

RECEIVED



FILED



2004 SEP -3 PM 4:40

IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IDAHO POWER COMPANY,)
)
 Complainant,)
)
 vs.)
)
 CITY OF EAGLE, IDAHO,)
)
 Respondent.)
 _____)
)
 EAGLE RIVER, LLC,)
)
 Intervenor.)
 _____)

CASE NO. IPC-E-04-04

IDAHO POWER COMPANY

REBUTTAL TESTIMONY

OF

DAVID L. SIKES

1 Q. Please state your name and identify the party
2 upon whose behalf you are presenting rebuttal testimony.

3 A. My name is David L. Sikes. I am also known
4 as Kip Sikes. I am testifying on behalf of Idaho Power
5 Company.

6 Q. Are you the same David L. Sikes that
7 presented direct testimony in this proceeding?

8 A. Yes.

9 Q. What issues will you address in your rebuttal
10 testimony?

11 A. In response to the testimony of Commission
12 Staff member Randy Lobb concerning the Idaho Public
13 Utilities Commission's need to determine whether the
14 facilities proposed by Idaho Power Company are needed, my
15 testimony will emphasize the urgency of needing to construct
16 the proposed 138-kV transmission line between the Eagle and
17 Star substations. I will also address the viability of some
18 of the various routes and alternatives for the location of
19 the proposed transmission line that were discussed with the
20 City and its representatives and I will show that the City
21 of Eagle has previously endorsed two transmission corridors
22 that are the subject of this proceeding. Additionally, I
23 will address other issues identified by the other parties in
24 their direct testimony.

25 Q. Commission Staff member Lobb notes in his

1 testimony on page 5 that none of the parties appear to
2 contest the need or benefits of the proposed 138-kV line
3 between the Eagle and the Star substations. Please
4 summarize the purpose of the proposed transmission line.

5 A. In the near-term, the line will provide a
6 source of electricity to the Star Substation. In the long-
7 range, excepting outages or other temporary operating
8 conditions which rely on the transmission or distribution
9 systems for alternate back-up supply, 100 percent of the
10 power carried by the portion of this line located within
11 Eagle's jurisdictional boundaries will serve Idaho Power
12 Company customers who live within either the City of Eagle
13 or the City's Impact Area.

14 Q. Is any new information available since you
15 filed your direct testimony in this matter that emphasizes
16 the urgency of needing to construct the transmission line
17 between the Eagle and Star substations and the benefits to
18 the Company's customers who would be served by this line?

19 A. Yes. Load information at the Star substation
20 for August 1 and 2, 2004 is attached hereto as Exhibit 6.
21 The summer of 2004 did not have the sustained high
22 temperatures experienced in 2003; however, there was a brief
23 period of high temperatures in late July and early August of
24 2004. As shown on Exhibit 6, the load at the Star
25 substation on Sunday evening at 7:26 PM was 8.64 MW. The

1 combined load for the Lansing and Star substations
2 (identified on the chart as LNSGSTAR.MW) was 22.35 MW at the
3 same time. On Monday August 2, 2004, their respective loads
4 were 8.55 MW and 22.92 MW at 7:06 PM.

5 Q. Please explain why these loads are material.

6 A. The loads experienced on Sunday evening,
7 August 1, 2004, are the maximum loads observed during the
8 summer of 2004 for the existing Star Substation. This load
9 response is characteristic of residential-type loads, the
10 predominant type of growth in the area currently served by
11 the Star Substation. Normally, one does not expect to
12 establish a peak load on a Sunday evening when many
13 commercial establishments aren't using significant amounts
14 of electrical energy.

15 For example, the total area load served by the
16 Lansing and Star substations of 22.92 MW on Monday, August
17 2, was slightly higher, even though the temperature was
18 somewhat cooler. Analysis I have performed in the past on
19 Treasure Valley loads has shown as much as a one percent
20 load increase per degree increase in the daily maximum
21 temperature. Should we experience several days of high
22 temperatures and demand saturation during the middle of a
23 week, the loads could be even ten percent higher.

24 Q. Can the Star and Lansing substations handle
25 loads of this magnitude?

1 A. No. Power flow studies on the 69-kV line
2 currently supplying the Lansing and Star substations
3 indicate the system is voltage-constrained at approximately
4 23 MW, the demand which was reached on Monday, August 2,
5 2004. With the continued growth and development of Star and
6 west Eagle, the 69-kV configuration supplied from the
7 Caldwell source is unable to reliably serve the load above
8 that level. It is critical that this configuration be
9 upgraded to assure service reliability and to prevent the
10 potential occurrence of outages during the summer of 2005.

11 I have also included a copy of the Star Area Study.
12 It is identified as Exhibit 7 hereto. On page 4 of that
13 document is a table showing that the expected load on the
14 Star substation for the summer of 2004 is 8.17 MW. The
15 actual peak described above on Sunday, August 1, 2004, was
16 8.64 MW, or almost one half MW higher. This demonstrates
17 that the capacity of the system has been reached. The
18 emergency measures put in place by Idaho Power for the
19 summer of 2004 will not accommodate the expected loads in
20 2005 as growth continues to accelerate in the area.

21 Q. If completion of the 138-kV line is delayed
22 beyond May 2005 for any reason, what means does Idaho Power
23 have available to ensure reliable service to its customers?

24 A. Mobile diesel generators could be installed
25 in the area to reduce peak loading. However, as noted in

1 the testimony of Commission Staff member Randy Lobb, Idaho
2 Power's experience with the placement of mobile generators
3 during the 2000/2001 energy crisis demonstrated significant
4 customer opposition and a high cost of operation.
5 Furthermore, this is a temporary solution requiring
6 additional environmental permitting.

7 Voluntary and involuntary load reductions could be
8 used; however, those types of reductions also incur
9 additional costs and usually result in customer
10 inconvenience. Alternatively, Idaho Power may have to
11 request that additional development in the impacted area be
12 delayed until construction of the line is allowed and is
13 complete.

14 Q. Does Idaho Power continue to recommend the
15 alternative routes or solutions that it included in its
16 filed Complaint in this matter?

17 A. Yes, with the exception of the two routes
18 proposed along Highway 55 and either Floating Feather Road
19 or Beacon Light Road. Sufficient time no longer exists to
20 negotiate with property owners to acquire the necessary
21 rights-of-way to construct a facility along those
22 alignments.

