

July 12, 2009

Ms. Daune Kirrene Sr. Contracts Negotiator CAISO Infrastructure Policy & Contracts **California Independent System Operator** 151 Blue Ravine Road Folsom, CA, 95630

RE: The Nevada Hydro Company Participating Transmission Owner ("PTO") Application Application Re-Submittal FERC Dockets PN-11858, ER06-278 and ER08-654

Dear Ms. Kirrene,

As you recall, in February 2007, The Nevada Hydro Company ("TNHC") submitted its application to become a PTO under the California Independent System Operator Corporation ("CAISO") Tariff in connection with its Talega-Escondido/Valley-Serrano 500 kV Interconnect ("Project"). After making that filing, the CAISO noted that a number of issues remained undecided, particularly issues relating to TNHC's filing at Federal Energy Regulatory Commission ("FERC") in Docket ER06-278. Now that FERC has acted in ER06-278 and has ruled on the issues so identified, TNHC re-submitted its draft TO Tariff in accordance with FERC's directives in ER06-278 in April of this year.

Last week, you kindly pointed out that as a result of FERC's directives, some of the content of our original Application now no longer matched provisions in the re-submitted TO Tariff. We have, therefore, made the appropriate corrections to the Application, and re-submits it herein.

TNHC requests that this re-submittal be completed and approved by CAISO at the next available opportunity. The TE/VS Interconnect has been designated as a critical Statewide transmission resource in the California Energy Commission's ("CEC") 2007 Strategic Transmission Investment Plan, CEC-700-2007-018-CMF." In that report, the CEC advised that this, and other recommended projects "are strategic resources that require specific, swift, and priority consideration by state regulators." Further, the Federal government, under the authority granted to it in Section 1221(a) of the Energy Policy Act of 2005, has identified that area of Southern California in which the Project sits as a "national interest electric transmission corridor." In so doing, Federal regulators allow state and federal agencies a one-year window in which to act on projects within these designated areas.

Ms. Daune Kirrene July 12, 2009

Please contact the undersigned if you have any questions or concerns.

Thank you for your attention to this matter.

Respectfully submitted,

Rexford Wait Vice President For The Nevada Hydro Company, Inc. FERC Dockets PN-11858, ER06-278 and ER08-654

Enclosure

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Talega–Escondido/Valley–Serrano 500kv Interconnect Project Application for Participating Transmission Owner Status

1. Description of the TE/VS Interconnect Project

The Nevada Hydro Company, Inc. ("TNHC") is developing the Talega– Escondido/Valley–Serrano 500 kV Interconnect ("**TE/VS Interconnection**") Project. The Project consists of an approximately 30–mile, 500-kV transmission line that will provide the only 500 kV connection between Southern California Edison ("SCE") and its Valley-Serrano 500-kV line and San Diego Gas & Electric's ("SDG&E") and its Talega-Escondido 230 kV transmission systems.

The Project is located principally on and adjacent to Lake Elsinore and within the watershed of San Juan and San Mateo Creeks; is near the City of Lake Elsinore; and is located in both Riverside and San Diego Counties in Southern California. This Project would also occupy federal lands, including lands managed by the US Forest Service - Cleveland National Forest, and the United States Department of Defense (Camp Joseph H. Pendleton).

TNHC has provided and will continue to provide all funding for the development and construction of the Project. TNHC will receive all entitlements and transmission system rights ("TSRs") generated by the Project in accordance with the tariff and protocols of the California Independent System Operator Corporation ("CAISO"). TNHC owns no other TSRs in California other than those TSRs that will be associated with the Project, as described herein. TNHC intends, in accordance with the Transmission Control Agreement and a Participating Transmission Owner Tariff ("PTO Tariff") to be entered into by TNHC, to turn over to the operational control of the ISO all transmission lines and associated facilities. TNHC will use the revenues generated by the TSRs and the PTO Tariff to pay the operation, maintenance and other ongoing costs of the Project, to repay the construction and long–term debt incurred to finance the Project and to pay equity investors a return of and on their capital in accordance with Orders from the Federal Energy Regulatory Commission ("FERC") and as may be set forth in FERC docket ER06-278.

