UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Southern California Edison Company	)	Docket No. ER07-1034
	)	

INITIAL BRIEF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

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To: The Honorable David Coffman,
Presiding Administrative Law Judge

Pursuant to Rule 706 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.706 (2008), and the briefing schedule established by the Presiding Judge, the California Independent System Operator Corporation ("CAISO") submits its Initial Brief in this proceeding.

I. PROCEDURAL HISTORY

The procedural history for this proceeding is set forth in the Joint Stipulation of Documents and Facts, filed in this proceeding on October 22, 2008.

II. DISCUSSION OF ISSUES

The CAISO presents its discussion of the issues raised in this proceeding under the headings set forth in the Joint Narrative Statement of Issues as submitted to the Presiding Judge on February 12, 2009.

PRIMARY ISSUE: Whether telecommunications facilities identified in the revised interconnection studies (JST-6 and JST-7) as necessary to interconnect the Green Borders Geothermal project to the CAISO Controlled Grid, consisting of a fiber optic cable and microwave equipment, should be classified as interconnection facilities or network upgrades.

Pursuant to Commission precedent regarding the classification of facilities, the telecommunication facilities at issue in this proceeding, consisting of (1) an approximately sixty-eight mile fiber optic cable, to run between Control Substation and the proposed Aurora switching station and (2) microwave equipment to be installed at the Green Borders project, the proposed Aurora switching station, and three communication sites owned by the Los Angeles Department of Water and Power, should be treated as interconnection facilities rather than network upgrades.[1]

The Commission has stated that the difference between "interconnection facilities" and "network upgrades" is that "the former are sole use facilities (e.g., a radial line that extends from the generating facility to the point of interconnection with the grid) that benefit only the interconnection customer, while the latter are part of the integrated grid and, therefore, benefit all users of the transmission system."[2] The telecommunication facilities at issue in the instant proceeding, which will be located on the Green Borders side of the interconnection, are necessary solely because of Green Borders' election to interconnect to the CAISO Controlled Grid via an existing customer-owned radial transmission line (the Dixie Valley-Oxbow line) and the resulting need to allow for the tripping of the Green Borders project without impacting service to the existing QF interconnected by that line.[3] As such, the telecommunication facilities

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1 *See* Joint Stipulation of Documents and Facts at P 14.
2 *See Nevada Power Co.*, 111 FERC ¶ 61,161 at P 18 (2005).
3 Exh. ISO-1 at 9; ISO-2 at 4-5.

benefit only Green Borders, not the CAISO Controlled Grid as a whole, and therefore they cannot be considered as part of the integrated grid. These facilities are properly classified as interconnection facilities, and the costs thereof should be directly assigned to Green Borders, and not spread to customers taking service over the CAISO Controlled Grid.

Issue 1: Whether the telecommunications facilities at issue provide a benefit to the CAISO Controlled Grid.

The Technical Assessment Study II ("TAS II"), which was performed in order to assess whether the level of transmission upgrade costs originally identified for the Green Borders facility could be reduced, concluded that, given the congestion management protocols to be implemented under the CAISO's new MRTU market design, scheduled to be implemented this year, some of the network upgrades that had been identified in the original studies would no longer be required, so long as tripping of the project could be incorporated into certain existing Remedial Action Schemes ("RAS").[4] Specifically, the TAS II determined that application of the MRTU congestion management protocols (which will allow for forward scheduling, thus ensuring that feasible schedules are implemented in the day-ahead and hour-ahead timeframes) would be adequate to manage base flows on the transmission lines affected by the Green Borders interconnection.[5] However, the TAS II concluded that it would still be necessary to have the capability to trip the Green Borders generator, in order to ensure system stability under certain outage conditions relating to specific transmission lines and transformer banks. This tripping requirement would be satisfied by incorporating the Green Borders facility into the existing RASs at the Bishop, Kramer and High Desert facilities.[6]

As CAISO witness Zhu explained in her direct testimony, such tripping would normally occur at the point at which the radial line to the generator tied into the

[4] Exh. ISO-1 at 7; JST-6 at 2-4. RASs on the CAISO Controlled Grid are referred to as "Special Protective Systems." For ease of readership, this brief will continue to refer to these systems as "RAS."
[5] Exh. ISO-1 at 7; JST-6 at 20-21.
[6] Exh. ISO-1 at 7; JST-6 at 22-25.