23 With regard to the remaining four alternatives,
24 provided that cost recovery issues are appropriately
25 addressed, Idaho Power remains somewhat indifferent to the

1 ultimate solution. The Company's proposal that the Eagle
2 Bypass Route be selected is based upon input received from
3 the City of Eagle's Community Advisory Committee ("CAC"),
4 the Company's ability to construct the transmission line in
5 that location given the compressed construction schedule and
6 the nature and characteristics of the work in that
7 particular location.

8 Q. Can the proposed 138-kV transmission line be
9 placed underground as requested by the City of Eagle?

10 A. Yes. Although the technologies exist to
11 construct 138-kV transmission lines underground, it is not
12 the industry standard to construct these types of facilities
13 in that configuration due to the cost and the impact on
14 consumer rates. Furthermore, at this late date, it is
15 uncertain whether a project of that scope which also
16 requires special equipment can be completed in a timely
17 manner in this particular case, that is, by May 2005.

18 Even though the Company has no personal experience
19 placing transmission lines underground and although burying
20 transmission lines is not the industry standard, the Company
21 is not opposed to that kind of construction provided the
22 entity or jurisdiction either requesting or demanding that
23 type of construction pay the differential in cost between
24 overhead construction and placing those lines underground.

25 It is the Company's position that that cost should

1 not be borne by Idaho Power customers generally since that
2 is not a construction standard practiced in either the
3 Company's service territory or in the industry as a whole.
4 Idaho Power's policy continues to be that the requesting
5 party of such premium service should bear the incremental
6 costs in constructing that service.

7 Q. Do viable alternatives exist to construct the
8 138-kV transmission line in Eagle in an overhead
9 configuration?

10 A. Yes, from the Company's perspective, viable
11 alternatives exist that do not distribute the additional
12 costs requested by the City to the Company's ratepayers
13 generally. In her testimony, Mayor Merrill claims that
14 Idaho Power failed to provide the City with viable
15 alternatives to the placement of transmission lines through
16 the City. However, as alleged in its Complaint, the Company
17 presented six route options to the City. In addition, Idaho
18 Power representatives discussed 16 alternatives with the
19 CAC, the committee that was composed of Eagle residents who
20 ultimately recommended the Eagle Bypass Route as the
21 preferred route for the proposed transmission line.

22 The bottom line is that the alternative alignments
23 for the proposed 138-kV transmission line in and of
24 themselves do not appear to be the real issue among the
25 parties. It is the presence of those facilities in an

1 overhead configuration, as proposed by Idaho Power, that is
2 causing the deadlock that has resulted in this case.

3 Q. Does the City's Comprehensive Plan address
4 the provision of electrical services within its
5 jurisdictional boundaries?

6 A. Yes, it does. The City's Comprehensive Plan
7 illustrates the use of both the State Street and Eagle
8 Bypass corridors for Idaho Power's facilities. Attached
9 hereto as Exhibit 8 is the *Eagle Area Idaho Power Facilities*
10 *Map* dated November 21, 2002 that is referenced in the City's
11 2000 Comprehensive Plan, as adopted by the City on November
12 9, 1999 and amended by the City on February 16, 2004. In
13 addition to those two corridors, the Star Substation and the
14 proposed Beacon Light Substation are also illustrated on
15 that map.

16 Q. Does the City's Comprehensive Plan offer
17 additional support for the alternatives presented to the
18 City by Idaho Power?

19 A. Yes. The City's 2000 Comprehensive Plan
20 states that "[a]ppropriate placement of electric utility
21 facilities on public rights-of-way is encouraged. Public
22 streets and road rights-of-way typically serve as corridors
23 for electric facilities." The Plan also notes that
24 "[a]dditions and improvements to electric utility facilities
25 that enhance the capacity and reliability of regional

1 resources, particularly when multi-jurisdictional benefits
2 within the region can be achieved, should be accommodated."
3 A copy of the portion of the City's Comprehensive Plan from
4 which these quotes are extracted is attached hereto as
5 Exhibit 9.

6 Q. Does the City's Comprehensive Plan establish
7 a City policy directing that Idaho Power's transmission
8 lines be placed underground?

9 A. No. The City's Plan makes no such policy
10 recommendation and makes no reference to the placement of
11 the Company's transmission lines underground.

12 Q. If the route alignments are not the real
13 issue concerning the parties, what is the issue preventing
14 the parties from resolving this matter?

15 A. The issue before the Commission is who is to
16 pay for placing underground the transmission and
17 distribution facilities proposed on any of the alignments
18 presented to the City by Idaho Power. Idaho Power concurs
19 with the testimony of Commission Staff member Lobb who
20 recommends that "the Commission direct the Company to
21 install overhead facilities unless or until the City of
22 Eagle provides the incremental difference in cost required
23 to place those facilities underground." Lobb Direct at 3,
24 11 1-4. Idaho Power's position is that its ratepayers
25 generally should not pay the incremental difference in cost

1 for construction standards that are not implemented within
2 the Company's service territory or even within the industry
3 as a whole.

4 Q. Of the alternatives presented to the City,
5 which alternative is the best or most acceptable to Idaho
6 Power?

7 A. Based upon input received from the Eagle CAC
8 regarding the favored route from the perspective of the
9 community and the perspective of the Company concerning the
10 ease and ability to construct certain alignments along with
11 the expected cost impacts, Idaho Power believes the Eagle
12 Bypass Route is the most favorable and acceptable
13 alternative.

14 However, as the direct testimony by all the parties
15 has shown, there are advantages and disadvantages to each
16 alignment depending upon the unique perspective of the
17 witness testifying. Idaho Power does not deny there may be
18 impacts, either real or perceived, with any of the
19 alternative alignments.

20 As noted in the testimony of Don C. Reading, Ph.D,
21 witness for the City of Eagle, public opposition toward
22 overhead power lines and the placement of substations has
23 increased significantly over the past few years. Fears of
24 health concerns, loss of property value and, most of all,
25 the aesthetic impacts of the lines have made the permitting

1 process for transmission lines and substations increasingly
2 difficult. The decision of the Eagle City Council to
3 repeatedly deny, over an extended period of time, the
4 Company's applications for a Conditional Use Permit is
5 testimony to this.

