Glennallen Intertie has me worried about the health effects of electromagnetic fields and the impact that high voltage ^{lines feeds} may have on recreation, wildlife, and the quality of life in the unspoiled wilderness along the Talkeetna Mountains. The writers of the feasibility study have admitted to underestimating the cost of the Intertie at 40 million dollars. This price, in my view, is not worth the benefits of meeting the predicted energy demand of one private company, Petro Star Refinery, who may have the potential for self or cogeneration. I can not see how such an expenditure will bring a reduction in rates for Copper Valley Residents. I am opposed to the funding and construction of the Sutton-Glennallen Intertie.

Sincerely,

Ellen Americus

Ellen Americus

underestimated:

+ right of way costs, legal battles

helicopter costs

fails to include static var compensator (5.6 mil)

Pag 102

RECEIVED

FEB 28 1994

DIVISION OF ENERGY/DCRA

FEB. 22, 1994

ROBERT E HARRIS

DIVISION OF ENERGY,

DEPT OF COMMUNITY AFFAIRS

333 W. 4th AVE, SUITE 220

ANCHORAGE, AK.

Dear Mr. Harris

I am writing to you about my deep concern towards a proposed intertie between Sutton and Glenallen.

I am a registered guide and make my living and support my family by conducting photographic trips into the Telkeetra mountains as well as guided Big game hunts and my subsistence hunts. The proposed intertie would do extensive damage to my business as well as my way of life, my family and I are strongly opposed to the construction of this intertie!!!

It has become evident that this intertie has been in the works for years since (1986) when a company began actively looking at routes for the line.

I have spoken to relatives in Copper Center and they express opposition as well

Most people I have come in contact with feel that Big oil and Big Business and government are at work to push this through, Regardless of the Opposition to it!

After contacting some people in Juneau and friends elsewhere this has proved all to true.

It is my belief that should the Sutton to Glenallen Antartic Be constructed, there will Be a number of Court Battles, one of which shall Be mine!

Sincerely, Gordon Bissell

GORDON Bissell

Box 304 SUTTON ALASKA

99674

RECEIVED
FEB 28 1994
DIVISION OF ENERGY/DCRA

February 24, 1994

To Whom it May Concern:

The Sutton to Glennallen Intertie is a poor choice for almost everyone involved. Here are three reasons why:

First - The people along the Glenn Highway will have this eye sore in their backyards.

Second - Petro Star knew how much power they would need to run the refinery before they built it. They knew what power was available, and if they needed more than was available, I'm sure they could have made some plans to take care of the shortage. Building the intertie for their benefit is not practical.

Third - The intertie being the least-cost alternative is bologna. We have to look at all costs here. CVEA will have to borrow the money to build the intertie - approximately \$76 million. Being a loan, it will have to be paid back. CVEA customers will be the ones who pay for this. Also CVEA will have to buy the power they use from ML & P, Chugach Electric or someone else. Again the cost is passed on to CVEA customers. The best plan for CVEA customers is to upgrade their present power plants or construct a new power plant. This way CVEA does not have to buy the power, they own it. This is the only way CVEA customers will ever receive low cost power.

Sincerely,



Merle Johnson
P.O. Box 277
Sutton, AK 99674

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

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MAR 01 1993

February 23, 1994

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Dear Commissioner Blatchford

Please listen to the concerns of the residents in the Glenn Highway corridor who will be ultimately affected by the Sutton to Glennallen intertie if it is built.

The first glance look at the feasibility study done by R.V. Berk makes it appear as if all areas of more cost effective power have been studied and this would be the only feasible alternative to the continued use of old deteriorating diesel generators. However, if you take the time to read and study their report and talk to them and ask questions it is apparent they have left out many areas concerning the overall cost. When asked about the cost they have projected for helicopter costs per mile they have \$120. Anyone knows without even doing legwork that you cannot rent any type of helicopter for \$120 per hour, much less one that is capable of doing the type of work that will be required. They have not figured in the cost of access roads because they do not know yet where they would be needed. No cost has been figured in for environmental challenges or lawsuits. They said they did not know what it might be so they used the figure of \$0.00 (zero). I only wish my budget worked that way! Also not included is the cost of the SVC (Static Var Compensator) which is only about FIVE MILLION DOLLARS. A slight oversight! or what. A budget of THIRTY-FIVE MILLION DOLLARS would sound even better if you conveniently forgot or left out a FIVE MILLION DOLLAR amount. Their answer is they didn't know for sure how soon it would be required but probably sometime in the first five years. I could understand leaving it out if it would not be needed for twenty-five years but I'm sorry I feel anything that will be needed that soon should be considered in the overall projected cost of the project.

The whole project seems to be hinged on the main concerns of one customer mainly Petro Star which they have figured on operating thru 2047 in the high and medium high growth load rates. This is a full thirty years beyond the expected shut down of the TAPS line. In the low-load scenario, the Petro Star refinery is assumed to close in 2013, it seems in the high and medium-high range that it will go on for ever and "supposedly" the TAPS would not shut down. Could this possibly be true. I have nothing against the oil

companies but I do not think our tax dollars should be spent to benefit one "privately owned" company at the expense of all residents and tax payers in the state of Alaska. There does not appear to be any promise on the part of Petro Star to continue purchasing their power from Copper Valley Electric. It is my belief that Petro Star is capable of producing their own power if they so desire. There is nothing in the report to even suggest that they have agreed not to do this in the future after the cost of the intertie is incurred by the residents of the Copper Valley Electric Association and possibly also (according to Ken Ritchie) Matanuska Electric Association consumers. The possibility of MEA being absorbed by Chugach Electric according to the news of 2/22/94 is also a possibility. In this case it would also effect people in the Anchorage area that seem to feel it doesn't matter as it wouldn't effect them anyway.

You should also enjoy some relaxing reading by Paul Bradeur before you sign on the dotted line to have the intertie built. One of his books *The Great Power-Line Cover-Up* should be required reading before you wish this health and environmental hazard on anyone, friend or foe. "Seven adults and children living on Meadow Street in Guilford, Connecticut - a street 180 yards long with only nine houses on it - have been struck by cancer during the past few years." These houses are across the street from a power substation.

I do not oppose the people in the Glennallen to Walden area having more cost effective electricity but I feel there are other more cost effective and environmentally safe and effective ways to obtain the power. I am all in favor of hydro-electric power. I won't go so far as to say we can never run out of water but I don't think all plans should be put on fossil fuels. I think water is a more reliable power source than fossil fuels can ever be.

Sincerely



Shirley Twitchell

RECEIVED

FEB 28 1994

Herb Hensley

DIVISION OF ENERGY/DCRA

Div. of Energy Dept. of Community + Regional Affs.
333 W. 4th Ave Suite 220

Anchorage AK 99501

Dear Herb Hensley

Here are my comments on the Sutton/Glenallen Intertie. The intertie is financially + environmentally irresponsible ~~as~~ well as unnecessary.

Local residents such as myself are opposed to the project. It will hurt tourism - wilderness, + recreation, which are also my financial base, as well as ^{that of} many other Alaskans.

The future energy needs are grossly overestimated. Cost of the project is grossly underestimated. ^{highly} A subsidy to a private business is a bad idea in these times -

Please do everything you can to stop this irresponsible unwanted project.

Thanks

Sincerely,

Nancy Pfeiffer

HC03 Box 8103

Palmer AK 99645

1

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FEB 28 1994

DIVISION OF ENERGY DCRA

Comments on the Proposed Extension & Shorter Intertie Feasibility Study.

This powerline would be one of the least needed, & most wasteful, projects in the state, if built.

For starters, the main drive to build it is coming from the Petro Star refinery. There is no way the project would pay for itself by supplying it w/ cheap power. The numbers just do not add up. This is why it can only be done with ADEA bonds & and interest-free loans. Private industry, operating under normal market conditions, could never justify an expenditure of this magnitude, with so little return, over so long a period.

We are not talking about giving poor struggling homeowners in the far back the wonderful improvement of electricity. All or most of road-access areas that this intertie would affect now have power. For those that do not, & want it, they are generating themselves. Spending \$60 to \$76 million dollars is hardly the way to give power to a few hundred more people. It would obviously be done for the oil industry, who seems, at the point seems to have the agency in its hip pocket, & is about to get the biggest,

2

fathest 'freebie' of its life. Petro Star is in
a comfortable enough financial position to
provide their own power. There is considerable
evidence that enough energy could be
provided by their own ~~own~~ products & by-products
to more - than - supply their needs.

DIVISION OF ENERGY
ARCHIVE

The environmental impacts of the
project are enough to put this project
on the scrap heap. Roads all over the back-
country & wasteful tree cutting are the
inevitable results. I live near the Arch. &
Healy interests, and have been in the area
as landowner & full-time resident
since 1977. New & unwanted tracks
branch off the powerline everywhere.
Thousands of acres of trees were cut, &
none were salvaged for use! Left to rot!
And as a result, the spruce bark beetle
has moved into the area. To lose one thing,
we local said would happen, & they did.

You are an ~~energy~~ energy agency, so it
is your job to ~~create~~ create projects like this:
dams, powerlines, powerplants, etc. And you
will try to justify these projects in real-
world terms, as if they really cut it in
the world of private industry. This is com-
pletely ridiculous. Just you & subsidies
are the only things keeping you floating,
which is a good thing if a project is really
needed. But you are just fitting more &

(3)

pieces of the puzzle on the map, connecting all parts of the state with these monstrous whether they are needed or not. Well,

our state's present financial situation is heralding the end of welfare projects such as this.

There is absolutely no public support for this thing. An overwhelming majority of local residents, business, conservation & outdoor groups, & a huge # of governmental organizations oppose it. Wake up, people! This is an era in which large projects have to justify themselves in real terms, not governmental double-talk, & gross under-estimations of costs.

