



**THE HYDRO COMPANY, INC.**

DBA THE NEVADA HYDRO COMPANY, INC.

March 3, 2015

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RE: Comments on Draft 2014–2015 Transmission Plan

Dear Governors and Planning Staff:

The Nevada Hydro Company (“Nevada Hydro”) has reviewed the California Independent System Operator’s (“ISO”) draft 2014–2015 Transmission Plan (“Draft Plan”) as well as the presentations and discussions at the stakeholder meeting held on February 17 (“Workshop”). Unfortunately, Nevada Hydro notes once again that the ISO has violated its own tariff provisions, Federal and State law and Order 1000 of the Federal Energy Regulatory Commission (“FERC”) in its continued mistreatment of Nevada Hydro’s proposed projects. Nevada Hydro urges the ISO Board of Governors to reverse the course set by the ISO’s former CEO and allow privately sponsored projects to be fairly evaluated in a nondiscriminatory manner.

As it stands, the Draft Plan:

- Reflects bad decision-making.
- Shows that the ISO is holding out for some miracle route or for Nevada Hydro to finally quite trying to get the ISO to consider properly its projects. In Nevada Hydro’s view, both are unlikely
- Until new generation authorized by the California Public Utilities Commission (“PUC”) is actually realized, the ISO cannot afford to ignore viable new transmission and non–transmission alternatives to meet its reliability mandates. Further, relying on the dream that 2000 MW of new gas generation will be permitted and built within the Los Angeles basin is contrary to state policy to reduce greenhouse gas emissions and is simply a pipe dream.

#### **1.0. Introduction**

After review of the Draft Plan, Nevada Hydro was again saddened to see that the ISO continues to mischaracterize, ignore and otherwise discriminate against Nevada Hydro and its two projects:

- The **Lake Elsinore Advanced Pumped Storage** (LEAPS) project is a 500 MW advanced pumped storage facility. The facility was being licensed in Federal Energy Regulatory

Commission (FERC) Docket P–11858, and is presently under review in Docket P–14227. LEAPS is located less than 25 miles from the San Onofre Nuclear Generating Station SONGS, within the Southern California load pocket. Its southern grid connection is barely 10 miles from SONGS on Path 44 – South of SONGS.

- The **Talega–Escondido/Valley–Serrano 500 kV Interconnect** (the TE/VS Interconnect) project. The TE/VS Interconnect is a 32 mile transmission connection between the service territory of San Diego Gas & Electric Company (SDG&E) and the State’s 500 kV electrical backbone that currently terminates in the southern end of the service territory of the Southern California Edison Company (SCE). This project will also connect LEAPS to the Southern California grid.

LEAPS has an advanced position in the ISO queue and executed Large Generator Interconnect Agreements (LGIA)<sup>1</sup>. Both projects have been thoroughly vetted environmentally by both FERC and the PUC. FERC approved rate base provisions for the TE/VS Interconnect in Docket ER06–278. The facility was under permit review in PUC Docket A. 10–07–001. Nevada Hydro will be reapplying shortly for a Certificate of Public Convenience and Necessity (CPCN) for this project under a new docket number. This [link](#) is to the PUC’s web site where Nevada Hydro’s last complete application may be found.

### **1.1. Present Permitting and Approval status**

As Nevada Hydro pointed out in its recent Request Window filing, with regard to its TE/VS Interconnect:

- As 30 of the approximately 32-mile length of the line traverses the Cleveland National Forest (“Forest”), the route has been fully vetted with the US Forest Service. As detailed in the request window filing, this vetting process involved detailed evaluation of the proposed location of each of the 170 transmission towers to be located on Forest land, as well as substation and work locations within the Forest. Project and Forest staff met and discussed each proposed location to assess existing site conditions, proposed site access methods, tower erection as well as site maintenance and rehabilitation.
- Most of the engineering work is completed, including project plan, profile and line sag assessment prepared by SAE Towers; detailed substation design and engineering prepared by Siemens AG and cost estimate prepared by Siemens AG and Barnard Construction Inc. Nevada Hydro included engineering drawings and detailed cost estimate with its Request Window filing.
- Rate incentives for the line were granted by the FERC after Nevada Hydro demonstrated with independent evidence that the project provides benefits to ratepayers. FERC’s Order is in docket ER06–278, and was included in the Request Window filing. This Order from the FERC will allow Nevada Hydro to move rapidly from permitting to construction.
- The PUC has completed an extensive analysis of the TE/VS Interconnect under the California Environmental Quality Act (“CEQA”) in connection with its analysis of the Sunrise Powerlink

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<sup>1</sup>/ FERC ordered the parties into settlement discussions in connection with a number of LGIA–related filings of SDG&E, SCE and the ISO in Dockets ER12–1302, ER12–1305 and ER12–1312.

project proposed by SDG&E. That analysis included a review of the TE/VS Interconnect as a CEQA alternative to Sunrise. The TE/VS Interconnect was identified as the environmentally superior transmission project in that proceeding. Nevada Hydro is preparing to refile its own application to the PUC for approval of the TE/VS Interconnect shortly.

Further, both LEAPS and the TE/VS Interconnect have a final environmental impact statement<sup>2</sup> (“FEIS”) that has been issued by FERC describing the project FERC could approve and the mitigations it and the U.S. Forest Service would impose on the approved projects. The FEIS is now in the process of being updated. Both projects also will benefit from the fully executed interconnection agreements with the ISO and both area utilities.

With its routing vetted and with environmental work and engineering largely complete, Nevada Hydro is confident that its present cost estimate for the TE/VS Interconnect of \$750 will not vary substantially. This cost includes all costs; including interconnection upgrade costs, mitigation costs, and all financing costs. Nevada Hydro does not believe any of the other projects considered by the ISO in southern California have anything close to the level of detail Nevada Hydro has, most of which has been provided to ISO staff. Nevada Hydro has prepared expert testimony demonstrating that at this cost, the system benefits will far outweigh the project’s cost, thereby meeting the test to receive approval from the PUC.

The FERC has commenced to update the FEIS. As the project and environmental setting are unchanged since the issuance of the FEIS, Nevada Hydro expects the update/refresh to be relatively straightforward. In addition, and most significantly, LEAPS has fully executed interconnection agreements, one each for its two connection points.

## **2.0. The ISO continues its recent history of mishandling LEAPS and TE/VS**

Notwithstanding the advanced stage of development for both projects, although (i) Nevada Hydro and the ISO have interacted for many years on these projects, (ii) the ISO is well aware of all project details and (iii) has been for many years, the ISO continues to ignore, misanalyse and mistreat the projects, apparently to advance other more costly and less effective projects sponsored by area utilities. After having supported Nevada Hydro’s projects and finding value to them in the past, Nevada Hydro sees this recent mistreatment as discriminatory, pure and simple.

This section details this mistreatment first of LEAPS followed by that of the TE/VS Interconnect.

### **2.1. The ISO has mistreated LEAPS for years, in violation of law and policy**

The Draft Plan claims on page 1 that,

*Increased opportunity for non-transmission alternatives, particularly preferred resources and storage, continues to be a key focus of the transmission planning analysis. In this regard, the ISO’s transmission planning efforts focus on not only meeting the state’s policy objectives in advancing policy-driven transmission, but also*

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<sup>2</sup> / Federal Energy Regulatory Commission and United States Department of Agriculture, United States Forest Service, Trabuco Ranger District, “Final Environmental Impact Statement for Hydropower License – Lake Elsinore Advanced Pumped Storage Project”, FERC Project No. 11858, FERC/EIS-0191F, January 2007.

*to help transform the electric grid in an environmentally responsible way. The focus on a cleaner lower emission future governs not only policy-driven transmission, but our path on meeting other electric system needs as well.*

All but the ISO seem agreed that large storage like LEAPS will be essential to meeting this goal, yet the ISO refuses to properly consider how LEAPS can help the ISO meet this stated objective.