6 Q. Commission Staff member Randy Lobb testified
7 that "the State Street alignment makes the most economic
8 sense from the standpoint of the general body of Idaho Power
9 customers." Lobb Direct at 9, 11 13-16. Mr. Lobb bases his
10 assertion on the fact that the existing State Street
11 overhead distribution line is located in an established
12 corridor and that the "most logical and economical
13 alternative is to upgrade existing overhead facilities . . .
14 in established utility rights of way." Does the Company
15 concur with this position?

16 A. Yes, Idaho Power generally concurs with Mr.
17 Lobb's assessment. Construction of the 138-kV transmission
18 line in the existing overhead alignment along State Street
19 is comparable in cost to the Eagle Bypass route; however,
20 complexities in construction due to the required
21 distribution underbuild and the fact that accommodations
22 have to be made during construction along this alignment to
23 continue to serve customers reliant upon the distribution
24 line existing in that corridor will likely increase the
25 overall cost of construction in that area.

1 Q. How does the nature of the work on the Eagle
2 Bypass route differ from the work that would be required on
3 the State Street alignment?

4 A. Because the new transmission system between
5 the Eagle and Star substations has to be completed by May
6 2005, any work during the condensed construction schedule
7 that involves additional distribution line construction
8 requiring "hot" work (that is, while the distribution line
9 is energized and providing service to existing customers)
10 such as the State Street route alternative, adds elements of
11 risk to both projected costs and the required completion
12 date. The Eagle Bypass Route offers the greatest
13 probability that the Company can get the needed transmission
14 line extension designed and completed during the short
15 construction schedule and at the least cost.

16 However, as I stated earlier in this testimony,
17 provided that cost recovery issues are appropriately
18 addressed, Idaho Power can support the State Street
19 alignment as a solution to this matter. Consistent with the
20 Company's position, however, if the City wishes the existing
21 distribution line located along this alignment to be buried,
22 any costs associated with that additional requirement will
23 have to be borne by the residents of the City of Eagle.

24 Q. Did Eagle's CAC endorse the State Street
25 alignment?

1 A. No, it did not. The CAC opposed the State
2 Street alignment even though the total length of this
3 alignment is shorter than the other alternatives. The Eagle
4 CAC and the results of numerous surveys have indicated that
5 minimizing the presence of transmission lines in residential
6 areas and reducing the distance that those lines have to
7 traverse the City are two of the most important elements in
8 selecting a route for a proposed transmission line.

9 Q. Would the construction of any of the overhead
10 alternatives suggested by the Company prevent burying either
11 the distribution or transmission facilities in the future?

12 A. No. Those facilities could be placed
13 underground at a later date provided the City agrees to pay
14 for the cost of burying those facilities.

15 Q. Are you aware of any funding mechanisms
16 available to the City to finance the cost to underground
17 these electrical facilities?

18 A. This is not my area of expertise but two
19 alternatives have been identified in documents already filed
20 with the Commission, namely, the Company's Complaint and the
21 direct testimony of both Company Witness Greg Said and
22 Commission Staff Witness Randy Lobb.

23 Both Mr. Said and Mr. Lobb identify the City's
24 option of creating a Local Improvement District, commonly
25 known as a LID. Based upon their testimony, it appears

1 Idaho Code Title 50 allows mayors and city councils to
2 create a LID to fund line extensions or to fund conversion
3 of existing overhead electric facilities to an underground
4 configuration. The time required to create a LID, however,
5 may preclude the use of this option in this instance.

6 Alternatively, as Mr. Said testified, Idaho Power
7 may be willing to accept installment payments, with
8 interest, to recover the cost of burying any facilities that
9 the City wishes to place underground. The proceeds of a
10 franchise fee, as permitted by Title 50 of the Idaho Code,
11 could be directed to pay the cost associated with burying
12 the facilities.

13 Q. Directing your attention to the testimony of
14 Pike Teinert, a witness for the City, did the Company
15 consider the use of alternative technologies or Demand Side
16 Management ("DSM") programs instead of building the 138-kV
17 line as planned by Idaho Power?

18 A. Witness Teinert talks extensively about ACSS
19 conductor as an alternative for the present situation. ACSS
20 conductor is basically an aluminum conductor that has been
21 annealed, or heated to high temperatures. That process
22 reduces the strength of the metal. As a result of that
23 procedure, the conductor requires additional steel strands
24 to provide the necessary support strength.

25 As such, the tension in the wire is placed on the

1 steel strands which permits the aluminum to operate at high
2 temperatures without comparable stretching when compared to
3 standard conductors. This reduced drooping or sag caused by
4 elongation of the wires allows reduced construction heights
5 to maintain required safety clearances.

6 Q. Would use of this special conductor allow
7 either the 138-kV or a 69-kV line to be constructed overhead
8 through Eagle such that the City's 35-foot height
9 restriction would not be exceeded?

10 A. No. To maintain the required clearances,
11 structures in excess of 35 feet would still be required.
12 Furthermore, 69-kV voltage is not available within the City
13 of Eagle. To place a 69-kV line between the Eagle and Star
14 substations would ultimately require the addition of at
15 least two \$1,000,000 138/69-kV transformers to integrate a
16 69-kV line into the power grid. One transformer would be
17 required at the Eagle Substation which does not contain
18 sufficient space to make this modification. Further, there
19 is insufficient time to order and receive this custom-
20 manufactured equipment and to obtain the necessary approval
21 from the City to make the needed modifications to the Eagle
22 Substation.

23 Q. Witness Teinert suggests that the "Caldwell
24 69-kV line could be reconductored [with ACSS conductor] to
25 mitigate the voltage support problem." Teinert Direct at

1 16, 11 23-24. Is that a plausible solution to the issues
2 facing the Company in this instance?

3 A. No, it is not. ACSS technology allows the
4 conductor to carry more electrical current at a higher
5 temperature. This technology, in effect, increases
6 ampacity. However, the use of ACSS conductor in this
7 application would not address the issue of voltage support,
8 the limiting factor in the Company's system that is driving
9 the need to construct the 138-kV transmission line through
10 the City of Eagle.

11 Moreover, the area's capacity and reliability
12 requirements would not be resolved with the application of
13 ACSS technology. In addition, the use of ACSS technology
14 would not preclude the eventual construction of another line
15 through the City. In that instance, the Company would
16 potentially face the same impasse with the City that it
17 confronts with the issue presently before the Commission.