There is the issue of Electro-Magnetic Fields (EMF). This is quickly becoming a major health concern in the U.S. More & more evidence is piling up that powerlines are harmful to human health. This issue has to be fully investigated. Check out the Jan./Feb. 1994 issue of Public Citizen Magazine for starters. You will be impressantly surprised at the many facts & figures found there.

There are accessible alternatives to the dinosaur of a project. Upgrade existing diesel generators to the newest, most efficient ones made; co-generation using gas by product from the Alberta facility. →

(4)

This project would ruin a great deal of the scenic beauty of the country ~~along~~ along the Glenn Highway. All ~~the~~ roadside & backcountry users, both residents and out-of-staters, have got a stake in that country. Do something good for your country, & ~~do~~ give up on this foolish project.

Denis Pransy
Box 344
Falsetta, Alaska
99676

19 year Alaska resident, landowner, ~~and~~
homesteader, commercial fisherman.

WALTER B. PARKER
3724 CAMPBELL AIRSTRIP ROAD
ANCHORAGE, ALASKA 99504
(907) 333-5189

RECEIVED

FEB 28 1994

DIVISION OF ENERGY/DCRA

February 25, 1994

Herv Hensley
Division of Energy
333 West 4th Ave., Suite 220
Anchorage, AK 99501-2341

Subject: Sutton-Glenallen Intertie

Dear Mr. Hensley:

The Sutton to Glenallen Intertie does not pass muster on any rational cost/benefit analyses. We should have learned from the Susitna Dam and Rampart Dam experiences that applying 1930's Bureau of Reclamation Theology to Alaskan energy problems does not work. We got little useful for now or the future from the some \$400 million poured into Susitna.

The Sutton-Glenallen Intertie is only needed to supply power to both Petrostar Refinery and HAARP. Existing needs are being and can be met by existing facilities. Petrostar can supply it's own power cheaper than if it had to carry the true costs of the Intertie. HAARP is probably not going to happen. If it does let the Department of Defense make its own power from the oil going right by it.

The population of Valdez and the Copper River Valley would have to increase by 400% in the next 50 years to justify this kind of investment now. This is not going to happen according to current demographic estimates, both state and federal.

When I was the Chairman of the Joint Federal/State Land Use Planning Commission for Alaska (1976-79) we did analyses of many proposed dams and interties. None of the large ones were competitive with natural gas or oil. For that matter some of the smaller ones that have been built were not competitive, but that is money over the dam. The primary reason was our small population, which meant that some major user had to be invented to make the project work and this major users, costs were to receive heavy up front subsidies.

We went through the same kind of exercises when I was on the staff of the Federal Field Committee for Development Planning in Alaska (1970-71) with the same general results. I reviewed all this as Director of the Alaska Energy Center in 1980 and our efforts quickly aimed at different solutions for small widely scattered populations.

Herv Hensley
Division of Energy
Page 2

It makes no economic sense to bring power to the area having access to the greatest existing energy source in Alaska - the Alyeska Pipeline. The difference in cost of generation between natural gas and oil is certainly not enough to justify linking Cook Inlet gas fired power to Valdez where all that oil can be made available incrementally if needs rise.

Sincerely,

A handwritten signature in cursive script that reads "Walter B. Parker". The signature is written in black ink and is positioned above the printed name.

Walter B. Parker

February 17, 1994

RECEIVED

FEB 23 1993

MAR 1 1994

Dear *m. Blatchford,*

DIVISION OF ENERGY/DCRA OFFICE
OF ENERGY & REGIONAL AFFAIRS

I am a Sutton resident that strongly opposes the Sutton-Glennallen Intertie. I also own a tourism related business on the Glenn Highway that would be directly affected by this intertie.

I would like to take a few minutes of your time, to share with you the reasons I oppose this intertie.

I grew up here in Sutton and now have a family of my own that I intend to raise here in this community. Like any community I have seen changes here over the years. This intertie would have a severe negative change here.

The proposed substation would be built in the middle of a highly used trail system. I personally use the trails with many of my friends and relatives for X-country skiing, snow-maching, horse back riding and motorcycling. I certainly would not be doing that with the EMF'S put out by this proposal.

This proposed intertie will also go through the middle of two hunting areas used by my family for years. I was told at the public opinion meeting that there was no study done on how this proposed intertie will affect the enviroment or wildlife under it. We have no idea what the EMF'S will do to the moose and caribou or what it will do to us eating it. Also what will having more access to these areas do to the herds.

My family owns a campground on Granite Creek. In the feasibility study it states that Granite Creek would be one of the places you could see the intertie from the Highway. It would be an extreme shame to clutter the majestic view of Granite Mt. with an ugly intertie. Almost every visitor at our campground is overwhelmed with the beauty here. I don't think looking up at Granite Mt. and soaring bald eagles with a intertie going through will do much for the visitors opinion of our campground or State. With the price of oil going down this state should be very concerned about the tourism dollars. I know I am!

As I said before I strongly oppose this project. The reason most people live here is to get away from the things that destroy and mangle the natural beauty of our country. I hope you do everything in your power to see that this project does not go through.

We're not talking about power for CVEA. We're talking about a way of life that will be gone forever once a project like this is allowed to happen. We're talking about my families future!

Sincerely,

Barbara Leppanen

Barbara Leppanen
Sutton Resident
Tourism Business Owner

February 22, 1994

Commissioner Blatchford
Department of Community and Regional Affairs
P.O. Box 112100
Juneau, AK 99811-2100

RECEIVED

MAR 1, 1994

DIVISION OF ENERGY, OIL & GAS

Re: Sutton-Glennallen Intertie

Dear Commissioner Blatchford,

In the brief period of time residents have had to study a plan that spent months in planning and revision stages, many flaws and shortcomings have come to light.

Two of the most glaring areas of concern are the projected costs and projected load demand.

Several aspects of the cost estimates bear scrutiny, from hourly labor costs to costs of acquisition for ROW, especially across native lands. The Bradley Lake Transmission Line cost twice as much per mile as the Intertie is estimated for a similar project. Add the completely ignored five million dollar expense that would have to be incurred within five years for a Static Var Compensator necessary for the line to handle the increased load, and all Intertie scenarios become economically unfeasible.

Along with increased costs eroding the feasibility of the Intertie, the load requirements must also be addressed. Only the high and medium-high load scenarios justify the Intertie. The projected load was based on Petro Star's own unsupported predictions for future growth, in turn based on the assumption of a natural gas pipeline. The pipeline provides another opportunity to meet fuel requirements at the source, and still leaves the question of why Petro Star does not co-generate their own power as other refineries do.

The Study determined that the Intertie is conditionally feasible from the standpoint of its impact on the Railbelt systems based on light load conditions. The economic feasibility is based on high-load assumptions. Already, power outages are frequent in the Railbelt Grid communities. Plugging a 135-mile extension cord into an already less than reliable system is a bad idea. Valdez has easy access to more fossil fuel than anywhere in the U.S. Extension cords are the least efficient means of transferring electricity. Seventy percent of the load requirement for the Copper Valley is in Valdez. Economically, environmentally and for better control of their own power, it should be produced in Valdez.

No economic consideration was given to the communities adversely affected by the Intertie. The designated corridor is a popular area easily accessible to recreational users from Anchorage, the largest population center in Alaska. No public meetings were held in Anchorage to obtain comment concerning the Intertie. Considering the cost of the project and the impact on the area, this concerns all Alaskans. The Intertie is a wasteful and unnecessary way for the State to spend \$60 million --- a \$35 million interest-free loan plus \$25 million made available by the legislature as AIDA revenue bonds. The \$35 million interest-free loan itself will cost the State an additional \$76 million it will lose by not charging a nominal 6% interest over the 50-year life of the loan, apparently to reduce power costs to a facility that is capable of creating its own power.

Sutton-Glennallen Intertie, Page 2

Beyond the economic unfeasibility of this plan, the environmental impact on our communities and way of life is highly ignored and underestimated. As previously mentioned, this is a playground accessible to a large percentage of the Alaska population, not just the local residents. The power companies can play down the effects of EMF's, but independent studies contradict the power companies. The EMF's can affect the entire food chain, cancers being the most obvious symptom. Please do not discount the effect on plants, animals and people. This proposed line is in our backyard.

Funding for the Intertie should be withdrawn immediately. The State can certainly use the money towards making up the budget shortfall. Further investigation of the real needs of CVEA reveal there are more practical sources of energy closer to home.

Sincerely,



Marlo "Red" Morton



Michele Morton

P.O. Box 1251
Chickaloon, AK 99674

VERONICA SLAJER
P.O. BOX 101293, ANCHORAGE, AK 99510
WORK PHONE: 272-3034 • HOME PHONE: 274-9974

RECEIVED

MAR 1 1994

DIVISION OF ENERGY/DCRA

February 25, 1994

Herv Hensley
Acting Director, Division of Energy
Department of Community and Regional Affairs
333 West Fourth Avenue, Suite 220
Anchorage, Alaska 99501

Dear Mr. Hensley:

As a lifelong Alaskan, I'm concerned about Alaska's financial future and feel we need to avoid spending state money on more capital projects without adequate assurances of viability. I believe all state-funded projects need to be based on conservative growth and demand projections, especially with state revenues dropping in the future. The recently released draft Copper Valley Intertie Study has its demand alternatives skewed to inappropriately high levels. Substantial growth in the Petro Star refinery load over the next 50 years should only be represented in the highest-case alternatives, as their source of raw material is the same declining oil resource.

The alternative of the Allison Lake project needs to be further investigated. It would produce clean energy with much less impact on the residents of the Copper Valley region. It would be a relatively affordable project more likely to meet the realistic energy demands of the region. Residents of the Copper Valley area want more affordable electricity; they don't care which project it comes from. The political support generated for the Copper Valley Intertie is based on the misperception that the funding will be lost if the intertie isn't built. Of course, the money could be reappropriated to the most cost-efficient alternative.