To avoid properly considering LEAPS, the ISO continues to mischaracterize LEAPS, using at least three methods, each in violation of law or tariff. First, it appears to be treating LEAPS as a generator when it is not. Second, it ignores the status of LEAPS as a preferred resource and a storage facility eligible for preferential treatment under AB 2514. Third, notwithstanding complete executed interconnection agreements, it has not followed its own tariff requirements that describe how such resources are to be addressed in planning and modeling. Each of these is discussed briefly below.

#### **2.1.1. LEAPS is not a generator but is advanced transmission technology under Federal law and was not treated as such in the Draft Plan**

Although the Draft Plan never specifies how, in fact, LEAPS was analyzed, the Draft Plan's description of LEAPS make it clear that the ISO considers LEAPS to be far less than it actually is. For example, in its description of the project on page 95, LEAPS is described as "a 500 MW generation / 600 MW pump storage project." In actuality, Federal Law mandates how the ISO must consider LEAPS. This law is the Energy Policy Act of 2005 (PL 109-58, 16 U.S.C. § 824p) (EPAAct 2005).

Section 1223 of EPAAct 2005 "encourages deployment of transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities." Under Section 1223(11), "pumped storage" is classified as an "advanced transmission technology," defined as a technology that increases the capacity, efficiency, or reliability of an existing or new transmission facility. On November 17, 2006, FERC explicitly identified LEAPS as an "advanced transmission technology."<sup>3</sup>

Nevada Hydro understands the complexity of properly analyzing the ability of LEAPS to increase "the capacity, efficiency, or reliability" of the southern California grid as a transmission asset as it is required to do. Nevada Hydro suggests that rather than ignoring this Federal mandate to brush LEAPS aside<sup>4</sup>, that it instead properly analyze the facility (perhaps in a separate workshop setting) before reaching such a simplistic and unsupported conclusion. As this apparent simplification is contrary to Federal law and FERC's Order, the ISO must withdraw this unsupported conclusion to avoid continuing to violate both Federal law and a FERC Order.

#### **2.1.2. The ISO ignores the fact that LEAPS is a preferred resource and is eligible for special treatment under state law**

In the Executive Summary and Section 1.3 of the Draft Plan, among other places, the ISO describes how "non-conventional", "non-transmission" or "preferred resources" "can constitute non-conventional

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<sup>3</sup> / Federal Energy Regulatory Commission, Order on Rate Request, Issued November 17, 2006, Docket Nos. ER06-278-000 et seq., P. 12.

<sup>4</sup> / With regard to LEAPS, the Draft Plan concludes that the ISO "did not identify a reliability need for the LEAPS in the current planning cycle", page 95.

solutions to meet local area needs that otherwise would require new transmission or conventional generation infrastructure.” The Draft Plan notes on page 37 that

*The general application for this methodology is in grid area situations where a non-conventional alternative, such as demand response or some mix of preferred resources could be selected as the preferred solution in the ISO’s transmission plan rather than the conventional transmission or generation solution.*

The Draft Plan describes, on page 6, “non-conventional resources” as including, for example demand response and storage, and notes that “preferred resources” “constitute non-conventional solutions to meet local area needs that otherwise would require new transmission or conventional generation infrastructure.”

The Draft Plan claims that “the ISO is continuing to make material strides in facilitating use of preferred resources to meet local transmission system needs.”<sup>5</sup> However, the Draft Plan then goes on to claim that the ISO

*has reviewed the existing methodology and concluded that further refinement of the generic suite of preferred resources forming the basis of the methodology would not be practical or effective until more detailed information is available about the types of preferred resource options being brought forward in the existing procurement processes.*

The Draft Plan then notes that, “Instead, efforts were focused on testing the resources provided by the market into the utility procurement processes for preferred resources.”<sup>6</sup> As a preferred resource potentially available to the ISO (i.e., “provided by the market”<sup>7</sup>) Nevada Hydro does not understand how the ISO can continue to pretend as if LEAPS does not exist.