transmission system, usually at a substation.[7] However, in the case of Green Borders, additional communications equipment is needed because Green Borders has elected to interconnect to the CAISO Controlled Grid via a pre-existing customer-owed radial transmission line. Specifically, Green Borders chose to interconnect to the Dixie Valley-Oxbow 230 kV line, which currently serves as the means of interconnection for the Oxbow QF.[8] Because of this choice, Green Borders cannot be tripped at the point of interconnection with the CAISO Controlled Grid, SCE's Control substation,[9] without also tripping the Oxbow QF at the same time. As a result, full redundant telecommunication routes must be constructed from SCE's Control substation to the new Aurora switching station, in order to send the tripping signal to Green Borders while still allowing the Oxbow QF to remain in service.[10] The fiber optic cable and microwave facilities will allow the RAS systems to monitor and control the circuit breakers at the Aurora switching station and at the generator's switchyard, such that, in cases of emergency, the Green Borders project can be independently isolated from the grid, without disturbing service to the Oxbow QF.[11]

In assessing whether the telecommunications facilities benefit the CAISO Controlled Grid as a whole, or benefit only Green Borders, it is important to distinguish between these facilities and other RAS upgrades. There is no dispute that the improvements to the RASs themselves, located beyond the point of interconnection with the CAISO Controlled Grid, should be treated as network upgrades, and that this is reflected in the unexecuted Large Generator Interconnection Agreement ("LGIA") that

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7 Exh. ISO-1 at 9.
8 *Id*.
9 *See* Exh. JST-9.
10 Exh. ISO-1 at 9.

SCE filed with the Commission.[12] However, the telecommunications facilities are discrete components. They are not integral components of the RAS. As Ms. Zhu testified, most generators do not require the sort of telecommunications equipment at issue here in order to be incorporated into a RAS system because they can be tripped directly at the point of interconnection with the CAISO Controlled Grid.[13] However, due to Green Borders' decision to interconnect via an existing customer-owned radial transmission line, additional telecommunications facilities are necessary in order to establish a communications link between the point of interconnection with the CAISO Controlled Grid and the project, in order to allow for separate tripping of Green Borders while still preserving service to the Oxbow QF.[14] As such, it would be inappropriate to treat the telecommunications facilities as inseparable from the upgrades to the actual RAS systems.

The only reason that this telecommunications equipment is required is because of Green Borders' decision to interconnect via the Dixie-Valley Oxbow line, and its sole purpose is to allow the tripping of the Green Borders project, without impacting service to the existing Oxbow QF. Therefore, it cannot be said that the telecommunications equipment is integrated with the grid, or provides a grid-wide benefit. On the contrary, these facilities serve only to facilitate Green Borders' decision to interconnect via the Dixie Valley-Oxbow radial line, rather than connecting directly to the CAISO Controlled Grid. As Ms. Zhu pointed out, treating these telecommunications facilities as network upgrades would mean that other network customers would simply be subsidizing Green

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[11] *Id*.

[12] *See* Exh. JST-8 at 64-69 (listing as network upgrades numerous additions and improvements needed to integrate Green Borders into existing RASs).

[13] Exh. ISO-1 at 10.

Borders' decision, without deriving any benefit.[15] It is appropriate that Green Borders bear the costs of this decision, in the same manner as a generator would be solely responsible for the costs of the radial line necessary to transmit its output from the plant to the grid, regardless of the length or configuration of the radial line.

[14] *Id*. at 9.
[15] Exh. ISO-2 at 5.

Issue 2: Do the telecommunications facilities at issue constitute a discrete upgrade, or are they an integral part of the RAS?

As explained in response to Issue 1 above, the telecommunications facilities at issue constitute a discrete upgrade. They are necessary only because of Green Borders' decision to interconnect to the CAISO Controlled Grid via an existing customer-owned radial transmission line, and the resulting need to provide a communications link between the point of interconnection and the project, so as to allow a tripping signal to be delivered from the RAS to the project without interrupting service to the generator already interconnected via this radial line.[16] Located on the Green Borders side of the point of interconnection, these telecommunications facilities are discrete and separate from the RAS systems as a whole, which are located on the CAISO Controlled Grid.

[16] *See* Exh. ISO-1 at 9-10.