I hope you will remain diligent in pursuing the most cost-effective alternative to achieving our state's energy goals. Thank you for considering my comments in your final report.

Sincerely,



Veronica Slajer

cc: Honorable Walter J. Hickel, Governor of Alaska
Honorable Edgar Blatchford, Commissioner, DCRA
Honorable Cynthia Toohy, Representative, Alaska State Legislature
Honorable Loren Leman, Senator, Alaska State Legislature

RECEIVED

MAR 3 1994

DIVISION OF ENERGY/DCRA

February 28, 1994
Robert E. Harris
Division of Energy
Department of Community and Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, AK 99501-2341

re: Proposed Sutton to Glennallen Intertie

Dear Sir:

I do not want the Intertie to be built, for it would ruin our environment and cost too much to build. The proposed path of the Intertie would run through scenic country. Hunting would be affected by the Intertie because the Nelchina caribou herd and large numbers of dall sheep inhabit the route of the proposed Intertie. The Intertie may be seen from the Glenn Highway and might cause tourism along the highway to decline. Access roads to the Intertie would also cause destruction of the environment.

The earliest the construction of the Intertie could begin would be 1996. The feasibility study says the Intertie would cost \$45.9 million in 1993 dollars. Due to inflation the costs could rise in the next few years. Also, some people feel the construction costs are underpriced. The estimated costs of the Intertie is \$250,000 per mile. On the Kenai Peninsula there is an electric line called the Bradley Lake Transmission Line. It cost twice as much per mile to build. Considering the rugged terrain along the Talkeetna Mts., how can the CVEA Intertie be built that cheaply? The huge helicopters that would be needed to haul equipment and materials cost from \$3,000 to \$7,500 per hour. Some people think that CVEA electrical rates would drop in cost once the Intertie is built. There is no guarantee that the electrical rates will drop. Rates for MEA customers are dramatically increasing.

The reason CVEA is proposing the Intertie is that Petro Star Refinery wants CVEA to provide power to it. Petro Star Refinery will only be around as long as there is fuel to refine. If oil runs out on the North Slope, Petro Star would have to shut down. There might not be a large business in the Copper Valley area that can use the power flowing through the Intertie.

An alternative is to build a hydroelectric project in the Valdez area. This project would have a positive economic impact and the

environmental impact would be minimal compared to the impact caused by an intertie. Petro Star refines oil into jet fuel, so Petro Star should produce its own energy using oil.

I do not think this project is economically or environmentally feasible and would ruin people's lives and livelihood from Sutton to Glennallen. I hope the intertie is not constructed and the idea is never thought of again!

Sincerely yours,

Zachary Baer

Zachary L. Baer

Sutton School Fifth Grader

P.O. Box 245

Sutton, AK. 99674

RECEIVED

MAR 4 1994

Dear Mr. Blatchford, DIVISION OF ENERGY/DCRA

As a concerned citizen of Anchorage, Alaska resident for the past 10 years, owner of land in Palmer - the mother of a young boy, I'm writing to ask that you not support the Sutton - Glenallen Intertie project coming up for endorsement.

I believe this project would be an unwise use of government funds and create future demands on our population that would tax our economic base and put unnecessary stress on our environment.

I would like to add also, that there is not one person I've talked to about this who supports it!

Thank-you for your conscientious consideration.

RECEIVED

MAR 02 1993

Sincerely,
Antonia Fowler
Antonia Fowler

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Past President of the Alaska Assoc. of
Aerobics Instructors
Multiple Sclerosis Society Mother of
the Year

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MAR 4 1994
DIVISION OF ENERGY/DCRA

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MAR 01 1993

Commissioner Edgar Blatchford
Department of Community and Regional Affairs
P.O.Box 112100
Juneau, AK. 99811-2100

COMMISSION
COMMUNITY & REGIONAL AFFAIRS

Dear Commissioner Blatchford,

I am writing in regards to the proposed Sutton-Glennallen Intertie. This is my first time being so involved in something like this, and frankly I am appalled.

I think the State of Alaska should take this 35 million dollars and use it to start replacing the 900 million dollars you're scrambling to find.

I've lived in Alaska for more than 30 years and I've seen more than enough boondoggles to last a lifetime, the Seward Grain Terminal, the Point McKenzie Dairy Farms, etc., etc., etc.

Everything concerning this intertie seems devious to me. Why is the overall estimated costs per mile of this line \$254,000, when the Bradley Lake line cost twice as much at \$505,000 per mile, not including the right of way clearing.

What about the legal costs that will be encountered in obtaining an easement to cross native lands? I see no mention of this in the study.

Why should the ailing economy of our State assume the burden of a 35 million loan for 50 years at no interest? The citizens of our State cannot afford to subsidize an oil refinery in light of the 2.2 billion dollar shortfall.

This project is obviously destined to incur millions, and possibly even billions of dollars in cost overruns if allowed to be built.

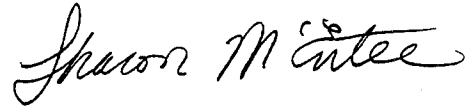
You are not listening to the citizens of this state now, just like you hardly ever have in the past. Only the power brokers and lobbyists for special interests seem to have any influence, and they certainly know what strings to pull!

How many generations does this wasteful, disrespectful of nature attitude have to go on before people will begin to have some good regard for the environment? Until there is nowhere left to

ruin?

Please, listen to your conscience, your inner voice, see the big picture, the past, the present, the future. Not the narrow, short-sighted, tunnel vision that seems to be affecting so many of the politicians of today.

Respectfully yours,

A handwritten signature in cursive script that reads "Sharon McEntee". The signature is written in dark ink and is positioned above the typed name and address.

Sharon McEntee
P.O. Box 4
Sutton, AK. 99674

RECEIVED

FEB 25 1994

P.O. Box 240343
Anchorage, Alaska 99524
February 25, 1994

DIVISION OF ENERGY/DCRA

Mr. Herv Hensley
Acting Director
Division of Energy
Department of Community & Regional Affairs
333 W. 4th Avenue, Suite 220
Anchorage, Alaska 99501-2341

Dear Mr. Hensley:

The draft feasibility study of Copper Valley Electric Association's future energy needs contains some important points to consider.

The study shows a possible reason for an Intertie electrical powerline from Sutton to Glennallen only if the Petro Star Refinery in Valdez more than doubles its current workload. There is no proof or even a cause to believe that Petro Star will ever need to increase its load by such an amount. If they do see that need in the future, there are other possible solutions to their power needs, including: seeking electricity from Alyeska Pipeline, producing their own power from waste heat, or some other alternative energy generation, such as a wind generator.

The idea of building a disruptive powerline (the Intertie) through the Talkeetna/Chugach Mountains at the cost of \$40+ Million, in order to support an unforeseen need for power sounds like an incredible waste of money by the State of Alaska.

Those who live in the region served by Copper Valley Electric Association deserve to have the lowest possible cost of energy. Since their power needs will likely increase slowly over the coming years, the alternatives discussed in the study to build a hydroelectric project at Allison Lake and/or purchase more efficient diesel generators seem to be the more cost-effective and reasonable solutions. Either or both of these power sources will likely result in much lower future costs of energy to CVEA consumers than the very expensive Intertie project.

Serious problems in how the study was done include:

1. The assumption that Petro Star will be operating through the year 2047, when current plans for the Pipeline end some 30 years prior;

page 2

2. The extremely low labor cost estimates for constructing the Intertie, especially when most of the work would be done with helicopters;
3. The underestimated cost per acre of right-of-way acquisition for the Intertie;
4. The low figure for legal costs for obtaining right-of-ways;
5. The elimination of the estimated cost of a \$5-\$6 Million Static Var Compensator, which CVEA consumers will be required to purchase shortly after completion of the Intertie; and
6. The lack of information regarding more efficient diesel generators for CVEA.

It is clear that building an Intertie from Sutton to Glennallen will only cause a financial burden to CVEA consumers and to the State of Alaska. I urge you to recommend the Intertie idea be canceled and that the more cost-effective alternatives for future power needs in the Copper Valley be given the highest attention.

Sincerely,



Michael V. Coumbe

copy to:
Edgar Blatchford, Commissioner
Dept. of Community & Regional Affairs

Robert E. Harris, Director
Division of Energy, Dept. of CRA
333 W. 4th Ave. Suite 220
Anchorage, AK 99501-2341

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MAR 4 1994

DIVISION OF ENERGY/DCRA

February 26, 1994

Dear Mr. Harris;

I am responding to the draft of the Sutton to Glennallen CVA Intertie study. I do recognize that the comment period ended on February 25 but I just received the latest information on the project. I am attending the University of Arizona for spring semester to finish up my graduate degree and will be returning to Alaska middle of May.

I still wanted to take the opportunity to respond to this project. I am very concerned with this project even reaching this stage in the GAME, considering the economy in Alaska. This is entirely a pork project between the upper levels of State Government and the private sector, Petro Star, and interest groups, such as the IBEW. I truly thought Alaska was breaking the sub government stigma, but this project is proof it is only promoting it.

Other private corporations have been responsible to provide their own resources for acquiring power. Green Creek on Admiralty Island, Alyeska, INC, in Valdez. I find it rather suspicious that the State of Alaska is providing special treatment for this company and EXPECTING the people of Alaska to provide the funds.

This project will not only benefit only a particular few interest groups, it will take the benefits away from many. We should be proud of our state to be one of the FEW left in the United States that can offer scenery, clean air, peacefulness, beauty, and feeling of uniqueness. We have a gold mine in those areas which is obvious in the amount of tourists coming to our state each year. Why do we continue to fight upper management to have an ecosystem that is not only providing income, but sustainability through our uniqueness!

