December 21, 2010

Mr. James Avery
San Diego Gas and Electric
8330 Century Park Court
San Diego, CA 92123-1548

RE: **Final Demand to CTPG; Protest, and FERC Non-Compliance**
Talega–Escondido/Valley–Serrano 500 kV Interconnect
FERC Dockets ER06-278 and ER08-654
California PUC A.10-07-001
Under FERC Order 890 and FERC NOPR RM10-23-000
Critical FERC 1221(a) Listed Project and CEC Transmission Project

Dear Mr. Avery.

The Nevada Hydro Company (NHC) has sent several letters to CTPG protesting its treatment of our Talega-Escondido/Valley-Serrano 500 kV Interconnect ("TE/VS Interconnect") Project without corrective action or response. NHC has sent similar letters to other state high voltage transmission planning venues, also without response.

Although CTPG may claim otherwise, it is apparent to NHC that **CTPG's actions are disingenuous, fictitious, discriminatory, non-compliant with FERC Order 890, and with FERC RM10-23-000.** The CTPG Study Plan's are also inconsistent with findings contained in past studies, including FERC's 1221a Critical Congestion Area study, CEC Transmission Reports, CREZ Planning, and RETI Planning.

As you are by now well aware, because no Independent Project has been evaluated fairly in your reports, and all Utility Projects were given good results, it is my personal belief that this is just another attempt by SDG&E/CAISO to use their position of power and reputed independence to create an unfair advantage--thereby picking winners and losers for transmission development in California. SDG&E and the CAISO are discriminating against the Independent Transmission developers, plain and simple. This is proven statistically, if by no other means: how many independent projects have been approved (zero) and how many utility sponsored projects have been approved (all).

As it applies to the Independent Transmission Developer–sponsored projects, I wonder:

- Where is CAISO Tariff Section 24?
- Where is FERC Order 890 and RM10-23-000?
- Who empowered CTPG to pick winners and losers under the current CAISO Tariffs?

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- Where was the transparency or impartial third party to protect our interests?
- Where is our "Safe Harbor" under RM-23-000?
- Why was a fictitious ROFR applied to the Independent Projects?

Independent Transmission Developers were never provided "seats" at the CTPG table. Further, with most final reports issued, all proposed IOU projects approved, and the CAISO stating they need no further transmission for 33% RPS, I contend that CTPG has conspired with the CAISO, and together broke all commitments to provide for an "Open-Access-Market", as required by FERC. At the same time, through 100% control of all planning efforts, CTPG and the CAISO have restrained the efforts of independent developers to move their own projects forward. The situation has deteriorated badly; with 206 complaints filed by desperate parties without any other relief Because the CAISO, SDG&E and SEMPRA compete head to head with independent transmission developers, I personally believe that the situation has devolved to violate anti-trust provisions.

I have, therefore, encouraged all Independent Transmission Developers, Storage, and Generators to file a class action anti-trust law suit. I just simply see no other way to enforce the existing Federal and State laws. Where else do we go to get enforcement of existing broken laws?

Finally, by this letter and to be crystal clear, NHC withdraws any support for, or participation with, CTPG.

Sincerely

Rexford J Wait
Vice President

Enclosures

THE HYDRO COMPANY, INC.
DBA THE NEVADA HYDRO COMPANY, INC.

October 29,2010

Mr. James Avery
San Diego Gas and Electric
8330 Century Park Court
San Diego, CA 92123-1548

RE: **NHC Protest: Phase 4 CTPG Study Plan Issued October 14, 2010**
Talega–Escondido/Valley–Serrano 500 kV Interconnect
FERC Dockets ER06-278 and ER08-654
Under FERC Order 890 and FERC NOPR RM10-23-000
Critical FERC 1221(a) Listed Project and CEC Transmission Project

Dear Mr. Avery.

The Nevada Hydro Company (NHC) has reviewed the CTPG Phase 4 Study Plan (Study Plan) issued October 14, 2010. NHC has commented previously on the disgraceful conduct of CTPG activities under the guise of Order 890 compliance. NHC comments submitted in every previous phase of CTPG activities have been ignored by CTPG. As noted, NHC engineers have run the TE/VS power flows on the cases contained in your reports, with the proper base case data, as set forth in FERC Dockets ER06-278, ER08-654, and our approved studies. NHC also relied upon the following:

1. Reports from the CAISO, including CSRTP, STEP and the Kiel report.
2. WECC reports and analyses.
3. The CPUC's Valley Rainbow Alternatives Report.
4. The FERC FEIS for LEAPS in FERC Docket P-11858-002
5. The CPUC FEIR issued for the Sunrise Project.

NHC has again found CTPG Phase 4 Study Plan as it "relates" to the TE/VS Project to be disingenuous, fictitious, discriminatory, non-compliant with FERC Order 890, and with FERC RM10-23-000. This Study Plan is also inconsistent with findings contained in the above studies and FERC's 1221a Critical Congestion Area study, CEC Transmission Reports, CREZ Planning, and RETI Planning.

As you are by now well aware, because no Independent Project has been evaluated fairly in your reports, and all Utility Projects were given good results, it is my personal belief that this is just another attempt by SDG&E/CAISO to use their position of power and reputed independence to create an unfair advantage--thereby picking winners and losers for transmission development in California. SDG&E and the CAISO are discriminating against the Independent Transmission developers, plain and simple. This is proven statistically, if by no

other means: how many independent projects have been approved (zero) and how many utility sponsored projects have been approved (all).

As it applies to the Independent Transmission Developer–sponsored projects, I wonder:

- Where is CAISO Tariff Section 24?
- Where is FERC Order 890 and RM10-23-000?
- Who empowered CTPG to pick winners and losers under the current CAISO Tariffs?
- Where was the transparency or impartial third party to protect our interests?
- Where is our "Safe Harbor" under RM-23-000?
- Why was a fictitious ROFR applied to the Independent Projects?

We look forwarded to a spirited and professional debate on any issue raised by this letter.

Sincerely

Rexford J Wait
Vice President

August 18, 2010

Mr. James Avery
San Diego Gas and Electric
8330 Century Park Court
San Diego, CA 92123-1548

RE: **NHC Protest: Phase 3 CTPG Draft Report Issued July 21, 2010**
Under FERC Order 890 and FERC NOPR RM10-23-000
Critical FERC 1221(a) Listed Project and CEC Transmission Project

Talega–Escondido/Valley–Serrano 500 kV Interconnect
FERC Dockets ER06-278 and ER08-654

Dear Mr. Avery.

The Nevada Hydro Company (NHC) has reviewed the CTPG Phase 3 Draft Report (Draft Report) issued July 21, 2010. NHC engineers ran the TE/VS power flows on the cases contained in your report, with the proper base case data, as set forth in FERC Dockets ER06-278, ER08-654, and our approved studies. NHC also relied upon the following:

1. Reports from the CAISO, including CSRTP, STEP and the Kiel report.
2. WECC reports and analyses.
3. The CPUC's Valley Rainbow Alternatives Report.
4. The FERC FEIS for LEAPS in FERC Docket P-11858-002
5. The CPUC FEIR issued for the Sunrise Project.

NHC has again found CTPG Phase 3 Studies and Draft Report on the TE/VS Project to be, at best, disingenuous, fictitious, discriminatory, non-compliant with FERC Order 890, and with FERC NOPR RM10-23-000. This Report is also inconsistent with findings contained in the above studies and FERC's 1221a Critical Congestion Area study, CEC Transmission Reports, CREZ Planning, and RETI Planning.

In addition, because no Independent Project was evaluated fairly in your Draft Report, and all Utility Projects were given good results, it is my personal belief; this is just another attempt of SDGE/CAISO to use its position of power and reputed independence, to create an unfair advantage, thereby picking winners and losers for transmission development in California. SDG&E and the CAISO are discriminating against the Independent Transmission Developers, plain and simple. This is proven statistically, if by no other means: how many independent projects have been approved (zero) and how many utility sponsored projects have been approved (all).

