



THE HYDRO COMPANY, INC.

DBA THE NEVADA HYDRO COMPANY, INC.

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).

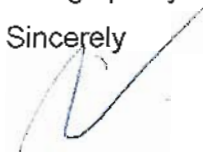
As it applies to the Independent Transmission Developer–sponsored projects, I wonder:

- 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?

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 forward 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-DELAGO 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%

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