At present, TNHC is the sole owner of the Project and has overall responsibility for the management of the Project throughout the development and construction phases. TNHC is coordinating with Siemens Energy Inc. on all aspects of the engineering, design and construction of the Project. TNHC has assumed the full risk of development, is funding all development costs required in connection with the Project, and will mange the financing (both debt and equity) needed to construct the Project. It is the expectation of TNHC that, at the time the Project is ready to enter commercial service, a third party will acquire the Project assets under yet to be determined terms. Federal environmental review of the Project is largely complete, with a Final environmental Impact Statement covering the Project issued by FERC in its Docket P-11858. The California Public Utilities Commission is expected to act as lead agency to coordinate the State's environmental review of the Project in compliance with CEQA. The TE/VS Interconnect has been designated as a critical Statewide transmission resource in the California Energy Commission's ("CEC") 2007 Strategic Transmission Investment Plan, CEC-700-2007-018-CMF." In that report, the CEC advised that this, and other recommended projects "are strategic resources that require specific, swift, and priority consideration by state regulators." Further, the Federal government, under the authority granted to it in Section 1221(a) of the Energy Policy Act of 2005, has identified that area of Southern California in which the Project sits as a "national interest electric transmission corridor." In so doing, Federal regulators allow state and federal agencies a one-year window in which to act on projects within these designated areas.

A general map of the route of the Project is attached as **Attachment A**. A more detailed description of the Project interconnection and single-line diagrams are provided in **Attachment B**.

2. Description of The Nevada Hydro Company Transmission Entitlements

TNHC has no "Entitlements" to facilities that the TNHC does not own but intends to turn over to CAISO operational control.

3. Encumbrances

There are no encumbrances as defined in the ISO tariff with respect to the Project as of this time and TNHC anticipates that there will be none as of the date the Project enters commercial service.

4. Transmission lines and associated facilities to be placed under the CAISO control

TNHC will turn over the operational control of the Project, as described above, to the CAISO as of the commercial operation date subject to TNHC's right to receive the financial benefits associated therewith, in accordance with the CAISO tariff.

5. Reliability Criteria

TNHC is not aware of any specific Local Reliability Criteria that are applicable to the entitlements identified in Section 2 above. The Project will meet the reliability requirements of the Western Electricity Coordinating Council ("WECC") and the North American Reliability Council ("NERC").

6. Maintenance

TNHC, as the participating transmission Owner will contract with appropriate operating and maintenance companies (to be determined) and will oversee the operation and maintenance of the Project including administration of the operation and maintenance agreement with the chosen contractor commencing as of commercial operation date for the Project. Project facilities will be maintained consistent with all applicable CAISO approved maintenance practices and standards. Project documents and contracts will require conformance with all applicable CAISO maintenance standards as set forth in the CAISO tariff and protocols, the Transmission Control Agreement (TCA), and all applicable WECC and NERC standards.

7. Temporary Waivers

Not applicable.

8. Proposed Transmission Owner Tariff

As the Project is presently in the development stage, with construction anticipated to begin in late 2009 following completion of permitting and financing, the final costs of the Project and the proposed PTO Tariff for the Project will be filed at a later date. As part of this application, TBC has attached a draft PTO Tariff as **Attachment C.** The final PTO Tariff will not go into effect until approved or accepted for filing by the FERC. TNHC anticipates filing its Transmission Revenue Requirement ("TRR) and its proposed PTO Tariff with the FERC no later than ninety days prior to the anticipated commercial operation date for the Project. The commercial operation date for the TE/VS Interconnect is currently expected to be in early 2011.

9. Transmission Revenue Requirement Data Form

TNHC filed with FERC in December of 2005 under FPA Section 205 in docket number ER06-278-000. FERC granted, in its Order issued on March 24, 2008 (122 FERC ¶ 61,272) rate incentives to the Project based upon its findings that the Project provided reliability and other benefits to the grid. These incentives are be set at "the upper end of the zone of reasonableness". As discussed in the previous section TNHC, has committed to file its TRR with the FERC no later than ninety days prior to the anticipated commercial operation date for the Project. The total cost of the Project is presently estimated to be \$350 million. Although there is contingency in that cost estimate, there are number of costs that will be finalized over the upcoming months, including the costs of interconnecting with the Southern California Edison system.