18 Q. Can DSM programs realistically address the
19 load demands in the Eagle/Star area?

20 A. No. Idaho Power agrees that appropriately
21 designed demand-related customer programs can shift or
22 reduce the peak demand on the electric system. However,
23 given the amount and concentration of growth in this area,
24 it is impractical to rely on these types of programs to
25 fully offset existing loads. For example, for every house

1 added to the area's housing stock, an existing house would
2 need to be "electrically" removed. This clearly does not
3 comport with either the growth projections of the City or
4 its expansion plans and permitted uses for the area.

5 Q. Both Charles Carlise, witness for Eagle River
6 LLC, and Witness Reading for the City of Eagle cite the
7 incredible rate with which the City of Eagle has grown.
8 Can DSM programs alone address the loads demanded by
9 population increases of those magnitudes?

10 A. I don't believe that would be realistic. In
11 my estimation, a 10% penetration of effective DSM programs
12 each year would be required to offset a 10% growth rate.
13 That amount would quickly saturate the market space given
14 the extent of growth exhibited by the City of Eagle and
15 surrounding area and the amount of growth predicted in the
16 future.

17 Witness Carlise states that the Eagle River
18 development alone "will bring several thousand jobs to the
19 City of Eagle and the surrounding community." He asserts
20 that the development "will employ one person for every 100
21 square feet of space, which translates to approximately
22 10,000 jobs." *Id.* at 11 10-12. Witness Reading notes that
23 the "City of Eagle was the 3rd fastest growing city in Idaho
24 between 1990 and 2000 increasing its population by 233%."
25 Reading Direct at 3, 11 19-20. He observes that "[t]his

1 growth has continued since 2000 increasing by nearly 2,200
2 residents or an additional 23%." *Id.* at 11 20-21.

3 Q. Witness Reading provided testimony that
4 property values were observed to be lower when located
5 within 1-km of high voltage lines in Toronto, Canada. Is
6 there local evidence that power lines have reduced property
7 values or inhibited development?

8 A. That is not our experience locally. One need
9 only drive along Eagle Road in the vicinity of Fairview
10 Avenue and McMillan Road to observe thriving development
11 adjacent to a significantly larger, 230-kV, power line.
12 Property in the vicinity of a 138-kV line along Front Street
13 in Boise is also developing successfully. As Dr. Reading
14 points out, there are many factors which influence perceived
15 value.

16 Q. Does this conclude your rebuttal testimony?

17 A. Yes, it does.

BEFORE THE

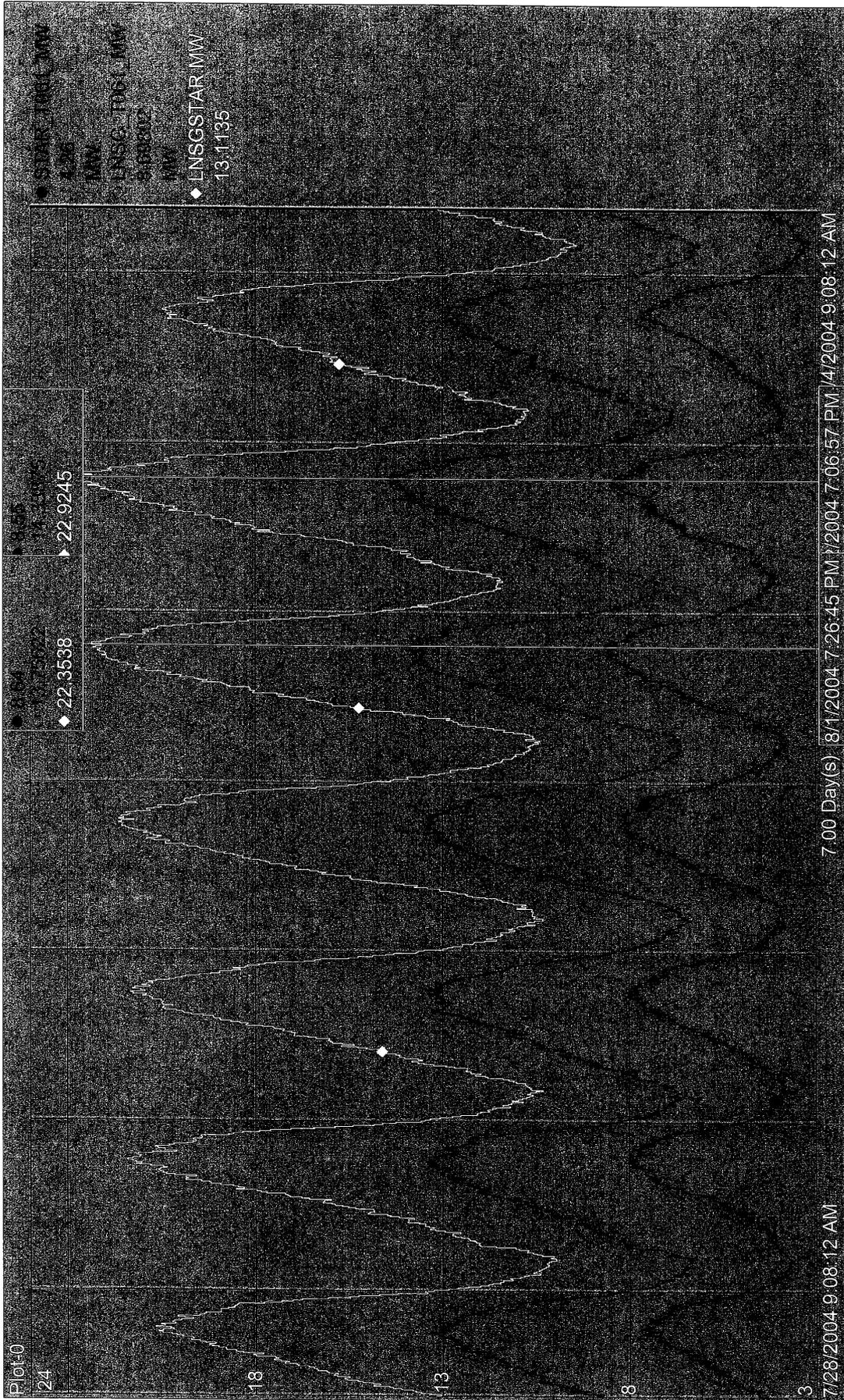
IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-04-04

IDAHO POWER COMPANY

EXHIBIT NO. 6

D. SIKES



BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-04-04

IDAHO POWER COMPANY

EXHIBIT NO. 7

D. SIKES

Star Area Study

OUTLINE

Introduction 2
 Definition of Star Service Area2

Land Use..... 3

Load Density & Estimation..... 3

Planning Concerns 4
 Challenges4
 Solutions4
 Options6

Plans For 2004 And Beyond..... 6
 Substation6
 Distribution6
 Neighboring Plans.....6

Appendix 7
 Contributing Authors7
 Pending RODs7

Star Area Study

Introduction

This study identifies the present and future needs of the Star service area.