I have been living in Tucson for only a short time, but I can not wait to get home to Sutton. The people, noise, crime, and general congestion of the southwest can never compare to the values that I have at home in Alaska. Unfortunately, those values are being raped in the name of a profit for Petro Star and a SELECT few.

This project is not only economically a disaster, but it is an environmental nightmare! The most beautiful area of the entire state, the Talkeetnas, will be tattooed forever. The largest moose concentration is in the area where the line is laid. Two natural mineral licks, which are few in the state, are in the vicinity. Moose rely on these licks during the entire year, especially in the winter. The road access will open this area up

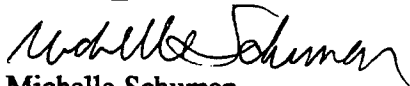
to an over concentration of off road vehicles. The line will cross hundreds of acres of wetlands which store snow melt water in the late spring; beaver, trout, sandhill swans, Canada geese, and many raptors, including the goshawk, rely on this water storage for food, nesting, and resting cover. Grizzlies can move without fear throughout this area. An increase in traffic will no doubt cause endless confrontations which will result in many bear being killed.

I truly don't think that government officials have any sense on what they actually have in Alaska's wilderness! I have traveled throughout the world and there are becoming fewer and fewer places in which pristine wilderness can be found.

The government of Alaska needs to take a stand to major development pork projects. Current policy is moving towards ecosystem management but noone knows how to implement it. Alaska has the chance to still make this management work because WE still have REAL ecosystems! There are better alternatives than the Intertie Project. I would suggest you go anywhere in the United States to try and find what we Alaskans have in beauty and in peace. Our wilderness is our gold mine. Not another boondoggle, pork project schemed up between upper sub government and private interest groups!

This project needs to be stopped. It is about time someone takes a stand to government waste. Please try.

Sincerely,



Michelle Schuman,
Environmental Scientist

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

Herv Hensley
Div. of Energy
Dept. of Community & Regional Affairs
333 9th Ave.
Anch. Ak. 99501

Dear Mr. Hensley:

I have been hearing about the proposed intertie between Sutton & Glennallen for some time now.

I have been opposed to it because of its impact on one of the most scenic highways that I know of, and I've been suspicious of it because of other energy projects that have been dreamt up and scrapped in the past.

Please do not blindly go forward with this project. Look at the economic studies, the realities of growth in the areas to be served.

In reference to the Daily News Article Feb. 27th in Metro - I see many strong arguments to stop the continuance of this project.

0-11-03..

MAR 5 9AM

Get Ramona Barnes off her mission to spend our money on this "pet" project of hers. Look for ways to spend our money on things that make economic sense, and that do not damage what we all agree is Alaska's fantastic Scenery.

R. I've in McCarthy and am developing a new rafting company. I drive that road often. I have no public electricity - we get by with solar power, generators & conservation!!

Thank you for considering this letter -

Sincerely, Howard Mozer
Howard Mozer
P.O. Box 114, McCarthy
Glenallen, AK 99588

RECEIVED

FEB 28 1994

P.O. Box 875
Anchorage, Alaska 99510
DIVISION OF ENERGY/DCRA
(907) 273-5506

February 25, 1994

Robert E. Harris, Director
Division of Energy
Department of Community and Regional Affairs
33 West Fourth Avenue, Suite 220
Anchorage, Alaska 99501

Re: Comments on the Draft Feasibility Study for the Proposed Sutton to Glennallen Power Intertie

Dear Mr. Harris:

Thank you for the opportunity to submit the following comments on the Draft Feasibility Study for the proposed Sutton to Glennallen intertie. Although the study itself is quite voluminous and suffers from many defects, these comments must necessarily be brief as a result of your Department's failure to provide adequate notice and opportunity to comment to me and the rest of the general public in Alaska. Several specific flaws of the study and current process are outlined below; however I request that any additional comments that I am able to make from a more thorough reading of the Study be considered by you and your Department and that they become part of the record in this matter.

The Draft Study Has Been Prepared Without Adequate Notice and Opportunity for Public Comment

Although your Department has purported to comply with the minimum legal requirements in publishing the Draft Study, in practice you have made it impossible for meaningful comment to be made by all of those who have an interest in the project. The Draft Study is a voluminous document, over 1,000 pages in all, with a large amount of technical information. It has taken over one year to complete its preparation. Yet the public has been given merely thirty days to digest this information and assess all of the potential effects on not just the Matanuska Valley, but on the rest of Alaska as well. Such a short comment period is especially egregious considering the enormity of this project and its resulting socio-economic, environmental, and fiscal impacts.

In addition, you have made it especially difficult for the citizens of Alaska to gain access to the Draft Study. Requiring individuals to pay between \$30 and \$50 per copy is outrageous. In doing so you have insured that only a limited number of people have had thorough access to the Draft. It is not enough to simply place copies in selected public

libraries. A large number of the people that will be significantly affected should the intertie be built live in rural areas that make it an inconvenience, at best, for them to spend long hours over this document at your appointed place of viewing. When their only alternative is to pay a large fee to exercise their right to view a public document, you have presented no real choice at all for access. Considering the more than \$400,000 spent in the completion of the Draft, it is unconscionable that you would exact such a toll on the public.

I am among the public that has had to travel to a public library in order to make sense of the Draft Study in such a short amount of time. Although these comments are the results of my general impressions of the Draft, more time is necessary to comment in a meaningful way. Therefore, I request that you consider, as part of the record, any supplement to these comments that I submit within a reasonable time.

The Primary Benefits Have Been Improperly Assumed

For the intertie to be logically feasible at all, the future energy demands of the Petro Star refinery must increase dramatically. Yet the Draft Study fails to determine if this will indeed be the case. Such a benefit cannot simply be assumed as the rosier scenario that some would prefer to see. It must be an objective probability that it will occur. As long as that is not the case, the final Study may not depend on Petro Star's vague hints at future expansion to boost CVEA's load forecast. Impacts To Property Values Have Been Ignored

The Draft Study completely fails to consider the costs that will result from the impacts to property values that will be imposed by the intertie. Although most of the potential routes for the transmission line will cross public land, the value of adjacent and nearby private lands will be impacted negatively. Not only will the overall worth of such property decrease, the public itself will be directly liable for such a decrease through the inverse condemnation proceedings that will result against the State. This cost must also be considered in the overall feasibility of the intertie.

The Social Costs of the Project Have Not Been Considered

The Draft Study does not consider the social costs of the proposed intertie. This failure, if unremedied, will result in an erroneous determination on your part, since the social costs of the project must necessarily be weighted on the cost side when determining feasibility.

The Draft Study Ignores Significant Potential Impacts on Tourism

The Draft Study brushes aside the potential impacts on tourism related businesses as "likely to be minimal." Yet, a large number of businesses in the Matanuska Valley have increasingly relied on tourism in recent years, and their numbers are growing. This is no

Draft Feasibility Study Comments
February 25, 1994
Page 3

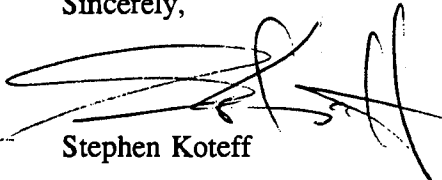
surprise, since the Valley is an ideal recreational destination for both out-of-state tourists as well as Anchorage residents. The major reason for this is that the Valley remains an unspoiled and natural area of Alaska. The presence of a large power intertie would significantly change the character of the Matanuska Valley and lead to a decline in tourism-related activities. Indeed, the Draft notes that the intertie will have a "significant impact" on "scenic and recreational resources" in the Valley. The Study must take these negative effects into account to determine the project's feasibility.

Costs From Impacts On Wildlife and the Environment Have Not Been Considered

Although the Draft Study fails miserably to adequately consider resulting environmental impacts, there are significant costs associated with them. Yet the Draft rather cavalierly assumes that there will be no cost from such adverse effects. To simply fail to consider a profound and certain impact and subsequently assign no cost value to that impact is arbitrary and capricious. In addition, it is certain that significant costs will be incurred as a result of further environmental study and mitigation. This must also be factored into the feasibility analysis.

Thank you again for your consideration of these comments. Clearly, even absent the significant considerations mentioned above, the Draft Study reveals that the proposed Sutton to Glennallen intertie is not economically feasible. Therefore, the Department of Community and Regional Affairs must make a determination that the proposal is not feasible, and save the citizens of Alaska the overwhelming cost of providing a limited additional convenience to very few people.

Sincerely,



Stephen Koteff

DCRA

Commissioner Edgar Blatchford
P.O. Box 112100

Juneau, Alaska, 99801

JAN 19 1993

Dir. Sir

While reading my ^{COMMUNITY & REGIONAL AFFAIRS} little newspaper ^{THE} other day (Copper River Country Journal) I came across a letter about the negative effects of the proposed Sutton Glennallen electric power intertie.

I want you to know I am against it also. We've been destroying the planet for so long most of us think its the only way to live.

Lets try to create a new community + or region that isn't more of the same. Arent you getting bored with the steam roller mentality? I always have been.

Thank you for your time it indeed you took it.

Sincerely Harry J Roehrig

Harry J Roehrig
P.O. Box 223
COPPER CENTER
AK, 99573

Dear Commissioner Blatchford:

RECEIVED

MAR 1 1994

I am opposed to the construction of Sutton to Glenallen intertie because:

DIVISION OF ENERGY/DCRA

Name: Lara Sox

Address: HCOM Box 9602
Palmer, AK 99645

Dear Commissioner Blatchford:

RECEIVED

MAR 4 1994

I am opposed to the construction of Sutton to Glenallen intertie because:

DIVISION OF ENERGY/DCRA

OF THE UNSIGHTLYNESS IT WOULD BRING TO THIS PRESTIGE ENVIRONMENT. (WE ALL GO NORTH TO RELAX + ENJOY THE VIEW). ALSO THE DANGER INVOLVED + PROVEN ABOUT THE SPILLAGE OF POWER LINES + PEOPLE

Name: TAMI POWELL

OR ANIMALS LIVING NEAR BY.