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- Where was the transparency or impartial third party to protect our interests?
- Where is our "Safe Harbor" under RM-23-000?
- Why was a fictitious ROFR applied to the Independent Projects?

Attached is our technical report that proves up points made in this letter. We were never contacted by TANK, or requested to give information that would be required to properly analyze our project.

We look forwarded to a spirited and professional debate. I am personally looking forward to taking apart your CTPG Phase 3 Report results, case by case, publically.

Sincerely

Rexford J Wait
Vice President

Attachments: NHC CTPG Report

Comments in Response to

California Transmission Planning Group

Phase 3 Draft Study Report

Dated July 21, 2010

Prepared by The Nevada Hydro Company

These comments are prepared by the Nevada Hydro Company (NHC) of its technical review of Sections 8.1 and 8.2 of the California Transmission Planning Group (CTPG) Phase 3 Draft Study Report dated July 21, 2010 (Report). These comments draw additional information from other parts of this Report and other materials previously prepared by CTPG, the California Independent System Operator (CAISO) and other documents that will be referenced when used.

The Talega-Escondido/Valley-Serrano 500 kV Interconnection Project (TE/VS) analysis in the Report (Section 8.1) is the first of the sections dealing with alternative transmission choices that may relieve perceived transmission needs not met by projects proposed by CTPG members. NHC has identified serious flaws in the analysis. Each is described in this report.

1. Flaw: Inaccurate Project Configuration

The project configuration used by the CTPG analysis team is shown in Report subsection 8.1.1.1.

This configuration, while described correctly in Section 8.1.1.1, appears to have been implemented incorrectly in the scenario development and subsequent analysis.

2. Flaw: Faulty Operating Scenarios

Section 8.1.1.3 of the Draft Report purports to address operating scenarios for the TE/VS Project. Three operating scenarios were studied. They were:

- Case 1 – With the phase shifting transformers at Case Springs bypassed.
- Case 2 – With the phase shifters set to cause flow of 1000 MW from the SDGE end of the Project to the Southern California Edison (SCE) end
- Case 3 – With the phase shifters set to cause flow of 1000 MW from the SCE end of the Project to the SDGE end.

The continued insistence on leaving the Lake Elsinore Advanced Pumped Storage (LEAPS) as not operating is not given any explanation. But, since this is an analysis that seeks to solve the needs for delivery of renewable energy, to disregard the use of significant energy storage device results in a highly flawed view of the project.

2.1. Corrections to Case 1

As described in both text form and provided model data for use in PSLF, it is evident that this scenario is physically impossible. This flaw was pointed out prior to this draft Report, and should be dropped from all discussion of the modeling of TE/VS. As noted, there is no bypass option as proposed in Case 1. If the phase shifters were set to zero power flow, then the N-0 results would reflect the same results as the “without TE/VS”

situation, but the ability would be there to better manage contingency conditions. Also, the fact of having three instead of two phase shifters will have an impact on performance in general.

2.2. Case 2 is seriously flawed and should not be considered

A significant flaw in the development of scenarios is the continued use of the Case 2 scenario, which schedules flow of 1,000 MW over TE/VS from San Diego to Southern California Edison (SCE). Under heavy load conditions this scenario is patently unrealistic and should never have been considered.

The Case 2 operating scenario has never been considered by TNHC or any of the "groups" that have studied the effects of TE/VS with or without the LEAPS Project in service (such as the Southern California Regional Transmission Planning [CSRTP] Group) as a realistic option for high load conditions. The Case 2 scenario is akin to a plan to operate the Palo Verde-Devers 500 kV line with flow toward Palo Verde under high load conditions. This scenario should not be countenanced.

2.3. Case 3: reasonable as is

The Case 3 operating scenario is considered reasonable by TNHC.

2.4. Case 4: reasonable as is, but the description is ill-placed

The fourth scenario, a scheduled flow of 500 MW from SCE, is one suggested by NHC. But the separation of the description of the scenario from the other three in the report is misleading. It should be placed with the description of the other scenarios.

3. Mitigation Plan Description

Section 8.1.1.4, "Mitigation Plan Description", is placed in the area of the report describing the performance of TE/VS without ever showing if there is any connection between the items in Table 8.1.3 and TE/VS. Further, this makes no attempt to show what caused the overloads. One could infer from this table that TE/VS is responsible for these overloads, but a careful review of the list would lead one to conclude that TE/VS has nothing to do with them, and this is merely another tactic to impute problems where there is none.

4. Flaw: Findings

Section 8.1.1.5 deals with the results found from the analysis conducted by the CTPG study team. The first portion of this section provides a summary of findings. The logical process of reporting would be that Tables 8.1.4 and 8.1.5 provide the support to uphold the summary presented. They do not. Indeed, **there seems to be little connection between the summary and the support provided by the tables**. Also, while being quite specific about selected violations within or near the SDGE service area, the summary is vague about other findings.

As noted, the Case 2 scenario should not be considered. So, the following tables present the same data without Case 2 being considered.

4.1. Revised Tables

Table 8.1.4 Normal Conditions (N-0) (Revised by NHC)

TE/VS Case	Overloaded Facility	Area	Rating(Amps)	Loading (%)	
				Phase 2 w/o Mitigation	With TE/VS Project
Case 3	TALEGA- CAMP PENDLETON 230 kV #1	22	1,145	N/A	148.6%

Since the Talega-Case Springs 230 kV line is to be reconductored (bundled) the rating should be 2,290 amperes, not 1,145 A. Also, the second circuit with the same capability has been added. So, the normal conditions would have no issues.

Table 8.1.5 Emergency Conditions (N-1 & N-2) (Revised by NHC)

TE/VS Case	Overloaded Facility	Contingency	Area	Rating (Amps)	Loading (%)	
					Phase 2 w/o Mitigation	With TE/VS Project
Case 1 (N-1)	CENTER S-DELAMO 230 kV #1	BARRE-ELLIS	24	2,480	<100%	103.8%
Case 1 (N-1)	VILLA PK-BARRE 230 kV #1	BARRE-LEWIS	24	3,750	103.4%	115.1%
Case1 (N-1)	BARRE-LEWIS 230 kV #1	VILLA PK-BARRE	24	3,750	114.4%	127.5%
Case 1 (N-1)	MLMS3TAP-OTAY MESA 230 kV	MIGUEL-WNDFARMS	22	3,150	<100%	101.3%
Case 1 (N-1)	OTAY MESA-TJI 230Kv #1	IMPRLVLY-CENTRAL S	22	2,071	<100%	100.6%
Case 1 (N-1)	TALEGA-CAMP PENDLETON 230Kv #1	MIGUEL-WNDFARMS	22	1,145	N/A	102.2%
Case 3 (N-1)	ESCONDIDO- CAMP PENDLETON 230 kV #1	TALEGA-CAMP PENDLETON	22	1,144	N/A	221.9%
Case 3 (N-1)	MLMS3TAP-OTAY MESA 230 kV #1	MIGUEL-WNDFARMS	22	3,150	<100%	104.5%
Case 3 (N-1)	OTAY MESA-TJI 230Kv #1	IMPRLVLY-CENTRAL S	22	2,071	<100%	100.9%
Case 3 (N-1)	PENASQUITOS-ENCINA TAP 230 kV #1	CAMP PENDLETON-TALEGA	22	2,289	<100%	106.8%
Case 3 (N-1)	TALEGA-CAMP PENDLETON 230 kV #1	CAMP PENDLETON-ESCONDIDO	22	1,145	N/A	224.6%
Case 3 (N-2)	DEVERS-SANBRDNO 230 Kv #1	DEVERS-VALLEYSC #1 & #2	24	796	125.9%	131.3%
Case 3 (N-2)	EL CASCO-DEVERS 230 Kv #1	DEVERS-VALLEYSC #1 &#2	24	1,150	128.0%	132.2%
Case 3 (N-2)	SAN ONOFRE-SANTIAGO 230 Kv #1	VIEJOSC-SAN ONOFRE; SAN ONOFRE-SANTIAGO	24	3,301	<100%	107.9%
Case 3 (N-2)	ESCONDIDO –CAMP PENDLETON 230 Kv #1	ENCINA-SANLUSRY-PEN 230Kv & BATIQTOS-	22	1,145	N/A	113.2%

		SHADOWR				
Case 1-3 (N-2)		IMPRVLY-CENTRAL S; IMPRLVLY-WNDFARMS	22	2,133	Diverged	Diverged

4.2. Corrected Contingency Analysis

As noted in the description of the plan of service, the proper 230 kV line configurations will affect the performance of the Project. By including the second circuits, including the bundling between Talega and Case Springs, many of the overloads reported in the tables for Cases 1 and 3 are eliminated. There are no overloads to report under normal conditions.