10. Address and Contact Names

Rexford J Wait Vice President 2416 Cades Way Vista, CA 92081 Tel. No. (760) 599-0086 FAX No. (760) 599-1815 Email: rwait@controltechnology.org

11. Settlement Account

For Confidentiality reasons, TNHC will provide this information in a separate document.

<u>80</u>

<u>885</u>

20

12. MWh Demand Per Month

Not applicable.

13. Instructions for Encumbrances and Entitlements

Not Applicable

This application is respectfully re-submitted on this 12th day of July, 2009.

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Signed

Rexford J. Wait Vice President The Nevada Hydro Company Inc FERC P-11858-002/ER06-278

Attachment A Route Map



Attachment B Detailed Interconnection Description and Single-Line Diagrams

The TE/VS Interconnect components are shown on Figure 1: Conceptual Single Line Diagram, and include:

A new 500 kV transmission line from the new Lake 500 kV Switchyard, to the new Case Springs 500/230 kV Substation entering service in February 2011 (depending upon timing of required approvals).

A portion of this transmission facility will be underground, and may include 500 kV gas insulated line (GIL), oil filled line, or dielectric line, in the area above Lake Elsinore, where there will be a "T" connection down to the Santa Rosa substation.

The Case Springs Substation is located on the northern border of Camp Pendleton, and will include three 500/230 kV, 500/620 MVA (normal and emergency rating) transformers. Three 230 kV phase shifting transformers, each rated 500 MVA normal and 620 MVA emergency, will be placed in series with the three 500/230 kV transformers. The station will also provide space and an integration point for one additional 500 kV line.

The Santa Rosa Substation is located roughly midway between the Lake Switchyard and Case Springs Substation, and will provide reliability enhancements to the local distribution system and later connect the pumped storage facility to the grid.

The Lake Switchyard will be located in the area of Lee (Corona) Lake, and will include a breaker and one-half configuration with four bays for the Valley-Serrano 500 kV Loops. Two more bays for an optional SCE distribution substation, can feed two 560 MVA 500/115 kV transformers. See SCE Alberhill 115 kV reinforcement project, Chapter 6, Alternative 5.

The existing Talega–Case Springs 230 kV line will be upgraded to provide a normal and emergency rating of 912 MVA in each of two circuits. After relocating an existing 69 kV line from the tower positions presently used on the portion of the line between Escondido and Case Springs, a second 230 kV circuit will be added to the towers between Escondido and Case Springs. This line will be rated at 456 MVA for each circuit, using the same conductor as the existing line in that line section. It is proposed that 3M ACCR conductors be used (see Attachment 2).

The high-voltage transmission line will run approximately 30 statute miles generally north to south in the Cleveland National Forest and interconnect the SCE and SDG&E transmission systems. The Project is electrically similar to the former Valley Rainbow project, CPUC Docket A.01-03-036. The power lines will be sized for 1,600 MW or 1,780 MVA.

All 500 kV air insulated circuits will be twin bundled 2156 ASCR, "BLUEBIRD". The underground circuits are GIL lines rated at 3,100 amps continuous and 63 kA short circuit. The conductor type for the second 230kV circuit between Talega and Escondido substation is now proposed as 3M Company Composite Conductor Part Number 3M1033-T13 with the upgraded path nominally rated at 1,000 MW with overload at approximately 2,000 MW. The final ratings and conductor will be finalized in the Facilities Study.



1. Proposed Lake Switchyard/Substation 500-kV, Optional 115-kV Tie, and 13.8-kV Station Power

As proposed, the northern connection and switchyard will be at Lee Lake (Corona Lake). This will be on the northern side of Interstate 15, in close proximity to the existing SCE 115 kV, 13.8 kV lines and 500 kV Valley-Serrano line. This new switchyard will occupy an area of

roughly 40 to 60 acres with a new breaker and a half configuration. The loop in/out will be approximately half way between Serrano and Valley substations. The Applicant will need a connection to the existing SCE 13.8 kV lines for station power, and as an option, five circuits, of 115 kV loop in/out connection. This optional connection could eliminate the need for the proposed Elsinore or Skylark 115-kV connections from the Santa Rosa substation/switchyard, described below. This 115 kV tie would likely include a tap changing transformer for flow control and may or may not include fault current upgrades to SCE Elsinore or Skylark substations.