Issue 3: Whether the location of the telecommunications facilities on the Green Borders side of the interconnection is relevant to determining their appropriate classification.

Contrary to the position of Green Borders, the location of the telecommunications facilities on the Green Borders side of the interconnection to the CAISO Controlled Grid is extremely relevant in assessing their appropriate classification. The Commission has stated in a number of cases that the basic test for whether or not particular facilities constitute interconnection facilities or network upgrades depends on whether the facilities are located "at or beyond" the point of interconnection with the grid.[17] If they are, then they are integrated facilities that provide benefits to all users of the grid, and the costs cannot be directly assigned to the interconnecting generator. If not, then the Commission considers them to be sole-use facilities, the costs of which can be directly assigned to the generator.[18] The Commission has strictly applied this test to numerous interconnections, with only a few very limited exceptions.[19]

In the instant case, the telecommunications facilities at issue will be located on the Green Borders side of the point of interconnection, which is at SCE's Control substation. As shown on page 19 of Exhibit No. JST-7, the fiber optic communications cable will run from Control substation to the new Aurora substation, which is the location where the Green Borders facility will connect to the Dixie

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[17] *See, e.g.*, *Nevada Power Co.*, 111 FERC ¶ 61,161 (2005); *Entergy Gulf States*, 98 FERC ¶ 61,014 at 61,023, *reh'g denied*, 99 FERC ¶ 61,095 (2002); *Tampa Electric Co.*, 99 FERC ¶ 61,192 (2002).

[18] *Nevada Power Co.*, 111 FERC ¶ 61,161 at P 12.

[19] *See Tampa Electric Co*, 99 FERC at 61,796-97 (allowing certain metering equipment used to measure generation located at the point of interconnection to be treated as an interconnection facility); *Nevada Power Co.*, 113 FERC ¶ 61,007 at P 26 (2005)(explaining that direct assignment of certain transmission facilities would be allowed when they fell into an "exceptional category" of facilities "that are so isolated from the grid that they are and will remain non-integrated").

Valley-Oxbow line. Thus, this cable is clearly located on Green Borders' side of the point of interconnection with the CAISO Controlled Grid.

The microwave equipment is also, practically speaking, located on Green Borders' side of the point of interconnection. Although certain of the equipment will be installed at communications sites owned by the Los Angeles Department of Water and Power ("LADWP"), this equipment operates to provide a backup communications signal from the Green Borders facility to the CAISO Controlled Grid, which in effect duplicates the function and the communications route of the fiber optic cable.[20] None of the parties appears to dispute the conclusion that the facilities at issue are located on Green Borders' side of the point of interconnection. Therefore, under the Commission's "at or beyond" test, the telecommunications facilities at issue in this case are sole-use facilities and are properly classified as interconnection facilities.

[20] See Exh. JST-7 at 19; ISO-1 at 10-11.

Issue 4: Does the fact that Southern California Edison will own and operate the telecommunications facilities support treating them as network upgrades?

The fact that SCE will own and operate the telecommunications facilities does not support treating them as network upgrades. First, the Commission's own *pro forma* LGIA makes it clear that the ownership of facilities is not, in and of itself, determinative of whether those facilities should be classified as interconnection facilities or network upgrades. Therein, the Commission includes definitions for "Interconnection Customer's Interconnection Facilities," consisting of facilities owned by the interconnection customers, and for "Transmission Provider's Interconnection Facilities," consisting of facilities owned by the transmission provider.[21] Significantly, the Commission's *pro forma* LGIA provides that the costs of both of these types of facilities may be directly assigned to the interconnection customer.[22]

Although ownership might be a *factor* in determining facility classification under certain circumstances, in this particular case, SCE's ownership and operation of the facilities is not determinative, because these facilities will be operated for the sole benefit of Green Borders, and not for SCE or for the grid as a whole. The fiber optic cable will be entirely dedicated to Green Borders.[23] And, although it is technically possible that other customers could make use of some of the microwave equipment, specifically the microwave dishes installed at the three communication sites owned by LADWP, there are no plans to do so, and, in any event, separate

[21] *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 68 FR 49845 (Aug. 19, 2003), FERC Stats. & Regs. ¶ 31,146 (2003) at Appendix C, Standard Large Generator Interconnection Agreement, pp 8, 14.
[22] *Id*. at Appendix C, Standard Large Generator Interconnection Agreement, Sections 11.1-11.2.

communications channels would have to be created for such customers. As Ms. Zhu explained in her rebuttal testimony, this situation is analogous to a radial transmission line which, although designed and built for the sole use of a particular generator, could hypothetically be used as a means to interconnect additional customers (as is demonstrated by the Green Borders interconnection).[24]

[23] Exh. ISO-2 at 8.
[24] *Id*.