Also, if the Case Springs phase shifters had been modeled properly in Case 1, the flows for the contingencies in Area 24 (SCE) would surely have been lower. Because of the lack of transparency it is not possible from this report to determine by how much. But it is likely that the flows would not have shown any overload if the phase shifter flows were set to zero to begin with. One should note that these supposed overloads didn't appear in the previous draft of this report. Thus, it would not be unreasonable to drop these imputed overloads as caused by modeling error. The contingency report table would now be as follows.

Table 8.1.5 Emergency Conditions (N-1 & N-2) with Correct 230 kV lines from Case Springs and other revisions noted above (Revised by NHC)

TE/VS Case	Overloaded Facility	Contingency	Area	Rating (Amps)	Loading (%)	
					Phase 2 w/o Mitigation	With TE/VS Project
Case 1 (N-1)	MLMS3TAP-OTAY MESA 230 kV #1	MIGUEL-WNDFARMS	22	3,150	<100%	101.3%
Case 1 (N-1)	OTAY MESA-TJI 230Kv #1	IMPRLVLY-CENTRAL S	22	2,071	<100%	100.6%
Case 3 (N-1)	MLMS3TAP-OTAY MESA 230 kV #1	MIGUEL-WNDFARMS	22	3,150	<100%	104.5%
Case 3 (N-1)	OTAY MESA-TJI 230Kv #1	IMPRLVLY-CENTRAL S	22	2,071	<100%	100.9%
Case 3 (N-2)	DEVERS-SANBRDNO 230 Kv #1	DEVERS-VALLEYSC #1 & #2	24	796	125.9%	131.3%
Case 3 (N-2)	EL CASCO-DEVERS 230 Kv #1	DEVERS-VALLEYSC #1 &#2	24	1,150	128.0%	132.2%
Case 3 (N-2)	SAN ONOFRE-SANTIAGO 230 Kv #1	VIEJOSC-SAN ONOFRE; SAN ONOFRE-SANTIAGO	24	3,301	<100%	107.9%
Case 1-3 (N-2)		IMPRVLY-CENTRAL S; IMPRLVLY-WNDFARMS	22	2,133	Diverged	Diverged

Regarding the two remaining N-1 contingency overloads noted, the Case 1 situation can be managed by proper operation of the phase shifters. Also, it should be noted that the change in flows on the Otay Mesa-TJI 230 kV line for the contingency of the loss of the Imperial Valley to Central 500 kV line is 0.3%, or 6 amperes, on a basis of over 2,000 amperes for a TE/VS base flow change of over 600 MW between CTPG's Case 1 and Case 3. Also, in its reporting of Case 4 (500 MW base flow on TE/VS) the CTPG report has no overload of the Otay Mesa-TJI line reported. Thus, it would appear that something is incorrect in the modeling.

NHC will continue to seek a copy of the power flow case in order to assure itself that it has properly modeled results.

4.3. Case 4 Results (500 MW flow over TE/VS)

The reporting of results for the Case 4 scenario shows that all overloads in the SDG&E area are reduced by the inclusion of the TE/VS Project. Further, it is evident that the inclusion of the LEAPS Project generation of 500 MW would mitigate the overloads in the SCE area for both N-1 and N-2 contingencies.

There is a logical inconsistency in the results reported for Case 1 compared to Case 4 in the 230 kV overloads reported in the area south of Los Angeles. Specifically, note the reported reduction of overload in Case 4 on the Barre-Lewis 230 kV line for the loss of the Barre-Villa Park line (114.7% to 108.6%), but the significant increase in overload for the same line and contingency in Case 1 (114.4% to 127.5%). The same problem exists for the reporting of the Villa Park-Barre line for loss of the Barre-Lewis line.

4.4. Other Reporting Flaws

Section 6.1 Transmission System Analysis states that "In contrast, the CTPG is performing power flow and *transient stability* (emphasis added)". No transient stability reporting is provided.

One of the criteria for power flow analysis in California is the study of what is known as "G-1/N-1" analysis. None is reported in this report.

In Table 7.4.6, the last entry has a mitigation of dropping load. This is contrary to the NERC performance criteria if it is for a single contingency.

5. Conclusions

There are enough problems with the results reported that it is hard to accept it as a true reflection of system performance as found by an unbiased analyst. This problem is compounded by this statement on Page 119.

> *The transmission upgrades listed in Appendix B do not include any transmission projects that may have been submitted as 'alternatives' by stakeholders."*

Does this mean that all the projects submitted by stakeholders have been ignored? If not, what is the process by which they may be included in the CTPG planning?

THE HYDRO COMPANY, INC.
DBA THE NEVADA HYDRO COMPANY, INC.

April 28, 2010

TO: The California Transmission Planning Group

SUBJECT: Exclusion of Talega–Escondido/Valley–Serrano 500 kV Interconnect Project from CTPG Reports

Once again, the Nevada Hydro Company ("NHC") must protest a transmission planning process orchestrated by the entrenched utility interests largely to protect their own turf.

Although The California Transmission Planning Group ("CTPG") is well aware of both the Talega–Escondido/Valley–Serrano 500 kV Interconnect project ("TE/VS Interconnect" or "Project") and the associated Lake Elsinore Advanced Pumped Storage ("LEAPS") project, CTPG has chosen to arbitrarily exclude these projects from analysis.

The TE/VS Interconnect has been designated as a critical statewide transmission resource since the California Energy Commission's ("CEC") published their 2007 "Strategic Transmission Investment Plan, CEC-700-2007-018-CMF" and the Project remains in the current strategic plan. In these reports, 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 ("EPAct"), has identified that area of Southern California in which the Project is located as a "National Interest Electric Transmission Corridor." In so doing, the federal government has determined that the area is "experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers." Even the Renewable Energy Transmission Initiative ("RETI") process has grudgingly included, sort of, the TE/VS Interconnect in its analysis. (Please see attached letter to Mr. Chuck Najarian of the California Energy Commission, who is a member of the RETI Coordinating Committee).

The Project will, for the first time, provide San Diego with a direct path to access renewable resources to its north and east and to the State's 500 kV backbone. By doing so, the Project will help alleviate reliability concerns within San Diego, further the objectives of California's Renewable Portfolio Standards ("RPS") and help San Diego meet its RPS goals. By providing for a connection for LEAPS into the grid, the Project will also assist the State in meeting its renewable goals, as LEAPS, as a rapid response energy storage asset, will become an essential tool in that effort. Because LEAPS can store and manage off-peak power, including wind and geothermal energy, the facility's operation will further the State's RPS goals and greenhouse gas ("GHG") emission-reduction standards.

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The huge environmental record produced in the LEAPS licensing proceeding at the Federal Energy Regulatory Commission ("FERC),"[1] combined with the extensive analysis of the Project already completed by the California Public Utilities Commission ("PUC") in connection with the Project's designation as the environmentally preferred transmission project in the Sunrise Powerlink proceeding, presents the CTPG with an opportunity to consolidate these findings, and conclusions drawn therein, and include this Project in its plans. Notwithstanding the facts set forth herein, facts that CTPG are well aware of, CTPG has arbitrarily decided to exclude these projects from review.