A single-line diagram appears as Figure 2: Lake 500 kV Switchyard – Single Line Diagram. Design parameters for the switchyard appears as Table 1: Santa Rosa Switchyard Design Parameters. A conceptual facility layout appears as Figure 3: Lake 500 kV Switchyard – Conceptual Layout.



Figure 2: Lake 500 kV Switchyard – Single Line Diagram

 Table 1: Santa Rosa Switchyard Design Parameters

To SCE Valley

Santa Rosa

Substation 500 kV

Rated voltage	550 kV
Rated frequency	60 Hz
Rated lightning impulse withstand voltage	1550 kV
Rated power frequency withstand voltage (1 min)	740 kV
Rated current busbar	4000 A
Rated current feeder	4000 A
Rated short - time withstand current	63 kA / 1s
Rated short - circuit breaking current	63 kA
Indoor ambient temperature	-5°C / +40°C
Outdoor ambient temperature	-5°C / +49°C

2. Proposed Santa Rosa Substation, 500-kV, 115-kV Ties, and 13.8kV Station Power

The mid point substation will be for connection to the LEAPS 500-MW pumped storage project and to provide local 115 kV reinforcement. It will be located to the rear of the proposed Santa Rosa powerhouse site located, in whole or in part, in the Cleveland National Forest, near Lake Elsinore. Distance to the northern substation is approximately 12.7 statute miles and approximately 16.5 statute miles to the southern connection. The substation will be approximately 60 acres and will also enclose a breaker and a half, 500-kV configuration. As mentioned above, two ties to the existing 115 kV Elsinore and Skylark, SCE substations (8 and 6 miles, respectively) are also included. These substations may require upgrades for fault current rating. Also, required is a 13.8 kV connection from Grand Avenue for station power (approximately 4,800 feet).

A single line diagram of the proposed substation may be seen in Figure 4: Santa Rosa Substation Single Line Diagram, and a conceptual site layout may be seen in Figure 5: Santa Rosa Substation – Conceptual Layout.

3. Proposed Case Springs Substation, 500-kV, 230-kV, 69-kV upgrades/voltage support, and 13.8-kV Station Power

The southern substation will be approximately 60 to 80 acres, and located near the existing SDGE 230-kV lines on or near the border of Camp Pendleton. These existing lines connect the Talega and Escondido substations. The Applicant proposes to construct a new 500/230-kV substation with flow control. In the Applicant's Phase I study, two phase shifting transformers sized for nominal operation, at 25 to 30 deg with a southern flow of approximately 1,000 MW, are proposed. The FACTS devices presently show no real benefit for flow control. The existing SDG&E 230 kV Talega-Escondido lines would loop in/out and bundling (adding a second conductor) will upgrade the existing lines. An additional circuit would be added to the existing spare tower supports, each direction matching the bundled circuits. This re-conductoring and added circuit would bring the SDGE 230-kV Talega-Escondido rating to approximately 1,000 MW. Other upgrades considered are rebuilding approximately 7.7 miles of 69 kV lines between Paula and Lilac substations. Also, adding voltage support at the existing Mission, Miguel, and Sycamore Canyon substations. Still unresolved is a requirement for one 13.8 kV circuit for station power. If unresolved, 13.8 kV conductors will be added on the same towers from the northern and mid point substations.

A single line diagram of the proposed substation may be seen in Figure 6: Case Springs Substation – Single Line Diagram, and a conceptual site layout may be seen in Figure 7: Case Springs Substation – Conceptual Site Plan. Figure 6: Case Springs Substation – Single Line Diagram and Figure 7: Case Springs Substation – Conceptual Site Plan provide the same views for the Case Springs Substation site.

Figure 3: Lake 500 kV Switchyard – Conceptual Layout







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Figure 6: Case Springs Substation – Single Line Diagram

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