While the ISO should cooperate with the PUC to allow it to fulfill the procurement mandates it is required to implement by law, the Draft Plan seems to ignore two fundamental requirements imposed on the PUC and instead approves resources in contravention the these mandates.

For example, in its Track 4 Decision<sup>8</sup> in the last long term procurement proceeding at footnote 3, the PUC affirmed that new large pumped hydro facilities like LEAPS, like all energy storage facilities, are to be treated as a “preferred resource”. This designation is fundamental as it requires that storage facilities are to be considered ahead of other resources in meeting authorized procurement targets. Where are storage facilities considered and valued in the Draft Plan?

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<sup>5</sup> / Draft Plan, page 6.

<sup>6</sup> / *Id.* Emphasis added.

<sup>7</sup> / A summary of the scope of interaction between Nevada Hydro and the ISO relative to LEAPS was provided in the introductory paragraph to Section 2.0.

<sup>8</sup> / Decision Authorizing Long-Term Procurement for Local Capacity Requirements Due to Permanent Retirement of the San Onofre Nuclear Generations Stations, Decision 14-03-004 in Rulemaking 12-03-014, March 14, 2014.

Further, state law<sup>9</sup> grants to storage resources certain priority considerations. The law does not exclude large advanced pumped storage (“APS”) facilities like LEAPS or single them out for special treatment, but it does require that APS be considered equally and receive the same benefits as other storage resources. Further, in its description of what a storage system is, AB 2514 requires that such technology be “commercially available”<sup>10</sup> and “cost effective”.<sup>11</sup> Only advanced pumped storage (“APS”) facilities like LEAPS are today clearly commercially available, and with efficiencies above 80%, are the most cost effective of all storage technologies.<sup>12</sup>

Pub. Util. Code Section 2836.2(c) requires that the PUC “consider the integration of energy storage technologies with other programs, including demand-side management or other means of achieving the purposes identified in Pub. Util. Code § 2837 that will result in the most efficient use of generation resources and cost-effective energy efficient grid integration and management”. Simply, the ISO must support this mandate and consider LEAPS in this context as well. Clearly it has not done so in the Draft Plan.

Although AB 2514 clearly addressed APS as well as other forms of storage, the PUC, in Decision 13–10–040<sup>13</sup> in its Rulemaking 10-12-007 (the PUC proceeding opened to address the requirements of AB 2514), chose to exclude from its procurement targets large APS facilities like LEAPS. This decision, however, pointed to the LTPP proceeding as the means to effectuate the intent of the Legislature in passing AB 2514 as the mechanism though with large APS storage benefits should be procured<sup>14</sup>. Although carved out of Rulemaking 10-12-007, the mandates of AB 2514 still apply to APS facilities like LEAPS, as acknowledged in the Track 4 Decision. The ISO must support this mandate, and by brushing LEAPS aside has not done so.

#### **2.1.2.1. The Draft Plan states that it will give preferences to resources like LEAPS, and then specifically snubs LEAPS**

Nevada Hydro is particularly concerned about comments in the discussion of preferred resources in southern California, in Section 2.6.3.2 of the Draft Plan. First, the ISO notes that:

*available preferred resources and storage including additional energy efficiency (AAEE), distributed generation, demand response and the preferred resources*

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<sup>9</sup> / “Energy Storage Systems”, signed September 29, 2010, Skinner, Stats. 2010 – ch. 469, Codified at Pub. Util. Code § 2835 *et seq.* (“AB 2514”).

<sup>10</sup> / Pub. Util. Code § 2835(a)(1).

<sup>11</sup> / Pub. Util. Code § 2835(a)(3).