Definition of Star Service Area

The Star ultimate service area is a 7.3 square mile semi-diamond shaped area, which includes the town of Star. The Star station is scheduled to be built in 2004. Lansing substation on the west, Eagle on the east, and Nampa, Black Cat, and Locust on the south bound the Star service area. The station will initially have a 28 MVA 69/12.5 kV transformer with 2 feeders serving approximately 7.7 MW. Ultimate build out is 60 MWs on two 37 MVA transformers serving 7 feeders.

Star substation will be served off the 69 kV line from Caldwell via a tap for the year 2004. The 69 kV line only has capacity for one year. The line from Eagle to Star will be built in 2005. This 138 kV line will ultimately be apart of a loop from the Locust 230/138 station.

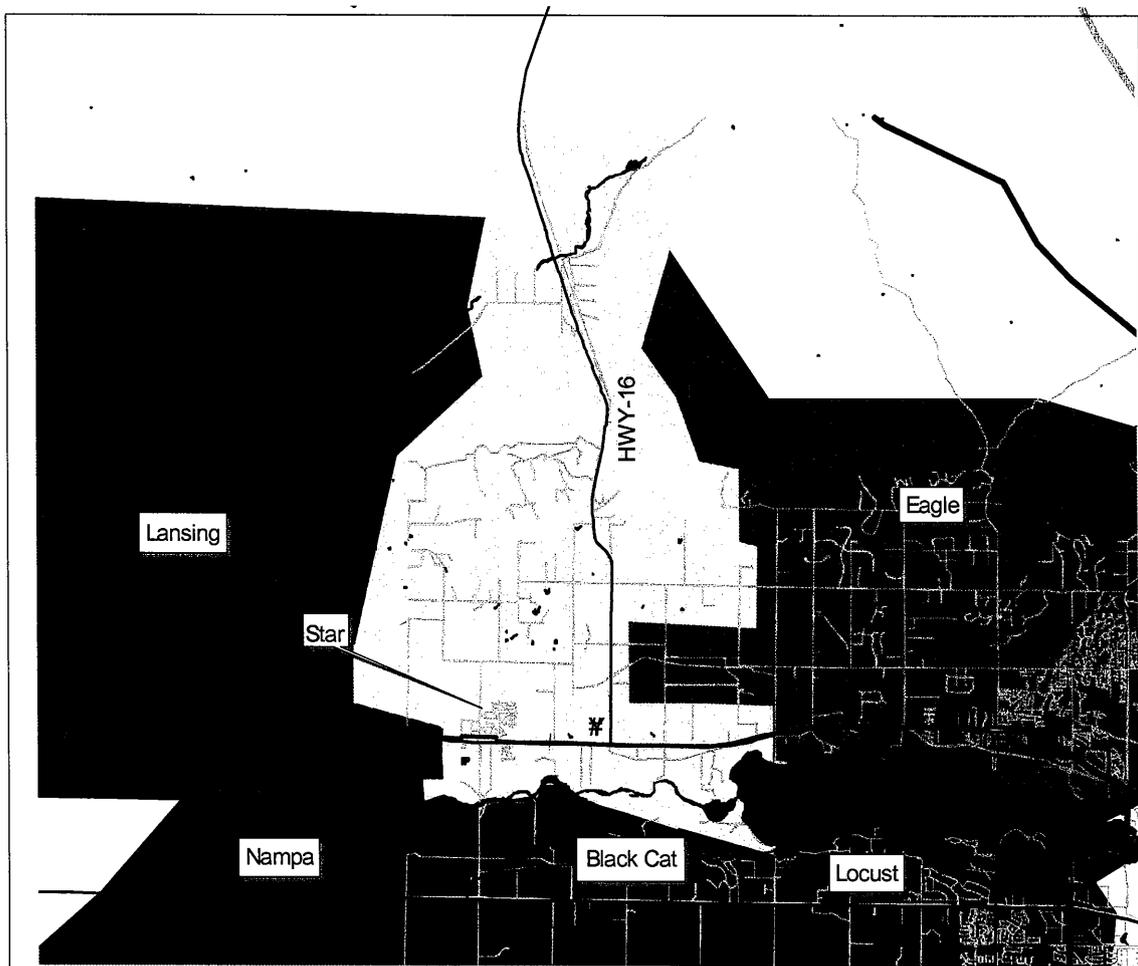


Figure 1: Overview of the Star Service area in 2005

Star Area Study

Land Use

Residential developments and the town of Star are the major loads in the Star service area. The residential areas are growing from Star to the north and west. There is a small amount of commercial load in the town of Star. The land use outside of the Star impact area is designated as rural transition. There is no comprehensive land use plan of Star available at this time.

Load Density & Estimation

Build-out load in the Star service area is estimated at 60 MWs. The total service area is estimated at 7.3 square miles.

Star Service Area	
Ultimate Build-out MW	60
Square Miles	7.3
Ultimate Load Density MW/sq mile	9

The ultimate build-out is based on using the land use zoning of the north Meridian area as an approximate land use in the Star ultimate service area. The following table shows the available area of the different zoning classifications and the estimated load from each of the classes. This estimate is considered the maximum load that could be seen in the Star service area, it will probably be less.

Zoning Class	Area (Square Miles)	Load (kW)	Load Density (kW/mi²)
Commercial	.5	15033	31006
Office	.03	626	20671
Low-Density Residential, 4 units/acre	3.4	19444	5702
Medium-Density, 8 units/acre	3.4	27006	7920

The following table shows the expected loading on the Star feeders and station in the near future and at ultimate buildout.