Issue 5: Is the Commission's decision in *Southern California Edison Co.,* 97 FERC ¶ 61,148 (2001) ("*Wildflower*") relevant to the issue of determining the classification of the telecommunications facilities at issue in the current proceeding? If so, how?

In the *Wildflower* decision, the Commission determined that certain RAS equipment should be treated as network upgrades, reasoning that the RAS upgrades permitted a cost effective expansion of the grid in lieu of more expensive upgrades that would otherwise have been borne by all customers taking service on the network.[25] The reasoning underlying this decision is appropriately reflected in the Green Borders LGIA,[26] which characterizes the RAS upgrades required by the Green Borders interconnection as network upgrades.[27] However, the *Wildflower* decision does not speak to the proper classification of the telecommunications facilities at issue in Green Borders.

The interconnection customer in the *Wildflower* proceeding planned to interconnect directly to the CAISO Controlled, and therefore, there was no need for the sort of communications upgrades necessary to effectuate the Green Borders interconnection.[28] The only way in which *Wildflower* could govern the classification issue being litigated in the instant proceeding is if the telecommunications facilities were treated as an inseparable part of the RAS upgrades, which, as explained in response to Issues 1 and 2 above, would be inappropriate. Therefore, the *Wildflower* decision has no particular relevance to the issue at stake in this hearing.

[25] *Southern California Edison Co.*, 97 FERC at 61,643-61,644.
[26] Exhibit JST-8.
[27] *Id*. at 64-69.
[28] See Exh. ISO-2 at 6.

Issue 6: Is it appropriate to compare the telecommunications facilities at issue in Green Borders to a radial transmission line for purposes of determining the appropriate facilities classification?

It is fair and appropriate to analogize the telecommunications facilities at issue in this proceeding to a radial transmission line. Although there is, of course, a difference between a radial line and the telecommunications facilities, in the sense that one transmits electrical energy while the other transmits communications signals, the facilities are analogous, in that both are solely dedicated to safely and reliably interconnecting a single interconnection customer to the grid.[29]

In the case of a radial line, its sole purpose is to transmit electrical energy from the project to the grid. In the case of the telecommunications facilities, their sole purpose is to transmit communication signals from the grid to the project. Both types of facilities are located on the customer side of the point of interconnection and can be isolated from the grid as a whole. Accordingly, both radial lines and the telecommunications facilities at issue here are sole use facilities that are not integrated with the CAISO Controlled Grid.

III. PROPOSED FINDINGS AND CONCLUSIONS

1. The telecommunications facilities at issue are properly classified as interconnection facilities rather than network upgrades.

2. The telecommunications facilities at issue benefit only Green Borders and do not benefit the CAISO Controlled Grid as a whole.

3. The telecommunications facilities are a discrete upgrade that should not be considered as inseparable from the RAS.

4. Based on Commission precedent, the location of the telecommunications facilities on the Green Borders side of the interconnection is highly relevant to determining their appropriate classification, and supports treating them as interconnection facilities rather than network upgrades.

5. The fact that SCE will own and operate these telecommunications facilities does not support treating them as network upgrades.

6. The *Wildflower* decision regarding the classification of RAS upgrades is already appropriately reflected in the unexecuted LGIA filed for Green Borders.

7. The *Wildflower* decision does not speak to the proper classification of the Green Borders telecommunications facilities.

8. It is fair and appropriate to treat the telecommunications facilities at issue in this proceeding in the same manner as a radial transmission line, for purposes of facilities classification.

[29] *Id*. at 8-9.

IV. CONCLUSION

For the reasons set forth above, the CAISO respectfully requests that the Presiding Judge issue proposed findings of fact adopting the positions set forth herein.

Respectfully submitted,

/s/ Michael Kunselman

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February 26, 2009

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing documents upon all of the parties listed on the official service list for the above-referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Washington, D.C. this 26th day of February, 2009.

/s/ Michael Kunselman
Michael Kunselman