NHC protects the exclusion of these projects and insists that the projects be included in the CTPG proceedings.

1.0 Project Description

The TE/VS Interconnect is a proposed approximately 32 mile, 500 kV alternating current regional interconnection transmission line with a nominal design capacity of 1,500 MW. The TE/VS Interconnect would extend northward from SDG&E's existing 230 kV Talega-Escondido transmission line in northern San Diego County to SCE's existing 500 kV Valley-Serrano transmission line in western Riverside County. The interconnection with SDG&E would be between SDG&E's existing Talega and Escondido substations at a new substation in the vicinity of United States Marine Corps Camp Joseph H. Pendleton ("Camp Pendleton"), and the interconnection with SCE would be at a point between SCE's existing Valley and Serrano substations at a new switchyard in the vicinity of Lee Lake. At roughly midway between these two existing lines, the TE/VS Interconnect will connect into a proposed Santa Rosa substation that would be located adjacent to the Proposed LEAPS powerhouse to serve local load in the immediate Lake Elsinore area. For most of its route alignment, the TE/VS Interconnect would be located on the federal lands located within the Cleveland National Forest, Trabuco Ranger District, and within Camp Pendleton.

2.0 Regulatory Background

With regard to the federal hydroelectric license proceedings in connection with the LEAPS project, FERC accepted for filing the Final License Application as of January 25, 2005, and is processing the application under the Federal Power Act ("FPA") as FERC Project No. 11858 (Docket No. P-11858). Because portions of the TE/VS Interconnect lies in the Cleveland National Forest, special use permit applications have been filed with the United States Forest Service ("USFS") on June 24, 2003, and July 12, 2005, seeking a right-of-way in which to construct, operate, and maintain the projects.

Most significantly, FERC and USFS coordinated to develop and issue the Final EIS ("FEIS") for LEAPS and the TE/VS Interconnect[2] in 2007. Adoption of the FEIS by FERC and the USFS will complete the Federal licensing process.

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[1] / See FERC Docket P-11858.

[2] / Federal Energy Regulatory Commission, Final Environmental Impact Statement for Hydropower License – Lake Elsinore Advanced Pumped Storage Project, FERC Project No. 11858, FERC/EIS-0191F, January 2007, Appendix B.

As a result of the above-described proceedings, we understand that FERC requires only a single action from the State of California before issuing its final decision: issuance by the State Water Resources Control Board of its water quality certification under Section 401(a) of the Federal Clean Water Act.

Under the Federal Power Act, a hydropower license issued by FERC must include all of the facilities necessary for the proper operation of the project, including the project's primary facilities or lines transmitting the project's power to the point of junction with the interconnected primary transmission system. No determination has been made in the FERC docket as to whether the TE/VS Interconnect would be primary lines with respect to LEAPS and therefore within the scope of the hydro license (there is no dispute that the line from the LEAPS plant to the TE/VS Interconnect should be included within the license). If the FERC were to consider the TE/VS Interconnect part of LEAPS primary facilities, the FERC license would apply to both LEAPS and the TE/VS Interconnect. The FEIS also indicates that TNHC, at its option, may seek to remove portions of the primary lines from the scope of the hydro license. In due course, FERC will decide the scope of the hydro license and the conditions, if any, applicable to that license. Regardless of whether the TE/VS Interconnect facilities are considered "primary lines" within the scope of the federal hydro license, TNHC has been working with the California Public Utilities Commission ("PUC") to ensure that all necessary regulatory approvals and environmental reviews for the TE/VS Interconnect are completed as soon as possible.

2.1 California Energy Commission

The TE/VS Interconnect has been designated as a transmission resource of "Statewide Significance" in the California Energy Commission's (CEC) 2007 "Strategic Transmission Investment Plan, CEC-700-2007-018-CMF," and continues to be listed in the CEC's Plans published since then. As indicated therein:

> *"The proposed Lake Elsinore Advanced Pumped Storage (LEAPS) project, planned jointly by the Elsinore Valley Municipal Water District and The Nevada Hydro Company, Inc. (TNHC), is a combined generation and transmission project located at Lake Elsinore in Riverside County. The LEAPS project meets all the requirements for inclusion in the 2007 Strategic Plan, although there are still issues to be resolved with both the FERC, and the California ISO. The transmission portion of the project, sometimes referred to as the Talega-Escondido/Valley-Serrano (TE/VS) line, would primarily be located in the Cleveland National Forest, which is located in both San Diego and Riverside counties. The 31 mile, 500 kV transmission component of the LEAPS project would connect to a tap on SCE's 500 kV Valley-Serrano line, as well as to a new substation near the existing Talega-Escondido 230 kV line where the line enters Camp Pendleton in Northern San Diego County. This would provide an interconnection between the SDG&E and SCE service territories much like the SDG&E Valley-Rainbow Project."*[3]

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[3] / California Energy Commission, Strategic Transmission Investment Plan, Final Joint Committees Report, CEC-700-2007-018-CMF, November 2007, p. 105.

The CEC report further noted that, in 2004, "the California ISO noted that 'The transmission line proposed in association with the Lake Elsinore Pumped Storage Project would allow the San Diego area to import substantially more power from surrounding areas and would greatly enhance electric system reliability.'"[4]

2.2 FERC Actions in Addition to the FEIS

In November 2006, in accordance with the provisions of Sections 1223 and 1241 of the EPAct, FERC identified LEAPS as an "advanced transmission technology," defined as a "technology that increases capacity, efficiency, or reliability of an existing or new transmission facility."[5] FERC stated that "Nevada Hydro has proposed a project that may help meet the needs of the CAISO in managing the grid and serving load."[6] In March 2008, FERC again issued a ruling with regards to the LEAPS and TE/VS Interconnect. FERC approved rate incentives for the TE/VS Interconnect under Section 219 of the Federal Power Act of 1920 (FPA) and Order No. 679 in order "to provide the regulatory certainty necessary for [TNHC] to proceed with its project."[7]

Based on evidence submitted in the proceeding, FERC found that the proposed TE/VS Interconnect "will add another major transmission path into the San Diego area with a potential for increasing San Diego's import capability including relief on currently limiting Path 43 (North of San Onofre) and 44 (South of San Onofre) while maintaining adequate system reliability and, therefore, satisfy the Commission's FPA section 219 requirement.

FERC concluded that the "TE/VS Interconnect project will ensure reliability, consistent with the requirements of Order No. 679"[8] and that the proposed transmission project "is not routine in nature, but will provide a critical link between two major transmission corridors in California, linking the San Diego basin to the main CAISO grid."[9]

3.0 TE/VS Interconnect will Help the State Meet Identified Objectives

California has identified and discussed numerous objectives in connection with the planning and operation of the high voltage grid, and in connection with achieving renewable resource goals. These have been discussed extensively by CTPG. These projects are unique in helping the state meet many of these objectives.

The objectives of the TE/VS Interconnect will help meet include:

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[4] / Ibid., p. 106.

[5] / Federal Energy Regulatory Commission, Order on Rater Request, Docket Nos. ER06-278-000 et seq., issued November 17, 2006.

[6] / Ibid., p. 12.

[7] / Federal Energy Regulatory Commission, Order on Rate Incentives and Compliance Filing, Docket Nos. ER06-278-000 et seq., issued March 24, 2008, p. 21.

[8] / Ibid.

[9] / Ibid., p. 23.