Star Area Study

Year (Loads in kW)	2004	2005	2006	2008	2010	Buildout
STAR-011	3,770	4,000	4174	4341	4449	8593
STAR -012	4,401	5,279	6310	7740	8350	8593
STAR -013		1,350	1,485	1,797	2,174	8593
STAR -014						8593
STAR -015						8593
STAR -016						8593
STAR -017						8593
Station	8171	10629	11969	13878	14973	60153

Planning Concerns

Challenges

1. **138 kV line to Star is meeting opposition by Eagle City.** The City of Eagle does not like the idea of the 138 kV line passing by Eagle.

Solutions

1. **Build the 138 kV line through Eagle.** The 138 kV line must be in operation in 2005. Due to time constraints, no other routes could be built in the time period left. The city of Eagle has had 4 years to determine a route for the line and has failed to agree upon a route. Idaho Power has submitted a complaint to the Idaho Public Utilities Commission for a determination of the route that the line should take.

Star Area Study

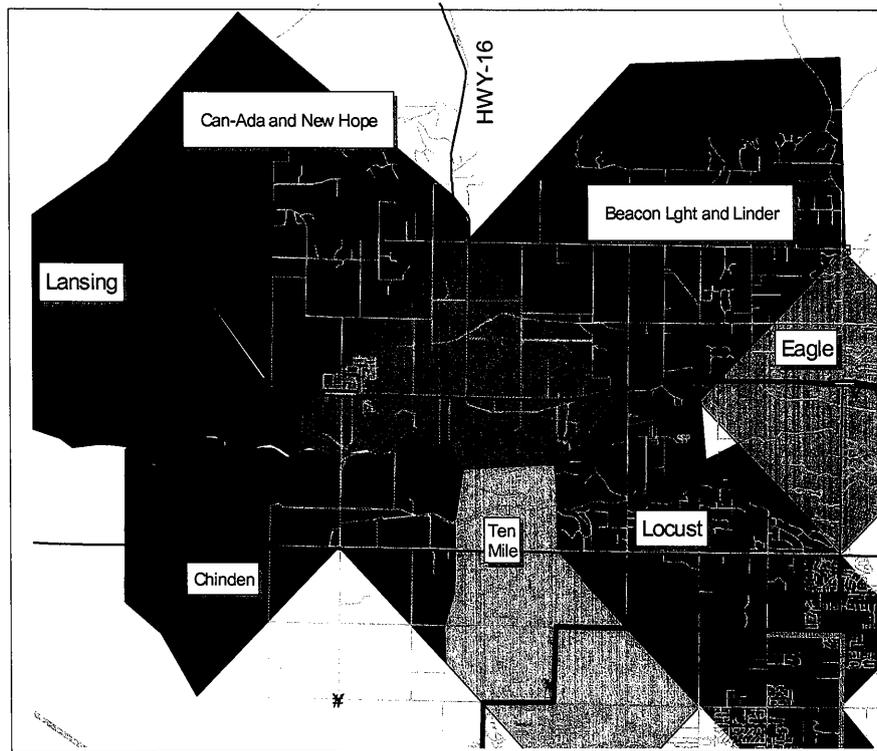


Figure 2: Ultimate Star service area and surrounding stations

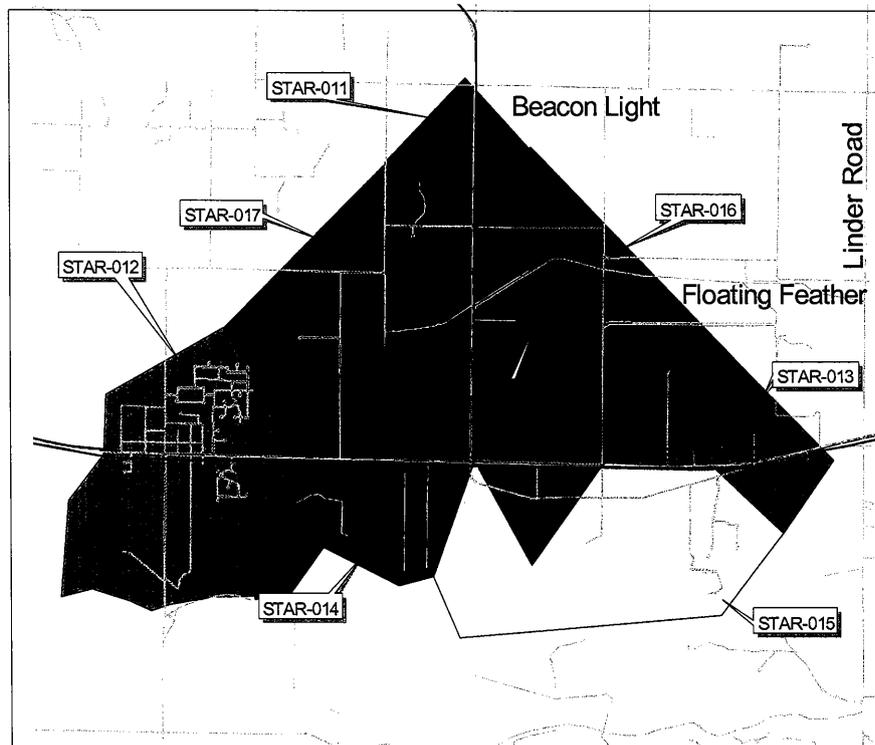


Figure 3: Star ultimate 7-feeder layout

Star Area Study

Options

1. **Ultimate feeder layout.** A suggested ultimate layout is shown above. The exact area for each feeder will depend on the load growth. Some decisions as to feeder layout are dictated by the physical constraints of the area such as roads and canals.

Plans For 2004 And Beyond

Substation

2005 Install T-131, 28/30 MVA.

Distribution

2005 Install STAR- 013 feeder.

Neighboring Plans

The following table is a summary of plans in neighboring areas.