Address: P.O. BOX 111605
ANCHORAGE, AK 99511-1605



I USE TO BE A VALLEY RESIDENT!

Dear Commissioner Blatchford:

RECEIVED

MAR 1 1994

I am opposed to the construction of the Sutton to Glenallen intertie because: IT makes no sense economically or environmentally. Please oppose it!

DIVISION OF ENERGY/DCRA

Name: Alex Harris

Address: HCOM Box 9602
Palmer, AK 99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: This is a very fragile, beautiful scenic highway. This intertie would be an eye sore. What about the tourist industry?

Name: James Roberts

Address: 3605 Arctic Blvd #2656
Anchorage Alaska 99503

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:
1) I believe Ptarmigan is the only beneficiary.
2) a Trans line of this length is inefficient + costly.
3) I strongly believe that water is our most important future resource. (Build a Dam not a cord)

Name: TED W. ANDERSEN

Address: BOX 334
SUTTON AK. 99674
Ted Andersen 745-8111

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: Environmental Damage, interference w. Vital subsistence Hunting grounds, Health issues, Monies could easily be used on more immediate problems facing stampouts today - esp. schools.

Name: TED W. ANDERSEN

Address: BOX 334
SUTTON AK 99674
Ted Andersen 745-8111

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: the cost and the impact on the land and wildlife.

Name: Mary Martu

Address: Anchorage, Ak. 99501

RECEIVED

MAR 4 1994

DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: Charles Hedges

Address: 3784 Mark Dr
Wasilla AK 99654

RECEIVED

MAR 2 1994

DIVISION OF ENERGY/DCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: *It is a Hacked/Modem Boondoggle and it violates Chickaloon Village Environmental Protection Ordinance.*

Name: DAVID HARRISON A.G.
CHICKALOON VILLAGE

Address: HC 04 Box 9880
Palmer, Alaska

99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: It damages the environment. It also trespasses on Native Lands.

Name: George ONDULA Sr.

Address: P.O. Box 670726
CHUGIUK AK 99567

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

I came to Alaska to enjoy the landscape and beauty and now adventures. I do not want the intertie as I fear it will damage the environment of this region.

Name: Anita Acevedo
Address: 1919 Hillcrest Drive
Anchorage, AK 99517

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

It makes no Economic or Ecological sense. It is BAD + STUPID Look At a Trump system

Name: GARY Harrison *Gary Harrison*
Address: Box 1105
AK 99677

RECEIVED
MAR 10 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

I BELIEVE THE DAMAGE TO THE ENVIRONMENT IS NOT WORTH THE "SO-CALLED" ENERGY BOOST IT WILL MAKE AVAILABLE.

Name: *I DO NOT WANT THE INTERTIE TO BE BUILT!*

Address: ANTHONY STALON
917 W. 75th AVE, #3
ANCHORAGE, AK 99518
MAR 10 1993
COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

*it's too expensive
not necessary; use alternative power sources in Valley. It's a boondoggle*

Name: Helen Woodings
Address: 211 S. Bailey
Palmer, AK 99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

① We need to put \$900 million back into the reserve fund (as per Judge Reese); ② the electromagnetic field caused by the lines

Name: *has been linked to cancer; ③ it will wreck the most valuable tourist resource in the state.*

Address: Sage Cohen (guide + teacher)
1236 Nelchina St
Anchorage AK
99501

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen Intertie because:

Name: TAMMY BUCHER
Address: 3651 W. 74th
ANCHORAGE, AK. 99502

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:
① FEASIBILITY STUDY HAS PROVEN IT UNFEASIBLE. ② THIS MEANS A \$950 BUDGET CRISIS.

Name: JEFF ARNOLD
Address: BOX 121
SUTTON, AK. 99674
RECEIVED
FEB 10 1993
COMMISSIONER
COMMUNITY & REGIONAL

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Not enough research & development into small electrical generation plants in Copper Valley has been done. There are other ways to

Name: M. Staggs
Address: PO Box 1170, Chickaloon, AK 99674

get electricity than across the state! Also health studies should prohibit this type of cross-country movement.

Robert E. Harris

RECEIVED

Dear Mr. Harris:

FEB 25 1994

DIVISION OF ENERGY/DCRA
I'm concerned about the State's budget crisis. The Sutton-Glenallen Intertie is a wasteful and unnecessary way for the State to spend \$60 million. Please cut this project as a first step toward responsible State spending. Thank you.

Sincerely,

Karen Jettmar
618 West 14th Ave
Anchorage, AK 99501

Dear Robert E. Harris,

I'm concerned about the state budget crisis. The Sutton - Glenallen is a wasteful and unnecessary way for the state to spend \$60 million. Please cut this project as a first step toward responsible state spending.

RECEIVED

FEB 15 1994

DIVISION OF ENERGY/DCRA

Thank you
Joel P. Larson

PO BOX 3891
Palmer AK 99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

This is unlimited benefit to the Copper Valley residents and alternative to the intertie should be sought. I am concerned over the quality of the study. I feel CEA is influencing the Consultant (see). This is supposed to be an independent & impartial study. The Glenn

Name: Highway is one of the most scenic Hwy's in Alaska character of the valley forever. It will affect tourism and Alaskans alike. The local residents will have to live with the concern of cancer, along with the beauty of the valley being damaged forever. with falling oil prices and last springs illegally appropriated money, this is a good chance to re-earn the project. Put them millions of dollars to better use around the state. A use that will benefit more people and not destroy such a beautiful valley that is almost inaccessible to so many people. Please don't ruin it with the huge, ugly, noisy intertie. Thank you
Debbie McAttee, 1728 Old John trail, Fairbanks AK 99709

Dear Mr. Blatchford,

Nov. 6, 1993

Please consider my opposition to the proposed above-ground intertie from Copper Valley to the Matanuska Valley. The project represents a real intrusion on our area and population by pack-based funding forcing activities. It won't do much good, but will be a real eye-sore in South Central Alaska. Use the money for school funding instead.
- Mike Benson

Shirley Suchman
P.O. Box 254
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:
I think that PetroStar is a smoke screen. The real reason for this intertie is HAARP. NO thought is given to the environment or any of us who reside in the area. If Washington wants this copper valley by way of Allison Lake or Silver Lake ~~del~~ on area already mucked up by power lines and the pipeline, why tear up a beautiful pristine wilderness area when other options are available and at lower costs. The Feasibility study does not show the real costs of an intertie, it is just another part of the smoke screen.

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:
FOR HEALTH REASONS of my CHILDREN and GRANDCHILDREN who LIVE IN SUTTON. PETRO STAR CAN USE ANOTHER ALTERNATIVE!

Name: Joyce Metzger

Address: 801 NORTH SHORE
WASILLA, ALASKA 99654

FEB 24 1993

COMMISSIONER'S OFFICE
COMMUNITY & REGIONAL AFFAIRS

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: the costs for construction will be much greater than the \$15.9 million. There will be litigation. All the people of Alaska will end up paying for it.

Name: Craig Baer

Address: Box 245
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: Bill Boyle

Address: AC-03 Box 8300
PALMER, ALASKA
99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:
feasibility study does not support it. Growth in Copper Valley is not high enough to support it no matter what Petro Star or CUEA says. Also with declining oil

Name: (which means less business for PetroStar)

Address: and with the budget crisis, Alaskans cannot afford this boardoggle

Mary Barrett
P.O. Box 124
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: IT IS SIMPLY NOT FEASIBLE UNDER THE COST PROJECTED!

Name: CHARLES WANSOR

Address: Box 261
SUTTON, ALASKA
99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: James Tapley

Address: Box 175 Palmer AK
99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: SANTA CLARK
2805 DAWSON ST

Address: Suite 101
ANCHORAGE, AK. 99503

Dear Commissioner Blatchford: **RECEIVED**
I am opposed to the construction of the
Sutton to Glenallen Intertie because:

Name: Catherine J. Wenzor
Address: P.O. Box 12
Sutton, Ak. 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
It would severely damage the
landscape & adversely affect
the areas will be being
I favor only sustainable energy
wind water sun development.
Name: Suzanne Barnard
Address: Po Box 55
Sutton, AK, 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
THIS IS AN EXPENSIVE PROJECT THAT WILL
HAR THE LAND FOREVER. THE SCENIC VALUE
OF THE LAND MUST BE PROTECTED.
Name: ALLEN K. MANSFIELD
Address: HCO4 Box 9625
PALMER, AK. 99645
Allen K Mansfield

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
1) alters character of highway communities
unnecessarily
2) spends scarce state revenues that
could be utilized elsewhere
Name: Lynne Woods
Address: Box 37
Sutton, AK 99674
3) very concerned about EMF's.

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
Name: Catherine Schmidt
Address: 1231 Timberlane
Anch. AK 99505

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
1) Lower property value of my home!
2) Negative impact to wildlife, tourism, ENV,
3) Bad credit ratio
Name: Mark Clark
Address: PO Box 242
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the
Sutton to Glenallen intertie because:
NOT COST EFFECTIVE - MAINTENANCE
COSTS ARE UNREPORTED
Name: Eleanor Thompson
Address: 224 E. MANOR
ANCHORAGE 99501

This will destroy the living habitat of
the animals (ie calving area of Dall sheep,
moose - etc)
Dear Commissioner Blatchford:
I am opposed to the construction of the
Sutton to Glenallen intertie because:
it is extremely unfeasable financially
and unsafe for the people living + //
recreating around it
Name: Karen Jarrett
Address: 4000 E 60th
Anchorage, AK
99507

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: FOR MANY REASONS THAT I WILL DETAIL FOR YOU AND THE DCRA IN PUBLIC MEETINGS IN THE FUTURE.