1. Provide additional high voltage transmission capacity to **reduce congestion** on the CAISO grid and thus reduce energy costs for CAISO consumers.
2. Provide at least 1,000 MW of **additional import capacity** to SDG&E system at all times to enhance San Diego load area's access to renewable resources available through the WECC/CAISO transmission grid.
3. Provide at least 1,000 MW **incremental transmission import capability** for SDG&E under G-1/N-1 conditions to satisfy reliability criteria and to reduce the cost to SDG&E ratepayers of capacity for CPUC Resource Adequacy requirements.
4. Provide SDG&E with the **first 500 kV interconnection with SCE** and thus to the CAISO 500 kV network and thereby enhance the integration and operational reliability of the CAISO transmission grid.
5. Provide a potential future option for further expansion of the CAISO grid by contributing to the creation of a 500 kV link from Arizona-Imperial Valley-San Diego 500 kV facilities to the 500 kV network in the Los Angeles basin.
6. Fortify and/or enhance localized electrical facilities and systems in order to better serve electrical demands and enhance local reliability within the Lake Elsinore area.
7. Provide the CAISO grid with **access to** the planned **LEAPS** pumped storage hydropower generation plant, a location constrained facility.

The objectives LEAPS will help achieve include:

1. **Store excess off-peak energy** production in the CAISO region, including off-peak production by wind generation facilities in the Tehachapi region and/or elsewhere, geothermal generation, and other existing baseload generation and release such energy by operation of the LEAPS hydropower generators as needed during peak demand hours.
2. Provide 500 MW of regulation, fast responding spin, and load following capability to **integrate intermittent renewable resources** procured by southern California Load Serving Entities (LSEs).
3. Provide 500 MW of regulation, fast responding spin, and load following capability to **facilitate the development of workable competitive wholesale markets**.
4. Provide 500 MW of **black start** capability, allowing for the restoration of network operations, to the CAISO southern California transmission system.
5. Provide **voltage support** for wind energy integration in the southern California electrical region.

3.1 The Projects will help the State Meet its Energy-Related Objectives

This section provides more detail on how these projects help California meet identified objectives.

3.1.1 TE/VS Interconnect

A. Reduce Congestion

Section 1221(a) of the EPAct 2005 (Siting of Interstate Electric Transmission Facilities) requires the Secretary of Energy to identify "any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers" as a National Interest Electric Transmission Corridor (NIETC). On August 6, 2006, the United States Department of Energy (DOE) issued a preliminary "National Electric Congestion Study" (Congestion Study), designating the southern California region as a "critical congestion area" under Section 1221 of the EPAct 2005. The Congestion Study defined "critical congestion area" as those "areas of the country where it is critically important to remedy existing or growing congestion problems because the current and/or projected effects of the congestion are severe."[10]

As further indicated in the Congestion Study: "San Diego is the Nation's seventh largest city, that demand in this area is served by a combination of internal capacity and imported power, and that virtually all of the imports are delivered through two points of interconnect. Neither of these points of interconnection is capable of meeting the peak load import requirements of the area if the other is out of service."[11]

In an October 10, 2006 letter to the DOE, the CEC expressed its support for DOE's identification of southern California as one of two critical congestion areas.[12]

Not only is the Project located in roughly the middle of this NIETC, but by providing 1,500 MW of additional extra high voltage transfer capacity available to the San Diego area, the TE/VS Interconnect will reduce congestion in this critical congested area of the CAISO controlled grid and, thereby, reduce the energy costs to CAISO consumers.

B. Provide at least 1,000 MW of incremental transmission import capability to San Diego

The Project will provide incremental transmission import capability for SDG&E under G-1/N-1 conditions to satisfy reliability criteria and to reduce the cost of reliability. The PUC's resource adequacy (RA) policy requires its jurisdictional load serving entities (LSEs) to procure the bulk of their wholesale electric needs through forward procurement mechanisms. The PUC has established a capacity-based RA obligation. This RA procurement obligation includes a CAISO-determined Local Capacity Requirement (LCR). The CAISO determines the LCR by identifying specific areas within the CAISO Balancing Authority Area that have limited import capability and determines the generation capacity necessary to mitigate the local reliability problems in those areas

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[10] / United States Department of Energy, National Electric Transmission Congestion Study, Energy, August 2006.

[11] / Ibid., pp. 45-46.

[12] / California Energy Commission, Letter to United States Department of Energy, Response to U.S. Department of Energy's August 2006 National Electric Transmission Corridor Study: Comments of the California Energy Commission, October 10, 2006.

to meet FERC approved reliability criteria. In general, the procurement cost of LCR capacity has been greater than the procurement cost of RA capacity.

Currently, there are only two power import paths to the SDG&E service area: the Southwest Powerlink (SWPL) line and the South of SONGS[13] path (WECC Path 44). The reliable import capability is determined by taking the worst single transmission contingency (SWPL line out) in the SDG&E system and making sure the SDG&E system still meets the WECC/NERC reliability criteria. After the contingency, all power flow originally on SWPL will have to flow through the South of SONGS path, as South of SONGS is the only remaining import path from the rest of WECC. Currently, the South of SONGS limit is 2,500 MW.

The TE/VS Interconnect provides a third and distinct import path to the SDG&E service area. For reliability analysis, after the loss of the most critical path (SWPL + Sunrise, with Special Protection Scheme exercised), the original flow on SWPL will now flow, divided between South of SONGS and the TE/VS Interconnect.

Without the TE/VS Interconnect, before the loss of the SWPL+Sunrise corridor, the total flow on South of SONGS and SWPL/Sunrise must be kept to a maximum of 2,500 MW. In order to keep the flow below 2,500 MW and meet reliability requirements, SDG&E has to limit imports and replace that power with generation originating inside the SDG&E service area. With the TE/VS Interconnect and phase shifters operating to schedule flow of at least 1,000 MW into SDG&E, the same system condition and contingency would allow the flow on South of SONGS of 2,500 MW with power flow on the TE/VS Interconnect at about 1,150 MW, a total of 3,650 MW.

Since the TE/VS Interconnect will provide at least 1,000 MW of additional transmission to the San Diego load area under this contingency condition, it will reduce SDG&E's LCR by the same amount while satisfying the CAISO's reliability criteria. As such, the TE/VS Interconnect will reduce the cost of reliability to CAISO ratepayers.

Additionally, California has adopted an aggressive Renewable Portfolio Standard (RPS). Under the State's RPS policy, LSEs are required to procure 33 percent of their energy needs from renewable resources. In a significant number of cases, renewable resources are located in areas that are remote to the State's load centers. As such, additional transmission infrastructure will be required for the State's LSEs to access the pool of available renewable resources in as cost efficient manner as possible.

By providing at least 1,000 MW of additional import capacity to SDG&E, the TE/VS Interconnect will provide access to a larger and more diversified pool of renewable resources, including developing wind energy resources in the Tehachapi area, solar energy from the Mohave area, geothermal energy from the Imperial Valley, and other

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[13] / SCE and SDG&E are currently interconnected at the San Onofre Nuclear Generation Station (SONGS) switchyard. SCE owns the north half of the SONGS switchyard and the four 230 kV transmission lines to the SCE service area. These four SCE lines comprise what is known as Western Electricity Coordinating Council (WECC) Path 43 or the "North of SONGS path." SDG&E owns the south half of the switchyard and the 230 kV lines to its service area. These five SDG&E lines comprise what is known as WECC Path 44 or the "South of SONGS path."

renewable resources from Nevada, the Pacific Northwest, the western United States, and Canada.

Imperial Valley geothermal resources can be delivered more reliably to the San Diego area by means of the TE/VS Interconnect. TE/VS provides backup to the SWPL/Sunrise in the event it were lost. Plus, it makes possible delivery over the existing SCE and Imperial Valley Irrigation District (IID) networks. With the addition of the Greenpath North Project, this additional capacity will further enhance delivery of renewable energy resources in the IID area into the CAISO controlled grid and over the TE/VS Interconnect into San Diego.