<sup>12</sup> / See for example, “Pumped Hydro Energy Storage, Energetics, Renewable Integration, and Technical Potential”, Charles Barnhart and Sally Benson, Stanford University Global Climate & Energy Project, presented at the PUC’s Technical workshop on pumped hydro storage, January 16, 2014. Available here: [http://www.cpuc.ca.gov/PUC/energy/electric/Technical\\_Workshop\\_Understanding\\_Current\\_State\\_of\\_Pumped\\_Storage.htm](http://www.cpuc.ca.gov/PUC/energy/electric/Technical_Workshop_Understanding_Current_State_of_Pumped_Storage.htm)

<sup>13</sup> / Decision Adopting Energy Storage Procurement Framework and Design Program, Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems, Decision 13–10–040, October 17, 2013

<sup>14</sup> / Nevada Hydro discusses its thus far unsuccessful efforts to get LEAPS properly considered in the LTPP process in Section 3.0.

*assumed to fill the LTPP 2012 local capacity authorization were utilized to mitigate reliability issues in the southern California bulk system.*

Then, the ISO then goes on to claim on page 97 that it “did not receive proposals for additional preferred resources in the southern California bulk system study area through the 2014-2015 Request Window.” Nevada Hydro submitted LEAPS into the Request Window, and as detailed herein, it was either ignored (in violation of ISO tariff provisions) or not properly considered (in violation of Federal and State law). In either case, this error must be corrected before the plan is finalized.

**2.1.3. Although LEAPS has 2 executed interconnect agreements, it has never been included in the base TPP models as required by the ISO’s tariff**

LEAPS has position number 72 in the ISO generation queue<sup>15</sup> and is the only APS facility with fully executed and approved interconnection agreements (FERC Dockets ER12–1302, ER12–1305 and ER12–1312). As a result of achieving these milestones, the ISO was obligated under its tariff to include LEAPS and associated upgrades in its modeling for this and previous transmission plans. However, it is clear that LEAPS has not been treated as required by tariff.

Phase 1 of the Transmission Planning Process (“TPP”), as described on page 19 of the Draft Plan, is supposed to include “network upgrades and additions identified in studies conducted under the ISO’s generation interconnection procedures and incorporated in executed generator interconnection agreements.” Nevada Hydro sees no evidence that the upgrades associated with the LEAPS interconnection agreements have been included as required. The Draft Plan notes further on page 42 that, “[i]n addition to generators that are already in-service, new generators were modeled in the studies depending on the status of each project”, giving no indication of what “status” is required for such inclusion. Does the advanced status of LEAPS qualify it for inclusion? Nevada Hydro has no way of knowing.

Tariff section 24 sets out the requirements for the ISO’s TPP, and it is under these provisions that this Draft Plan has been developed and now published. Section 24.3.1 describes the inputs to the Unified Planning Assumptions. Of significance here are two subsections describing required inputs, neither of which have apparently been complied with in connection with LEAPS:

- Under §24.3.1(e), “Network Upgrades identified pursuant the various generator interconnection processes . . . that were not otherwise included in the comprehensive Transmission Plan from the previous annual cycle.”
- Under §24.3.1(j), “Generation and other non-transmission alternatives that are proposed for inclusion in long-term planning studies as alternatives to transmission solutions.”

In addition, section 6.1.5.6 of the Business Practice Manual for Generator Interconnection Procedures requires coordinating interconnection information with the transmission planning process, Specifically, subsection (iii) requires the “performance of sensitivities within the Transmission Planning Process, including cases considering Generating Facilities included in the Phase II Interconnection Study(ies) to

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<sup>15</sup>/See, <http://www.ISO.com/Documents/ISOGeneratorInterconnectionQueue.pdf>.



the extent possible, to optimize transmission upgrades developed in the current Transmission Planning Process to achieve System Reliability, economic efficiency, and satisfy the Network Upgrade requirements to interconnect Generating Facilities included in the Phase II Interconnection Study.” To Nevada Hydro’s knowledge, this has never been done for LEAPS.