Name: WARREN KEOGH

Address: P.O. BOX 1166
CHICKALOON, AK 99674

57965 AK Palmer, AK 99645
L207
M. Jones

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

I believe it would be a wasteful expenditure of public funds, when Petstokan Name: can cogenerate it own power Address: for much less the cost. I further believe the inter-tie would mar a beautiful & presently virtually unspoiled landscape. Please put this money to better use.

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: it will have an adverse effect on the quality of life in this area, it is a project which uses state monies in park-barrel fashion - benefiting a few while destroying most scenic, accessible areas.

Name: Nancy Beetels

Address: P.O. Box 263
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: Suel D. Jones
Address: HC 03 Box 8460
Palmer, AK 99645

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: It is unnecessary, too costly, and would spoil the beauty of the Antares valley.

Name: Howie Petersen

Address: Genevieve Selvey
Sutton, AK 99674

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because:

Name: Daniel T. Wanson
Address: P.O. Box 12
Sutton, AK 99674

RECEIVED
MAR 2 1994
DIVISION OF ENERGY/UCRA

Dear Commissioner Blatchford

I am opposed to the construction of Sutton to Glenallen intertie because:

Name: John Michael Wanson

Address: P.O. BOX 12
SUTTON, AK. 99674

RECEIVED
MAR 2 1994
DIVISION OF ENERGY/UCRA

Dear Commissioner Blatchford:

I am opposed to the construction of the Sutton to Glenallen intertie because: I am concerned the actual cost will be more than any free interest loan or state grant and will not reduce rates as just specified. In fact recent I believe from Clayton Name: Donna Larson is hoping to only stabilize them. There are no quarries in the area. Also

it is an eyesore. off on the road. And for tourism? Makes it worse - the eyesore!

CHICKALOON VILLAGE
P.O. BOX 1105
CHICKALOON, ALASKA 99674
(907) 745-7184 or (907) 745-0505

RESOLUTION 92-09-26

RESOLUTION REGARDING ACTS OF ENVIRONMENTAL CONTAMINATION

WHEREAS, Chickaloon Village is a distinct, independent traditional community, and is qualified to exercise powers of self-government by reason of its original traditional tribal sovereignty as passed down from its ancestors since time immemorial; and,

WHEREAS, the Chickaloon Village Traditional Council is the governing body of Chickaloon Village as recognized by Chickaloon Village and the United States of America, and is responsible for protecting the health, security, and general welfare of Chickaloon Tribal members; and

WHEREAS, a basic sacred principle of the our culture is to defend the well-being of our Mother Earth, and the natural world upon which all life depends; and

WHEREAS, Chickaloon Village maintains relationships based on family ties as well as peace, friendship and mutual support with Indigenous villages and Nations throughout Alaska; and

WHEREAS, The Chickaloon Village Traditional Council is well aware of past and current acts of environmental contamination, carried out by the United States of America, military and other governmental and corporate entities with complete disregard for the People and the Natural environment of Alaska, as demonstrated by the nuclear wastes buried by the Federal government in 1961 near the village of Point Hope, and

WHEREAS, the United States of America has consistently failed to disclose the full extent of its hazardous, toxic, medical and nuclear testing, waste programs and sites in Alaska,

THEREFORE BE IT RESOLVED that the Chickaloon Village Traditional Council hereby demands that the United States of America and its subdivisions; the State of Alaska; corporations; and other private or public entities immediately **CEASE AND DESIST** any and all activities in Alaska which could result in further contamination of land, water, air and other living things by radioactive, toxic, hazardous or any other health-threatening substances; and

BE IT FURTHER RESOLVED that the United States of America (the Army Corps of Engineers, Environmental Protection Agency, etc.) and the State of Alaska Department of Environmental Conservation immediately reveal to Chickaloon Village, other Villages, and the general public, the exact location, history and contents of ALL possible or known hazardous, toxic or radioactive sites in Alaska, including

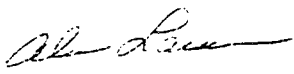
but not limited to: dumps; disposal sites; storage sites; test or experimentation sites and programs; spill or accident sites; and any other locations in which hazardous, toxic and/or radioactive substances have ever been used; and

BE IT FURTHER RESOLVED, that the responsible party(s) and/or agencies must undertake immediate, complete clean-up of all such sites, and provide full compensation to victims who have suffered any form of injury resulting from this contamination; and

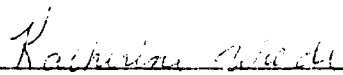
BE IT FURTHER RESOLVED, that the Chickaloon Village Traditional Council supports all efforts by the Point Hope Traditional Council to obtain full disclosure of existing pertinent information, to protect the health of its members, and to seek full restoration and restitution from those responsible for this genocidal act of environmental contamination; and

BE IT FINALLY RESOLVED, THAT THE CHICKALOON VILLAGE TRADITIONAL COUNCIL RECOGNIZES THE JURISDICTIONAL RIGHTS OF ALL TRADITIONAL INDIGENOUS VILLAGES, TRIBES AND NATIONS AND THEIR AUTHORITY TO PROHIBIT ACTIVITIES WHICH POSE A KNOWN OR SUSPECTED THREAT TO THE WELL-BEING OF THEIR MEMBERS AND TRADITIONAL LANDS, NOW OR IN THE FUTURE.

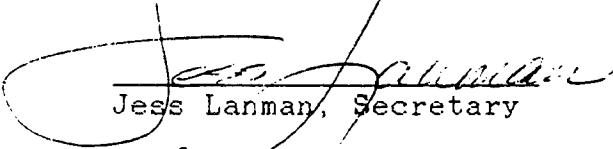
Duly considered and approved September 26, 1992.



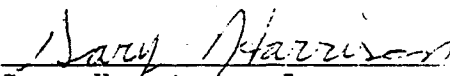
Alan Larson, Chairman




Katherine Wade, Elder



Jess Lanman, Secretary



Gary Harrison, Treasurer



George Ondola, Elder

CHICKALOON VILLAGE
P.O. BOX 1105
CHICKALOON, ALASKA 99674
(907) 745-7184
(907) 745-0505

RESOLUTION 92-07-03

WHEREAS, Chickaloon Athabascan Village is a distinct, independent political community, and as such is qualified to exercise powers of self-government by reason of its original tribal sovereignty as passed down from its ancestors since time immemorial; and,

WHEREAS, The Chickaloon Traditional Council is the duly constituted governing body of Chickaloon Village as recognized by Chickaloon Village and the Federal Government of the United States; and

WHEREAS, under the Constitution of Chickaloon Village, Chickaloon Tribal Council is charged with the duty of protecting the health, security, and general welfare of the Chickaloon Tribe and all Tribal members; and

WHEREAS, the Sovereign Dena'ina and Ahtna Athabascan People, the ancestors of the current peoples of Chickaloon Village, have traditionally used, depended upon and lived in harmony with the land, water, plant and animal resources of Chickaloon's traditional subsistence area since time immemorial; and

WHEREAS, it is the understanding of Chickaloon Village that we were given by our Creator the responsibility and obligation to safeguard the well-being of the natural environment of this area as a sacred trust necessary to the survival of our future generations; and

WHEREAS, it is the responsibility of the Chickaloon Council to take action to protect the well-being, health and right of subsistence and survival of its present and future Tribal members, and it is our understanding that these are inseparable from the protection of the Natural environment in which we live; and

WHEREAS, the responsibility for protecting the environmental and human health of our traditional subsistence and jurisdictional area predates and supersedes that of any subsequent governmental authority which has claimed and/or assumed jurisdiction over lands within this same area of Alaska; and

WHEREAS, Chickaloon Village has never relinquished its sovereignty or jurisdiction to any other governmental body (whether National, State, borough, etc.), and

WHEREAS, for the above stated reasons, the protection of the natural environment is an integral part of the essential governmental function of Chickaloon Village Traditional Council; and

NOW THEREFORE BE IT RESOLVED, Chickaloon Village Traditional Council enacts the following ENVIRONMENTAL ORDINANCE to protect its traditional subsistence, linguistic,

cultural and jurisdictional territory.

CHICKALOON VILLAGE ENVIRONMENTAL PROTECTION AUTHORITY

I. UNLAWFUL ACTS:

a. It shall be unlawful for any individual, whether a member of Chickaloon Tribe, another Native Tribe or a non-Native person, any group of persons, corporation, or governmental agency to contaminate, or cause to be contaminated the air, land and/or water within Chickaloon's traditional jurisdictional area with any substance known or suspected of causing damage or harm to humans (living or not yet born), animals, plants, air or water-table ; such substances include but are not limited to the those substances included in the Environmental Protection Agency's list of known toxic and/or radioactive substances. (site EPA document)

b. It shall be unlawful for any person etc. to engage in any private or commercial activity (i.e. mining, dumping, toxic waste disposal and transport, weapons testing, etc) which has the potential for such contamination without applying to the Chickaloon Village Council for a permit. Such an application must include a thorough environmental impact statement. Chickaloon Village also requires that copies of all such pending permits and applications currently filed with the State of Alaska be submitted to the Chickaloon Council for review.

II. MONITORING AND ENFORCEMENT

Responsibility for monitoring and enforcement of this ordinance and related environmental protection activities will currently be the carried out by Chickaloon Village's Fish and Game Department under the supervision of the Traditional Council, until that time when Chickaloon Village's law enforcement division is fully operational. Chickaloon Village's law enforcement division will include at least one Environmental Protection Officer.