As a result, by providing San Diego consumers more economical access to the Imperial Valley and other areas rich in renewable resource potential, the Project is an essential element in the State's efforts consistent with Senate Bill 1078 and California's "Energy Action Plan" (EAP). By providing access to the San Diego marketplace, the TE/VS Interconnect will encourage the development of such resources, thereby diversifying the State's resource mix and reducing its reliance on fossil fueled generation.

Enhanced access to renewable resources will promote the attainment of California's RPS and greenhouse gas (GHG) emission reduction objectives and will do so in an economically efficient manner, by reducing SDG&E's renewable resource portfolio risk.

C. Provide an interconnection between SDG&E and SCE transmission systems

The State's existing 500 kV bulk transmission "backbone" runs from the Oregon border through the SCE service territory but does not connect with the San Diego area. San Diego's system currently connects to the rest of California via 230 kV lines running north through the San Onofre Nuclear Generating Station (SONGS) and 500 kV lines running east to Imperial Valley. The CEC confirms that a new "northern 500 kV interconnection would improve the reliability of California's transmission system and increase the state's overall ability to import lower cost power from Arizona, Mexico, and the Desert Southwest. In 2004, the California ISO noted that 'The transmission line proposed in association with the Lake Elsinore Pumped Storage Project would allow the San Diego area to import substantially more power from surrounding areas and would greatly enhance electric system reliability.'"[14]

San Diego is the nation's seventh largest city and the nation's sixth largest county with an economy producing in excess of $70 billion of goods and services per year. Yet it depends on this single set of 230 kV lines and a single 500 kV line to tie it into the transmission network outside the San Diego area to obtain the electricity imports needed to support its economy. Among the electric service areas in the State, only the San Diego region is so underserved.

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[14] / Op. Cit., Strategic Transmission Investment Plan, Final Joint Committees Report, CEC-700-2007-018-CMF, p. 106.

The TE/VS Interconnect will provide SDG&E with the first 500 kV connection directly to the robust network of SCE and thus to the CAISO 500 kV network backbone. By doing so, the facility will enhance the integration and operational reliability of the CAISO transmission grid.

D. Further long term infrastructure planning efforts

The California Independent System Operator ("CAISO") has noted that the "CAISO has begun developing a vision of an adequate 500 kV backbone transmission system for the state."[15] According to the CAISO, it is the lack of this type of backbone transmission that gives rise to the exercise of market power and the need for broad market-wide mitigation measures. Correcting this deficiency through transmission upgrades would, according to the CAISO, be more prudent than relying on ongoing regulatory intervention.[16]

In addition to providing for the first 500 kV connection for San Diego into the CAISO-controlled grid, in the future, the TE/VS Interconnect would serve as the northern leg of a 500 kV full loop around San Diego that would tie the TE/VS Interconnect and Sunrise. This option should be part of CTPG's analysis and focus.

E. Enhance Local Reliability

The TE/VS Interconnect provides alternatives to support SCE's San Jacinto Regional Transmission Mitigation Plans to fortify and enhance local electrical facilities and system and to service area load demands.

SCE's San Jacinto Regional Local Area covers 1,262 square miles in Riverside County, and is served by SCE's transmission system only through the Valley 500/115 kV Substation. The Valley 115 kV system serves approximately 110,000 metered customers and the region is bounded by the Cities of Riverside and Redlands to the north, Orange County to the west, the City of Palm Springs to the east, and San Diego County to the south. Based on projected growth trends, the load is expected to grow by approximately 4,500 MW over the next 50 years. In order to service this expected load, SCE has proposed an extensive transmission line expansion including four new 500 kV or 230 kV transmission substations and 24 new 115/33/12 kV substations.

TE/VS Interconnect and LEAPS provides two mitigation alternatives that can relieve these local reliability and load service issues. One proposed solution extends the TEVS Interconnect's Lake Switchyard and adds SCE's proposed Alberhill 500/115 kV section. This solution:

- Provides SCE local load access to the SCE's bulk transmission system.
- Relieves Valley substation capability (up to 700 MW).

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[15] / California Independent System Operator, Testimony of Armando J. Perez, Stephen Thomas Greenleaf and Keith Casey on behalf of the California Independent System Operator, Application 01-04-012, September 25, 2001, p. 19.

[16] / California Public Utilities Commission, Proposed Alternative Decision of Commissioner Peevey, A. 01.04-012, mailed May 1, 2003, p. 14.

- Provides local voltage support and reduced local exposure to low voltage and A/C stalling issues.
- Eliminates some of SCE's 115 kV transmission projects.
- Provides alternative source for other loads in the region.
- Provides up to 700 MW of load serving capability without extensive 115 kV upgrade.

A second proposed solution extends the Santa Rosa Substation by looping in the existing Elsinore – Skylark 115 kV line. This solution:

- Provides SCE local load access to the SCE's bulk transmission system.
- Relieves Valley substation capability (up to 350 MW).
- Provides local voltage support and reduced local exposure to low voltage and A/C stalling issues.
- Provides an alternative source for other loads in the region.
- Provides up to 350 MW load serving capability.

F. Provide access to the planned pumped storage facility

With the State increasingly focusing on how to integrate the mandated renewable resources into the grid, LEAPS is the only large project on the horizon which is able to provide 500 MW of renewable storage and firming while also providing increased grid reliability and enhanced access paths to renewable basins.

By providing the CAISO grid access to LEAPS, the TE/VS Interconnect will allow the grid the full benefit of the flexibility that facility can provide. This includes storage and firming of renewable resources and particularly intermittent renewable resources, like wind. In addition, LEAPS will provide 500 MW of dispatchable power, regulation and fast responding spin to integrate intermittent renewable resources generation procured by southern California's LSEs and 500 MW of storage regulation and load following capability to facilitate the development of workable competitive wholesale markets. This, combined with the ability to provide voltage support, will help the grid integrate wind and other renewable energy resources in the southern California electrical region.

Sites for pumped storage facility hydro are relatively rare, particularly so in southern California. The location identified for LEAPS is likely the only site capable of efficiently supporting a large scale facility. If the State is to utilize the benefits of pumped storage, LEAPS must be connected to the CAISO controlled grid.

3.1.2 LEAPS

A. Store off peak power

As indicated in the "National Energy Policy," the "nation's most pressing long term electricity challenge is to build enough new generation and transmission capacity to

meet projected growth in demand."[17] The Nation's and the State's electric generation system must have sufficient operating generating capacity to supply the peak demand for electricity by consumers (including the transmission and distribution losses associated with power delivery). An additional amount of reserve power plant capacity must be operational to act as instantaneous back up supplies should some power plants or transmission lines unexpectedly fail. According to the Western Electricity Coordinating Council (WECC), to reliably deliver power, control area operators should maintain operating reserves of seven percent of their peak demand (including losses). If operating reserves decline below that level, customers that have agreed to be interrupted in exchange for reduced rates may be disconnected. If operating reserves get as low as one and one-half percent, firm load will likely be shed locally, resulting in rotating blackouts, in order to avoid system wide blackouts.[18]

As noted by the CEC: "It is the long term planning application usage of resource adequacy requirements that ultimately drives construction of new generating facilities – or 'new steel in the ground.' Peak loads are gradually increasing throughout the West because of economic expansion and population growth. As loads increase over time, the existing installed base of 'steel in the ground' electric generation is gradually becoming inadequate for reliably meeting future loads, on a planned basis."[19]

As reported by SDG&E: "Beginning in 2010, overlapping transmission and generation contingencies, as defined by the CAISO, on peak days could result in a situation where the sum of available in-area generation and existing import capability could not meet load in the SDG&E service area, potentially resulting in involuntary load shedding."[20]

Although disagreement exists among experts as to the timing when the demand for new generation facilities will arise, there is consensus that future demand exists. As reported by the San Diego Association of Governments (SANDAG): "Current trends indicate that electricity peak demand will nearly double, increasing by more than 4,000 MW by 2020. This increase in demand is the equivalent to the output of about six to seven moderate generation plants."[21] The North American Electric Reliability Council (NERC) indicates that "[t]he siting of new generators, whether utility or merchant built,

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[17] / National Energy Policy Development Group, National Energy Policy, Reliable, Affordable, and Environmentally Sound Energy for America's Future, May 2001, p. 1-5.