Location	Transformer	Feeder	Size		Year	Required Date	Source
			From	To			
Locust	T-133		New	20	2006	6/1/06	New Purchase
Locust	T-232		New	300	2004	6/1/04	New Purchase
Locust		011			2006	6/1/06	
Locust		012			2006	6/1/06	
Ten Mile	T-131			28	2005	6/1/05	New Purchase
Ten Mile		011			2005	6/1/05	
Ten Mile		012			2005	6/1/05	
Ten Mile		013			2005	6/1/05	
Ten Mile		014			2005	6/1/05	

Star Area Study

Appendix

Contributing Authors

Contributors to the details and concepts of the Star Service Area Study:

Jeff Nofsinger	BOC	2147	Planning Engineer
Hilly Penton	CHQ-8	2451	Planning Engineer
Keith Georgeson	BOC	2034	Planning Engineer
Amy Janibagian	CHQ-2	2983	Technical Writer

Finish date: June 3, 2004

Pending RODs

System Forecast Requirements

RECORD OF DECISION (ROD) DOCUMENTATION SUPPORT

TITLE:

STAR ROW FOR 138KV TRANSMISSION LINE

Function:	33	Key	GROWTH-	Orig Date:	1/13/2000	SequenceNo:	2829
Status:	PENDING	Region:	W	In-Service-Date:	10/1/2003	Rev	2
Sponsor:	DISTPLAN	Area:	NAMPA_CDWL_STAR	Proj. Lead	45 Mos	Rev	5/16/2002
By	KA GEORGESON	Projects:	STAR SUBSTATION	Cost in K\$:	\$150	Bucket:	CRITICAL
				Value			

DECISION:

Purchase ROW for a 138kV transmission line from Eagle tap to Eagle line to the new Station site just west of State Street and Hwy 16. This station needs to be installed in 2004.

SCOPE/Impact:

Determine the best course of action to provide Transmission Right-of-Way to the new Star area Station site. Station is located just west of the intersection of Hwy 16 and State Street. Line length is approximately 5.5 miles from the Eagle substation. Difficulty of siting a transmission line through Eagle has occurred in the past. The distribution serving the West end of Eagle currently occupies the ROW along State Street that a 69kV line from Lansing to Eagle previously occupied.

DRIVING FORCES/ Purpose:

Growth
Capacity

INFORMATION:

Station site located near the intersection of Hwy 16 and State Street. Existing feeders currently serving Star area (EAGL-015 and LNSG-012) are currently near or at peak capacities or voltage limitations. LNSG-012 is being rebuilt from Lansing to Star Road in 2001. Continued growth in Star will require a source closer to the load. EAG-015 serves west out of Eagle to Hwy 16 and then serves north in the area of Firebird Raceway. This area is voltage and capacity limited because of its distance from Eagle substation (13.5 miles). A source closer to this load is required to support additional growth in the area.

Most of this route is on the interurban ROW from Boise to Caldwell. Because of this and the wider ROW along the state highway, most of the ROW should be for overhead and special circumstances only.

Star Area Study

System Forecast Requirements

RECORD OF DECISION (ROD) DOCUMENTATION SUPPORT

TITLE:

STAR 138KV TRANSMISSION LINE TO NEW STATION

Function:	33	Key	GROWTH-	Orig Date:	1/13/2000	SequenceNo:	2828
Status:	PENDING	Region:	W	In-Service-Date:	5/15/2004	Rev	2
Sponsor:	DISTPLAN	Area:	NAMPA_CDWL_STAR	Proj. Lead	52 Mos	Rev	5/16/2002
By	KA GEORGESON	Projects:	STAR SUBSTATION	Cost in K\$:	\$1,500	Bucket:	A2
				Value			

DECISION:

Build a new 138kV transmission line from Eagle to the new Station site just west of State Street and Hwy 16. This station needs to be installed in 2004.

SCOPE/Impact:

Determine the best course of action to provide 138kV Transmission to the new Star area Station site. Station is located just west of the intersection of Hwy 16 and State Street. Line length is approximately 5.5 miles from the Eagle substation. Difficulty of siting a transmission line through Eagle has occurred in the past. The distribution serving the West end of Eagle currently occupies the ROW along State Street that a 69kV line from Lansing to Eagle occupies.

DRIVING FORCES/ Purpose:

Growth
Capacity

INFORMATION:

Station site located near the intersection of Hwy 16 and State Street. Existing feeders currently serving Star area (EAGL-015 and LNSG-012) are currently near or at peak capacities or voltage limitations. LNSG-012 is being rebuilt from Lansing to Star Road in 2001. Continued growth in Star will require a source closer to the load. EAG-015 serves west out of Eagle to Hwy 16 and then serves north in the area of Firebird Raceway. This area is voltage and capacity limited because of its distance from Eagle substation (13.5 miles). A source closer to this load is required to support additional growth in the area.

Star Area Study

System Forecast Requirements

RECORD OF DECISION (ROD) DOCUMENTATION SUPPORT

TITLE:

STAR-013 FEEDER EAST TO LINDER RD

Function:	43	Key	GROWTH-	Orig Date:	8/24/2001	SequenceNo:	3021
Status:	PENDING	Region:	W	In-Service-Date:	6/1/2005	Rev	
Sponsor:	DISTPLAN	Area:	NAMPA_CDWL_STAR	Proj. Lead	34	Mos	Rev 8/22/2002
By	JL NOFSINGER	Projects:	STAR SUBSTATION	Cost in K\$:		\$250	Bucket: B2
				Value			\$0

DECISION:

Build a new STAR-013 feeder East along State Street (Hwy 44) from the Star Station site, at State Street and Hwy 16, to a new pole top switch on the east side of Linder Rd. (EAG-015) First mile conductor needs to be 795AA to Palmer Ln (future double circuit), and the second mile needs to be 336AA single circuit.

SCOPE/Impact:

Determine the best course of action to serve the growing loads around the Star area when a new Star 138/12.5kV distribution Station is built in 2003. This area is currently served from LNSG-012 (Star townsite) and EAGL-015 (Hwy 16 North to Firebird and East to