III. REMEDIES

a. Chickaloon villages encourages all acts to restore the environment in areas which have been damaged due to past negligence or neglect, and to prevent future environmental destruction. These include, but are not limited to:

1. recycling of all recyclable substances
2. clean-up of toxic sites, dumps, etc.
3. development of alternative energy sources which are non-polluting
4. use of natural and non-polluting products and substances as alternatives to those that are

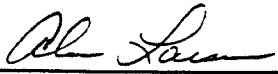
- pollution causing
5. Providing education to tribal members and non tribal members residing within Chickaloon's jurisdictional area regarding environmental protection and alternatives to contamination-causing actions.
 6. reintroduction of traditional ways of life, subsistence relationships and traditional practices regarding the management and protection of environmental resources

IV. REPARATIONS

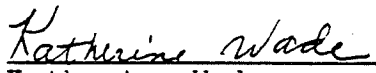
1. Any person, etc. convicted in Chickaloon Traditional Tribal Court for an act described in section I. will be held responsible for an immediate halt to the action; furthermore the individual, corporation, etc. will be held responsible and financially liable to repair or otherwise restore the damage caused.

2. Furthermore, the person or persons may be remanded for criminal charges in federal court at the discretion of the Chickaloon Village Tribal Court.

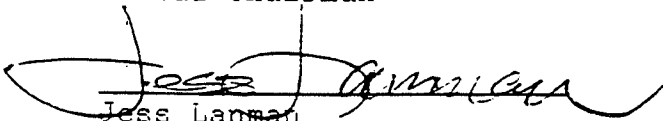
Duly considered and approved March 7, 1992.



Alan Larson
Tribal Chairman




Katherine Wade
Tribal Elder



Jess Lanman
Tribal Secretary



Gary Harrison
Tribal Treasurer



George Ondola,
Tribal Elder

RECEIVED

FEB 23 1994

A RESOLUTION OF THE GLACIER VIEW COMMUNITY COUNCIL
REGARDING THE STATE OF ALASKA, DEPARTMENT OF COMMUNITY
AND REGIONAL AFFAIRS, DIVISION OF ENERGY, COPPER VALLEY
INTERTIE FEASIBILITY STUDY DRAFT REPORT, JANUARY 1994

Whereas the Glacier View Community Council adopted a resolution on April 7, 1993 making recommendations to the Alaska Energy Authority concerning the Copper Valley Intertie Feasibility Study (Sutton to Glennallen Intertie); and,

Whereas the April 7, 1993 Glacier View Community Council resolution recommended the intertie be north of Anthracite Ridge through the backcountry; and,

Whereas the proposed design location of the intertie as currently routed will adversely impact Glacier View Community Council businesses, residents and property owners; and,

Whereas the Draft Feasibility Study preferred route parallels the highway along the south face of Anthracite Ridge crossing Purinton and Cascade Creeks despite community preferences for the Boulder Creek route; and,

Whereas using the Draft Feasibility Study's route selection evaluation criteria supports the Boulder Creek route over the preferred route considering the following evaluation criteria:

Cultural resource conflict, section 4a on map page 2 the preferred route parallels the Nelchina trail, indigenous peoples were believed to travel along Anthracite Ridge;

Visual Intrusion, private property and residences located along the highway in the Cascade Creek region;

Scenic Viewshed, the intertie will be visible from the highway in the Cascade Creek region;

Unstable Slopes, Anthracite Ridge is an unstable geologic formation as evidenced by frequent avalanching of rock on the road in the Long Lake area;

Stream Crossings, along the preferred route there are no less than 7 stream crossings;

Increased Access, close proximity of preferred route to the highway and trailheads will heavily impact the surrounding land,

and wildlife resources;

Glacier View electrical substation, Matanuska Electric Assn, testified at the Glacier View Draft Feasibility Study public hearing last week that MEA has no future plans for locating a substation in the area,

Whereas the draft feasibility study does not show a planned location of access roads, or evaluate the impact the roads will have upon adjacent lands by increasing vehicular access, thus putting additional pressure on the fish and wildlife resources; and,

Whereas the draft feasibility study assumes a minimum safe distance of 600 feet from residences exposed to possible cancer causing electromagnetic fields which is based upon a (138 KV) transmission line, despite the legal authorization for the intertie to be upgraded to a higher voltage; and,

NOW THEREFORE BE IT RESOLVED that the Glacier View Community Council recommends;

The utility enter into a take or pay contract with Petro Star Refinery before an intertie is constructed,

BE IT FURTHER RESOLVED that the Glacier View Community Council recommends:

Access Roads be minimized if not entirely deleted and

The Boulder Creek route be designated as the only acceptable route in the final Feasibility Study, and absolutely no highway route, and

The safe clearance distance be designed for the line to be upgraded to a higher voltage.

Adopted be the Glacier View Community Council this 16th day of February, 1994.

Katherine Wright, Secretary of the G.V.C.C. 745-4763

Katherine Wright 2-17-94

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FEB 25 1994

DIVISION OF ENERGY/DCRA

GREATER COPPER VALLEY CHAMBER OF COMMERCE

RESOLUTION IN SUPPORT OF
THE SUTTON TO GLENNALLEN INTERTIE PROJECT

WHEREAS the Greater Copper Valley Chamber of Commerce is located within the Copper River Basin, and the people and businesses represented by the Chamber reside in the area between Paxson and Valdez, and from Sheep Mountain to Slana, which is primarily within the service territory of Copper Valley Electric Association and are therefore member/owners receiving central station service from Copper Valley Electric; and

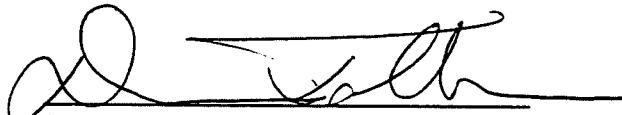
WHEREAS Copper Valley Electric Association's rates are among the highest unsubsidized electrical rates in the State of Alaska; and

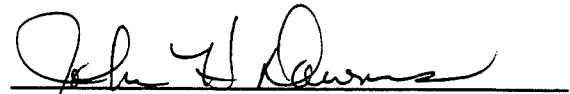
WHEREAS Copper Valley Electric Association has pursued many alternatives to facilitate rate stability and possibly rate reduction for its member/owners, and as a result of an economical reassessment of various proposals, it was determined to be in the best interest of the members that Copper Valley Electric pursue the design and construction of the Sutton to Glennallen intertie; and

WHEREAS the Sutton to Glennallen intertie will benefit the people of the Copper River Basin and the City of Valdez, through future rate stabilization and possibly a rate reduction, it would reduce or possibly eliminate the need for fossil fuel generation and the exhaust emissions, and would support the economical development of our area; now therefore

BE IT RESOLVED, the Greater Copper Valley Chamber of Commerce supports Copper Valley Electric Association's efforts and respectfully requests the Department of Community and Regional Affairs; Division of Energy to support and approve the loan funding for the design and construction of the Sutton to Glennallen intertie.

Approved and signed this 14th day of October, in Glennallen, Alaska.


Secretary (Attest)

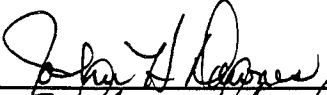

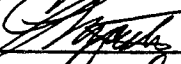


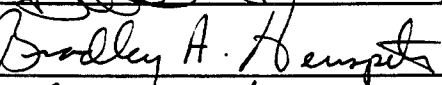


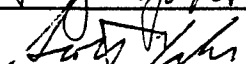
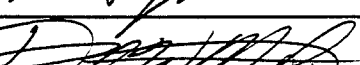



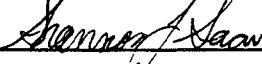
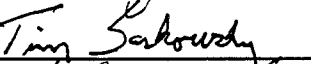
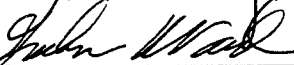
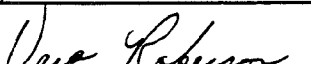

President

(seal)

GREATER COPPER VALLEY CHAMBER OF COMMERCE
P. O. BOX 469
GLENNALLEN, ALASKA 99588

RECEIVED
FEB 25 1994
DIVISION OF ENERGY/DCRA

We the undersigned members of the Greater Copper Valley Chamber of Commerce support the construction of the Sutton-Glennallen Intertie. The Energy Division is strongly urged to support the line as well. The long term economic benefits far outweigh the costs of the project. Let us remain viable business entities by providing stable power rates to the Copper Valley region. This can only be done with the construction of this line.

SIGNATURE	PRINTED NAME	ADDRESS	PHONE #
	John H Downes	Box 309 Copper Ltr	822-3444
	STAN STEPHENS	BOX 1297 VALDEZ	835-4731
	L. ALAN LEMASTER	PO Box 222 COYCONA, AK	99586
	DARRA SUREVE	PO Box 2053 VALDEZ AK	835-4734
	DUNE BOE	BOX 3410 VALDEZ AK	835-374
	Brad Henspeter	Box 98 Copper Center AK	822-397
	CONNIE SACKETT	Box 234 Glennallen	822-3101
	Suzie Johnson	Box 1103 Valdez AK	835-2984
	Scott Yahr	Box 223 Glennallen	99588 822-5212
	Douglas W. Neely	Box 88 Glennallen AK	99588 822-3594
	Reid Straabe	BOX 710 Glennallen AK	822-305
	Dawn Oaks	P.O. Box 5 Glennallen AK	822-3205
	SHANNON SAAVEDRA	P.O. Box 381 Glennallen AK	822-3626
	Tim Saskowsky	P.O. Box 495 Glennallen, AK	822-3567
	Graham Ward	M. 10 173 Steen Hwy	822-3065
	Vera Roberson	Box 375 Glennallen, AK	822-3363
	Kenneth Roberson	Box 375 Glennallen, AK	822-3363

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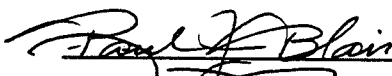