[18] / When major outages occur, there is an increased risk of significant public health and safety impacts. Shortages of electricity can impose risk of very serious impacts on the public, potentially increasing the risk of deaths due to heat waves (Source: California Energy Commission, CalPeak Enterprise #7 Escondido [01-EP-10] Staff Assessment for Emergency Permit, June 1, 2001, pp. 3-4).

[19] / California Energy Commission, Revised California and Western Electricity Supply Outlook Report, Prepared for the 2005 Integrated Energy Policy Report Proceedings Docket #04-IEP-1, CEC-700-2005-019-ED2, July 2005, p. 51.

[20] / Avery, James P., Sunrise Powerlink, Chapter 1, Application No. A.05-12-014, San Diego Gas & Electric Company, August 4, 2006, p. I-16.

[21] / San Diego Regional Energy Office, Energy 2020 – The San Diego Regional Energy Strategy, Creating a More Secure Energy Future for the San Diego Region, San Diego Association of Governments, May 2003, p. 16.

can clearly have an impact on the reliability of the interconnected electric systems. For example, locating new generators electrically close to demand centers will cause less of a burden on the transmission systems than generators built in remote locations. In some instances, constructing new generators near demand centers may actually reduce transmission system loading."[22]

As indicated by the CEC: "Electricity use varies widely over the time of day and time of year. On a typical day, demand increases 60 percent from the midnight low to the afternoon high. Because air conditioning loads drive peak demand, California sees its greatest demand spikes during the summer months (June, July, August, and September). This variable load requires a generation system that is extremely flexible. The full available capacity of the system needs to be dispatched only to meet a few hours of peak demand."[23]

Although A/C electricity cannot be directly stored, it can be converted to other forms of energy and then reconverted back to electricity when it is needed. Large scale storage systems, such as pumped storage, provide the ability to utilize low cost, baseload power, generated during period of low demand, during peak load periods. Without storage, the electrical industry must develop and maintain a delivery network capable of meeting the highest demand of the year. With storage, however, the electricity delivery system can be designed to accommodate a normal load and the stored energy can be used to respond to peak demands.

"Pumped storage plants are primarily peak generating facilities. During off peak periods, water is pumped from a lower reservoir or body of water to an upper one. The water is then released for power generation during periods of peak power demand. Although a net consumer of energy, pumped storage can be economically viable because it uses baseload capacity during off peak periods to create additional peak capacity. Pumped storage can also be used to provide emergency reserve generating capacity." LEAPS can respond to a CAISO dispatch signal in and can provide up to 500 MW in 10 seconds.

B. Integrate intermittent renewable resources

Adding significant quantities of wind capacity to the grid will create integration challenges for the CAISO that, if not properly planned for, may lead to unnecessarily high integration costs. For example, the unpredictable and intermittent nature of wind will increasingly place the CAISO operators in the position of having to adjust up or down other generating resources. Without the additional regulation and quick responding spin capacity that LEAPS provides, the most optimistic scenario would have CAISO operators adjusting up or down the output of slow responding, fossil fuel thermal generation to integrate the additional wind capacity. This increased reliance on fossil

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[22] / North American Electric Reliability Council, Reliability Assessment: 2002-2011, The Reliability of Bulk Electric System in North America, Final Draft for BOT Approval, October 2002, p. 28.

[23] / California Energy Commission, Revised California and Western Electricity Supply Outlook Report, Prepared for the 2005 Integrated Energy Policy Report Proceedings Docket #04-IEP-1, CEC-700-2005-019-ED2, July 2005, p. 13.

fuel thermal generation for purposes of integrating wind resources would be contrary to California's RPS and GHG emission reduction objectives.

It would be more likely that CAISO operators would simply curtail wind resources because it was the most economic choice, given all considerations, such as unit start-up costs, etc. The least optimistic scenario would have CAISO operators' blackout certain sections of the grid because of insufficient regulation capacity and fast responding spin required to level out any sudden, unexpected decrease in wind output.

The CAISO and others have acknowledged the difficulty in planning for and integrating wind resources. In its November 2007 "Integration of Renewable Resources," report, the CAISO noted: "Additional storage capability would be of considerable benefit with the integration of large amounts of renewables, especially intermittent resources."[24] "A proven and deployed storage technology is hydro pump storage."[25]

C. Facilitate the development of workable competitive wholesale markets

LEAPS will facilitate the implementation of California's MRTU energy and ancillary services market design by providing significant energy storage, regulation up and down, load following, and spin services. For example, LEAPS will be a "shock absorber" in the physical and economic systems by easily accommodating frequency deviations, large energy ramps, and significant mismatches between day-ahead schedules and real time supply and demand. To the extent CAISO operators have the necessary tools to meet real time deviations from schedules, LEAPS will minimize their need for out of market calls that end up harming workable wholesale competition.

D. Provide black start capability

Because there is always the possibility of natural disasters, malfunctions, and other events causing all or a portion of the southern California grid to go down, it is particularly vital to provide for the restoration of network interconnections to the CAISO and the southern California transmission system in the event of such grid-wide emergencies, especially contingencies involving SONGS and other nuclear units. Having this capability is a critical feature to grid management.

LEAPS will be equipped to provide 500 MW of black start capability and can routinely produce 6,000 megawatt hours (MWh), and, in an emergency, 8,000 MWh, of stored energy. In addition, LEAPS can synchronize to and bring up a segment of the 500 kV interstate loop between Valley, Talega, and Case Springs substations. LEAPS can, independently of all other power facilities, fuel sources and transmission, from a cold start, be on line and ready to supply energy into the grid in 10 minutes. It can then, through its control room and associated substations, isolate the local segments of the 500 kV transmission system and resynchronize at 500 kV. Once these critical transmission segments are re-powered, the facility can expand outward to other grid

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[24] / California Independent System Operator, Integration of Renewable Resources, November 2007, p. 10

[25] / Op. Cit., p.11.

segments and synchronize them as well. This will allow other power facilities to come on line and provide additional power supplies as the grid becomes re-established and re-interconnected.

All facility control rooms and substations have state of the art emergency power facilities and will provide long term power supply to all critical equipment, communications, and telemetry systems. The LEAPS control room will be equipped to function as an emergency command center, and will be able to communicate, not only with the CAISO, but with federal, State, and military facilities as well.

E. Provide voltage support

All high voltage AC transmission lines provide positive voltage support (that is, provide VARs to the grid) when they are loaded below the "surge impedance loading" level (normally about 1,600 MW for a 500 kV line) through line charging effect.

All generators with excitation systems, which provide a range of lead and lag power factor (CAISO required +0.95 - 0.9 power factor capability for all generators), can help regulate transmission voltage. When in leading power factor, a generator supplies VARs to the system (increase voltage). When in lagging power factor, a generator consumes VARs from the system, thus reducing the transmission line voltage (when system is lightly loaded, transmission voltage tend to be too high, or above operating voltage limit). Further, VARs do not travel far. Local voltage support is, therefore, important to local areas. Because the location of the Project is central to SCE and SDG&E systems, LEAPS can provide voltage support to both the SCE and SDG&E systems.

In addition, SONGS has a voltage requirement imposed by the Nuclear Regulatory Commission (NRC) to maintain voltage and ensure off site power to the station for safe shutdown. LEAPS can provide this voltage and off site power requirement to the SONGS nuclear station.

For the SDG&E system, even today, after losing the SWPL line, the system continues to have a low voltage issue, particularly near the Miguel and South Bay areas, since these are located at the end of the radial system from SONGS. The Project can provide voltage support not only by supplying VARs directly but also indirectly by unloading the existing South of SONGS transmission line.