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-04-04

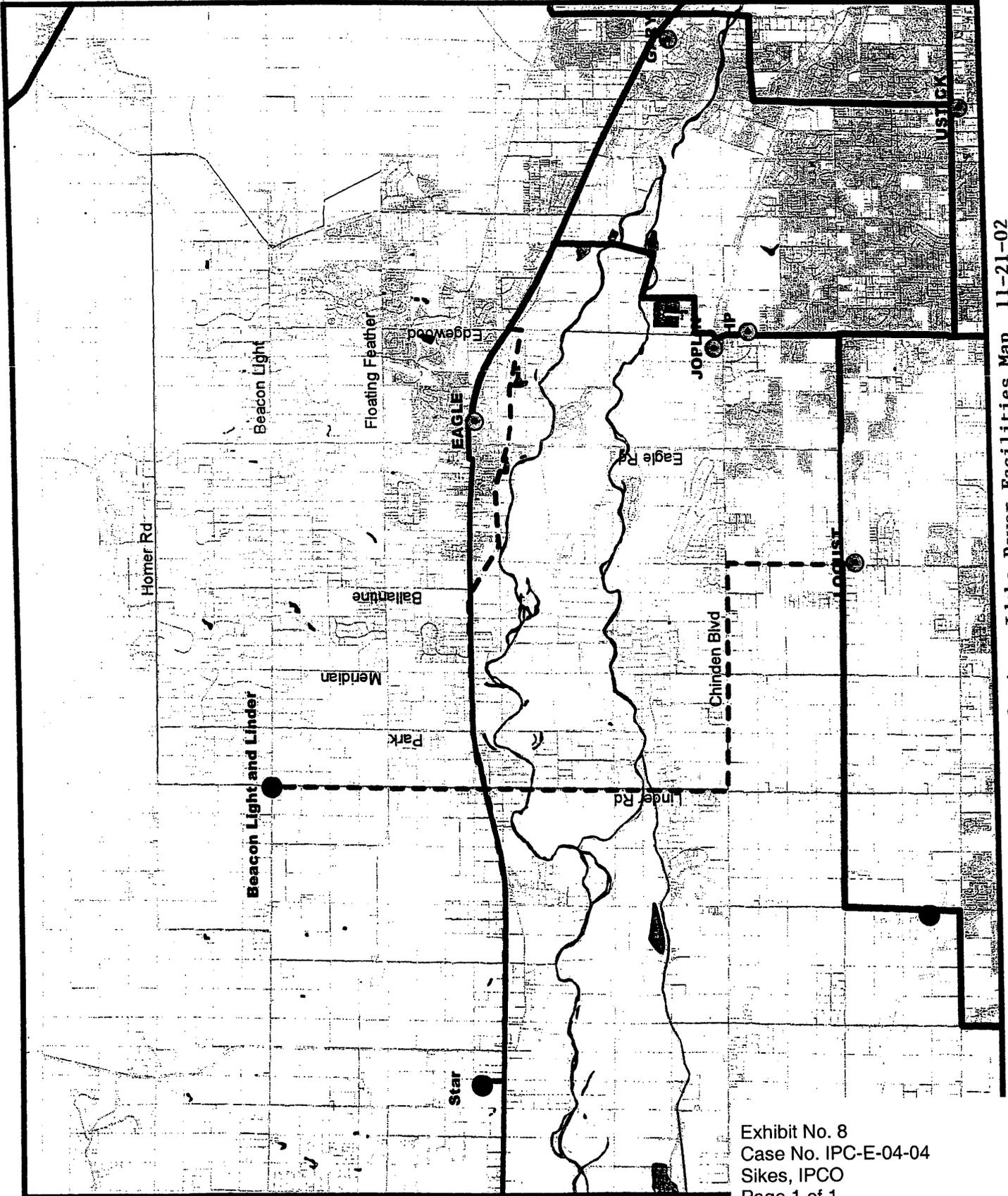
IDAHO POWER COMPANY

EXHIBIT NO. 8

D. SIKES

Legend

- Future_subs2.ship
- Ip_sns_pt.ship
- Eagle future line.ship
- ▬ Trans_ipc.ship
- ▬ 46
- ▬ 69
- ▬ 138
- ▬ 230
- ▬ 500
- ▬ R4316_in_ipc
- ▬ R44316_in_ipc
- ▬ Hy4316_pl_ipc
- ▬ Parcels_ipc.ship
- ▭ Area of impact.ship



BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-04-04

IDAHO POWER COMPANY

EXHIBIT NO. 9

D. SIKES

4.2.7 Other Services and Utilities

Electricity

Idaho Power Company (IPC) provides electrical services throughout the City and Area of Impact. IPC is a public service company regulated by the Idaho Public Utility Commission (IPUC).

The "Eagle Area Idaho Power Facilities Map", provided by IPC, designates the general location of electric utility facilities of a nominal voltage of 55,000 volts or greater. Map designations showing the general location of proposed electric facilities apply to a general utility corridor area rather than to a specific site. The City should periodically consult with IPC to obtain up-to-date information.

Appropriate placement of electric utility facilities on public rights-of-way is encouraged. Public streets and road rights-of-way typically serve as corridors for electric facilities. Transmission lines are usually located on easements that IPC acquires from private property owners. The joint use of utility corridors is also encouraged, provided that such joint use is consistent with limitations as may be prescribed by applicable law and prudent utility practice for existing and proposed utility facilities.

Additions and improvements to electric utility facilities that enhance the capacity and reliability of regional resources, particularly when multi-jurisdictional benefits within the region can be achieved, should be accommodated.

The City should provide IPC with periodic updates of population, employment, and development projections. The City and IPC should seek to jointly evaluate actual patterns and rates of growth and compare such patterns and rates to electrical demand forecasts.

Pressure Irrigation

The City of Eagle currently requires the installation of pressurized irrigation systems for the irrigation of landscaping when new development is within an irrigation district and water rights are available.

Solid Waste

A private contractor currently provides household and business trash collection and recycling services to Eagle residents.



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3rd day of September, 2004, I served a true and correct copy of the REBUTTAL TESTIMONY AND EXHIBITS OF DAVID L. SIKES upon the following parties:

Donald L. Howell, II
Deputy Attorney General
Idaho Public Utilities Commission
472 W. Washington Street
P.O. Box 83720
Boise, Idaho 83720-0074

Hand Delivered
 U.S. Mail
 Overnight Mail
 FAX
 E-mail

Susan Buxton
Moore Smith
225 N. 9th Street, Suite 420
Boise, Idaho 83702

Hand Delivered
 U.S. Mail
 Overnight Mail
 FAX
 E-mail

City of Eagle
P.O. Box 1520
Eagle, Idaho 83616

Hand Delivered
 U.S. Mail
 Overnight Mail
 FAX
 E-mail

B. Newel Squyres
Mary V. York
Holland & Hart, LLP
Suite 1400, U.S. Bank Plaza
101 S. Capitol Boulevard
P.O. Box 2527
Boise, ID 83701

Hand Delivered
 U.S. Mail
 Overnight Mail
 FAX
 E-mail

Eagle River, LLC
c/o Ennis Dale
485 E. Riverside Drive
Eagle, ID 83616

Hand Delivered
 U.S. Mail
 Overnight Mail
 FAX
 E-mail



MONICA B. MOEN