SIGNATURE

PRINTED NAME

ADDRESS

FEB 25 1994 PHONE #

DIVISION OF ENERGY/DCRA

 JEREMY WEED Box 224 GAKONA 8223524
 Brad Haines COPPER CENTER 130130 - 820-3467
 Benny Waggoner Copper Center, AK P.O. E 8233266
 Karleen Waggoner Copper Center, ak Box E 822-3266
 Jeanne Sunder Copper Center Box 379 822-3674
 ROBERT E. SUNDER P.O. Box 379 OR 822-3088
 Linda L. Lanegan Linda L. Lanegan P.O. Box 28 Glennallen AK ⁹⁹⁵⁸⁸ 822-528
 Bruce Cain BRUCE CAIN BOX 303 GLENNALLEN AK 99588
 John M. Baalke John M. Baalke Box 237 Glennallen, AK 99588
 Maxine Becker MAXINE Becker Box 359 Copper Center, AK 99573
 Judy Hargreaves Judy Hargreaves Box 617 Glennallen AK ⁹⁹⁵⁸⁸
 C.P. Bartley C.P. Bartley HC03 Box 8758, Palmer, AK 99645
 Rosemary A. Bartley Rosemary A. Bartley HC03 Box 8758, Palmer AK ⁹⁹⁶⁴⁵
 Dan L. SAILORS DAN L. SAILORS Box 286 GAKONA, AK 99586
 Jeanne Ekemo Jeanne Ekemo Box 28C GAKONA AK 99586
 Roy S. Ewan Roy S. Ewan Box 215 Gakona, AK 99586
 G. Glenda Ewan G. Glenda Ewan Box 215 Gakona, AK 99586
 LINDA WEIB LINDA WEIB BOX 224 GAKONA 99586
 Vera Blair Vera Blair Box 168 Glennallen 99588
 PAUL BLAIR Box 168 -GLENNALLEN AK 99588
 DENNIS D. POFF box 322. Glennallen 99588
 Colleen Granger Colleen Granger Box 671 GLENNALLEN 99588
 Donna Tollman Donna Tollman Box 377 Glennallen 99588



Matanuska-Susitna Borough

350 EAST DAHLIA AVE, PALMER, ALASKA 99645-6488 • PHONE 745-9683

BOROUGH CLERK'S OFFICE

February 23, 1994

RECEIVED

FEB 25 1994

DIVISION OF ENERGY/COHA

Mr Herv Hensley
Director
Division of Energy
Alaska Department of Community
& Regional Affairs
333 West 4th Avenue, Suite 220
Anchorage, AK 99501-2341

Dear Mr Hensley:

Enclosed for your information are copies of two resolutions regarding the Copper Valley Intertie Feasibility Study Draft Report of January 1994. The Planning Commission passed Resolution 94-12 (AM) on February 18 and the Matanuska-Susitna Borough Assembly passed Resolution 94-021 (AM) on February 22, 1994.

As you are aware, there is considerable opposition to the proposed intertie from Matanuska Valley communities. The borough Planning Commission and Assembly share their concerns and, like our residents, support alternative cost-effective sources to supply energy needs to Copper Valley residents.

Sincerely,

A handwritten signature in cursive script that reads "Linda A. Dahl".

LINDA A. DAHL
Borough Clerk

PLN/ldk/JD414

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION 94-12 (AM)

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION REGARDING THE STATE OF ALASKA, DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS, DIVISION OF ENERGY COPPER VALLEY INTERTIE FEASIBILITY STUDY DRAFT REPORT, January 1994

WHEREAS, the Matanuska-Susitna Borough Assembly adopted Resolution 93-035 on April 13, 1993 making recommendations to the Alaska Energy Authority concerning the Copper Valley Intertie Feasibility Study; and

WHEREAS, the Copper Valley Intertie Feasibility Study Draft Report compiled by R.W. Beck & Associates was issued in January 1994; and

WHEREAS, in Resolution 93-035 the Assembly expressed concern about the potential impacts on health, tourism drawing potential, fish and wildlife habitat, and wetlands; and

WHEREAS, proposed route alternative D attempts to mitigate health concerns by locating the 138-kV intertie more than 600 feet from homes and other occupied structures; and

WHEREAS, the Environmental Report prepared by Dames & Moore, Inc. acknowledges that "the most significant impacts resulting from this project would be visual and recreation impacts in the project area"; and

WHEREAS, Dames & Moore, Inc. recognizes that "the Matanuska Valley is a highly scenic area with many businesses in the small communities oriented toward tourism" and "use of a backcountry route could mitigate the visual impacts along the scenic Glenn Highway.."; and

WHEREAS, Dames & Moore, Inc. states that use of a backcountry route "could still result in an impact on recreational users.."; and

WHEREAS, although a stated route selection criterion is to avoid direct conflicts with the Chickaloon-Knik-Nelchina trail system, it appears that proposed route alternative D would parallel or be visible from the trail for several miles on map 2; and

WHEREAS, the Boulder Creek route is preferred by the Glacier View community; and

WHEREAS, Dames & Moore, Inc. identifies as a lesser impact "increased pressure on wildlife and recreation resources due to increased access to the area" and suggests mitigation of these impacts by "limiting additional access roads associated with the project"; and

WHEREAS, it is unknown what access roads are proposed since the study states a more detailed right-of-way access plan will not be prepared until the ROW acquisition phase of development of the project; and

WHEREAS, oil production on the North Slope is projected to decline over the next few years with the eventual closure of the Trans Alaska Pipeline System by 2017; and

WHEREAS, the draft feasibility report identifies the intertie as economically feasible only in the high and medium-high load growth cases which assume that the Petro Star refinery in Valdez will operate through 2047; and

WHEREAS, the Petro Star refinery could possibly generate its own power for less cost; and

WHEREAS, construction of a marginally feasible capital project seems at this time to be an imprudent investment.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Planning Commission expresses the following concerns about the environmental impacts of the proposed project:

- the Environmental Report finds the intertie will negatively impact tourism and recreation whether routed along the highway or in the backcountry;
- the Environmental Report finds the intertie will likely increase pressure on wildlife and recreation resources due to increased access to the area;
- the draft feasibility study does not specify what additional access will be created, making it difficult to quantify these effects; and


BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Planning Commission supports consideration of an alternative scenario which projects co-generation of electricity at the Petro Star refinery; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Planning Commission considers it inappropriate to pursue a capital project with marginal feasibility at a time when the State of Alaska is experiencing a severe budget shortfall.

ADOPTED by the Matanuska-Susitna Borough Planning Commission, this 18th day of February, 1994.


CARL DEPRIEST, Chairman

ATTEST:


LINDA KETCHUM, Planning Clerk

MATANUSKA-SUSITNA BOROUGH
RESOLUTION 94-021 (Am)

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY REGARDING THE STATE OF ALASKA, DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS, DIVISION OF ENERGY COPPER VALLEY INTERTIE FEASIBILITY STUDY DRAFT REPORT, January 1994

WHEREAS, the Matanuska-Susitna Borough Assembly adopted Resolution 93-035 on April 13, 1993 making recommendations to the Alaska Energy Authority concerning the Copper Valley Intertie Feasibility Study; and

WHEREAS, the Copper Valley Intertie Feasibility Study Draft Report compiled by R.W. Beck & Associates was issued in January 1994; and

WHEREAS, in Resolution 93-035 the Assembly expressed concern about the potential impacts on health, tourism drawing potential, fish and wildlife habitat, and wetlands; and

WHEREAS, proposed route alternative D attempts to mitigate health concerns by locating the 138-kV intertie more than 600 feet from homes and other occupied structures; and

WHEREAS, the Environmental Report prepared by Dames & Moore, Inc. acknowledges that "the most significant impacts resulting from this project would be visual and recreation impacts in the project area"; and

WHEREAS, Dames & Moore, Inc. recognizes that "the Matanuska Valley is a highly scenic area with many businesses in the small communities oriented toward tourism" and "use of a backcountry route could mitigate the visual impacts along the scenic Glenn Highway.."; and

WHEREAS, Dames & Moore, Inc. states that use of a backcountry route "could still result in an impact on recreational users.."; and

WHEREAS, although a stated route selection criterion is to avoid direct conflicts with the Chickaloon-Knik-Nelchina trail system, it appears that proposed route alternative D would parallel or be visible from the trail for several miles on map 2; and

WHEREAS, the Boulder Creek route is preferred by the Glacier View community; and

WHEREAS, Dames & Moore, Inc. identifies as a lesser impact "increased pressure on wildlife and recreation resources due to increased access to the area" and suggests mitigation of these impacts by "limiting additional access roads associated with the project"; and

WHEREAS, it is unknown what access roads are proposed since the study states a more detailed right-of-way access plan will not be prepared until the ROW acquisition phase of development of the project; and

WHEREAS, oil production on the North Slope is projected to decline over the next few years with the eventual closure of the Trans Alaska Pipeline System by 2017; and

WHEREAS, the draft feasibility report identifies the intertie as economically feasible only in the high and medium-high load growth cases which assume that the Petro Star refinery in Valdez will operate through 2047; and

WHEREAS, the Petro Star refinery could possibly generate its own power for less cost; and

WHEREAS, construction of a marginally feasible capital project seems at this time to be an imprudent investment.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Assembly expresses the following concerns about the environmental impacts of the proposed project:

- * the Environmental Report finds the intertie will negatively impact tourism and recreation whether routed along the highway or in the backcountry;
- * the Environmental Report finds the intertie will likely increase pressure on wildlife and recreation resources due to increased access to the area;
- * the draft feasibility study does not specify what additional access will be created, making it difficult to quantify these effects; and


BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly supports alternative cost effective sources to supply energy needs to Copper Valley residents; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly considers it inappropriate to pursue a capital project with marginal feasibility at a time when the State of Alaska is experiencing a severe budget shortfall.

ADOPTED by the Matanuska-Susitna Borough Assembly this 27th day of February, 1994.


ERNEST W. BRANNON, Borough Mayor

ATTEST:


LINDA A. DAHL, Borough Clerk

(SEAL)