In terms of renewable resources, most forms of solar and wind energy conversion devices provide limited reactive voltage support to the grid. In fact, these devices are likely to have a negative voltage support. With the increase of renewable energy requirements in California, voltage support will become a critical element (this will continue to become a more critical issue as the State moves toward the required 33 percent RPS level).

By their nature, modern advanced pumped storage facilities provide large amounts of reactive support and can provide this support in all modes of operation. For example, pumped storage facilities can run dry, synchronized to the 500 kV system. In this mode of operation, the units produce no real power, but provide reactive power support services to the grid as synchronous condensers. In the wet mode of operation, the units provide energy simultaneously with all ancillary services, particularly voltage support.

Most importantly, LEAPS can provide, as required, large amounts of voltage support for the CAISO controlled grid. This additional capacity will offset the local amounts of reactive support consumed by the wind and solar resources as they come on line.

4.0 Conclusion

In summary:

- The CEC's 2007, 2008 and 2009 Strategic Transmission Investment Plans advises that the Project requires "specific, swift, and priority consideration by state regulators".
- Section 1221(a) of the Energy Policy Act of 2005 points out the importance of the Project to the Federal government.
- The Project will be an essential element in the State's efforts to meet its RPS and GHG goals and will help with the State's and Commission's RETI proceedings.
- FERC has a complete environmental record and FEIS.
- The PUC has created a complete environmental record and a Final Environmental Impact Report, in connection with its analysis of the Project as the preferred transmission alternative in the Sunrise Power Link proceeding.
- The Project will provide nearly 5 million hours of direct employment for the region, and an additional 10 million hours of indirect employment.
- After extensive consultation, the precise transmission alignment, facility sites, access roads, and construction staging areas located on National Forest System ("NFS") and other federal lands have been completed and found acceptable by the USFS.

In conclusion, NHC strongly urges CTPG to do the right thing and include the TE/VS Interconnect in its process.

Attachment: Nevada Hydro Letter to the California Energy Commission regarding RETI.

THE HYDRO COMPANY, INC.
DBA THE NEVADA HYDRO COMPANY, INC.

September 11, 2009

Mr. Chuck Najarian
RETI Coordinating Committee
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Renewable Energy Transmission Initiative (RETI)

Dear Mr. Najarian,

I appreciate your email of September 8, 2009, by which you provided David Kates with copies of previous Final RETI Phase 2A reports. As you may be aware, the California Energy Commission has been very supportive in our efforts to construct the Talega-Escondido/Valley-Serrano 500 kV Interconnect Project ("TE/VS Interconnect") and Lake Elsinore Advanced Pumped Storage ("LEAPS") Projects. We were very pleased to see our projects included in your 2007 Transmission Plan, and we appreciate the Commission's support.

I was, however, disturbed by the email chain you provided to David later that day. You can see from this chain that neither our consultant, Jaleh Firooz, nor anyone from the Nevada Hydro Company (TNHC) were included in the distribution list. Unfortunately this chain demonstrates that your assumption (that "all RETI stakeholders were copied on [an email chain] between Shashi Pandey and Jan Strack discussing details regarding LEAPS") is not correct.

As you know RETI was to "be an open and transparent collaborative process in which all interested parties are encouraged to participate." As the sponsor of the TE/VS Interconnect, TNHC was unaware of the discussions taking place regarding our project and was never consulted regarding changes to the LEAPS Group description. This is neither "open", "transparent", nor "collaborative." TNHC should have at least been given the opportunity to contribute to the discussion. Further, a review of the e-mail traffic among the RETI stakeholders will show that TNHC is routinely not copied on the e-mails sent to other RETI stakeholders. As only the most recent example, TNHC did not receive e-mail notice of the September 9, 2009 RETI conference call concerning additional work to be performed by Black & Veatch.

With respect to the "primary…issues" raised by "stakeholders" concerning the description of the LEAPS Group, the description submitted by the TNHC for the Phase 2A report contained no "speculation" as was alleged. The description submitted by the TNHC was either based on work performed in connection with the RETI process or on the laws of physics governing electrical power flow. For example:

1. Shift factors calculated by SDG&E for the RETI studies showed that energy from the Palm Springs and Riverside East CREZs flows through the west of Devers system towards the Los Angeles basin and then south into the San Diego area through the

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TE/VS project. RETI never adopted any threshold at which flows on a particular line segment (shift factors) were deemed to "facilitate" the delivery of energy from a CREZ. This is the same set of data used by others to measure, score, and make conclusions as to the flows on all the other lines (including the lines comprising the Imperial Valley Group).

2. Physics dictates that the LEAPS Group shift factors and associated economic score would be improved if any of the Imperial Valley Group/west of Devers line segments that are electrically in parallel with the TE/VS line were not present. Why? Removing any of these line segments increases the impedances between the Imperial Valley and the San Diego and Los Angeles load centers and thereby increases the amount of power that flows on other parallel paths including the TE/VS line. While no "study" is needed to reach this conclusion, SDG&E nevertheless computed shift factors for the LEAPS Group for a case with one of the Imperial Valley Group line segments removed. The results confirmed what common sense indicates: shift factors for the LEAPS Group increased.

As requested by RETI, TNHC provided a description of the LEAPS Group. This description included a short discussion of other benefits that the TE/VS project provides, including, for example:

- Reduced Local Capacity Requirements (LCR) for the San Diego and Los Angeles areas. This was demonstrated by power flow studies conducted in the Sunrise Powerlink proceeding.
- Providing the only 500 kV connection between the SDG&E and SCE systems (a simple fact, not speculation).
- Increased import capability into the San Diego area. This was demonstrated by power flow studies conducted in the Sunrise Powerlink proceeding.

TNHC included a discussion of these benefits since the LEAPS Group was put in its own category. The reason for the disparate treatment of the LEAPS Group was never clearly explained. Certainly, the description of the various categories in the Phase 2A report could lead to placing the LEAPS Group in either the "Delivery" or "Foundational Line" category. In the spirit of cooperation, and knowing that planned detailed analysis would support discussion of how the LEAPS Group's shift factors and economic scores would improve should certain other line segments be delayed or not built, TNHC went along with the peculiar treatment of the LEAPS Group provided that the discussion of the other benefits of the line would be included in the final Phase 2A report.

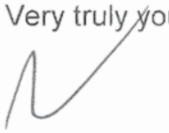
Fundamentally, if there was a legitimate issue with the description of the LEAPS Group provided by TNHC, it should have been brought up much earlier to the group and such discussion certainly should have involved THNC. The suggestion to change the LEAPS Group description was made long after the date by which public comments on the June, 2009 draft report were to have been submitted to the CEC. There was no process for adjudicating final changes to the draft report. As TNHC has pointed out, this lack of transparency excludes stakeholders, like us, from participating in important decisions.

As I hope is apparent from the above discussion, none of the comments made by Mr. Pandey, which were apparently used as the basis for revising the LEAPS Group description provided by TNHC, were valid. The fact that one representative was able to change the final report without checks and balances from other participants troubles us.

Although one stakeholder apparently objected to the suggested changes to the LEAPS Group description, the factual bases of Mr. Pandey's assertions were not specifically challenged. Why? We suspect that as TNHC was left out of the working group discussions, and is not a member of the RETI Stakeholder Steering Committee (SSC), no other members, were able to challenge these assertions. Please note that TNHC is unfortunately unique in that we are not are represented on the SSC.

To honor its stated commitment to an open and transparent process, and to provide a level playing field, the non-utility transmission sponsors should be represented in RETI SSC as are the utility transmission sponsors. TNHC would appreciate your help in getting us approved as a the RETI SSC representative of non-utility transmission sponsors. Having an independent voice on the SSC is necessary because non-utility transmission lines often are in direct competition with utility-sponsored transmission projects.

Very truly yours,



Rexford Wait
Vice President