This same section also requires that “generation projects entering the Phase II Interconnection Study will also be considered in the Unified Planning Assumptions.” Again and to Nevada Hydro’s knowledge, this has never been done for LEAPS, although its studies had been completed long ago.

LEAPS does not connect to the ISO system at a single point, it connects into both the SCE and SDG&E systems. Had it properly included LEAPS in the base case model used for this and past transmission plans, the ISO would have rightfully concluded that LEAPS could provide 500 MW of LCR benefits into the West LA basin, offsetting the need for new a similar amount of new local (and largely GHG-producing) generation and other non-preferred resources. Clearly this is a fundamental error in this and past transmission plans which must be now be remedied before this plan is finalized.

#### **2.1.4. Conclusion**

Although LEAPS is the most flexible of resources to be located in the southern California load pocket with the ability to address the loss of SONGS, the upcoming overgeneration crisis while fixing voltage and other reliability issues facing the southern California grid, the ISO continues to push it aside. Doing so, it ignores its many benefits using by use of a stilted and simplistic analysis. Such shoddy work masquerading as a professional analysis does a disservice to the State and its ratepayers as well as violating Federal and State law.

#### **2.2. The ISO has also mistreated the TE/VS Interconnect for years, in violation of law and policy**

On page 2, the Draft Plan notes that its

*analysis indicated in this planning cycle that the authorized resources, forecast load, and previously-approved transmission projects working together meet the reliability needs in the LA Basin and San Diego areas. However, due to the inherent uncertainty in the significant volume of preferred resources and other conventional mitigations, the ISO has performed extensive analysis of transmission alternatives in the event other resources fail to materialize.*

Page 99 further elaborates on the ISO’s focus on “options to synergize increased generation deliverability out of Imperial area, as well as enhancing local reliability in Southern California”, “transmission reinforcements that strengthen the LA Basin and San Diego connection provide reliability improvement for the LA Basin / San Diego area”, and that “provide Imperial area deliverability benefits”. As the TE/VS Interconnect is the only viable option under consideration that connects San Diego and Los Angeles at 500 kV from within the load pockets and that can deliver Imperial Valley generation directly to the Talega substation, the TE/VS Interconnect should obviously be seriously considered. Yet is summarily brushed aside.

As it did with LEAPS so as to exclude it from consideration, the ISO has done exactly the same thing in connection with its evaluation of the TE/VS Interconnect, again in contravention to law and tariff provisions. This mistreatment focuses on the ISO’s conclusion that it “did not identify a reliability need



for the TE/VS in the current planning cycle.”<sup>16</sup> This claim is quite simply factually incorrect because both FERC and the ISO have concluded otherwise, facts conveniently omitted from this and past recent transmission plans.<sup>17</sup> With SONGS now offline, the need for the TE/VS Interconnect is now magnified, while the Draft Plan tries to squirm around agreeing with this fact.

### **2.2.1. Prior ISO findings of value for the TE/VS Interconnect**

The ISO has reviewed this connection formally on three occasions over nearly 10 years, reaching identical conclusions that should have been followed by ISO Board approval, yet was not. These reviews are described in the following subsections.

#### **2.2.1.1. Valley Rainbow**

On March 30, 2001, the ISO Board of Governors issued a resolution stating as a Finding of the Board of Governors that the Board, “[f]inds that a 500 kV Project, such as the Valley-Rainbow project, is needed (without selecting a preferred near-term alternative and without regard to routing) to address the identified reliability concerns of the San Diego and South Orange county portion of the ISO grid beginning in 2004 . . .” [Emphasis added.] On the same day, the ISO Grid Planning Department made a presentation to the Board, noting that “a potentially less contentious route may be available in association with Nevada Hydro's proposed Lake Elsinore Pumped Storage Project.”<sup>18</sup>

This Board Resolution was approved based upon the recommendation of ISO Staff. In an ISO Staff Memorandum, dated March 23, 2001 (one week prior to the Board meeting), Staff explicitly stated the Nevada Hydro’s project was the functional equivalent of the similar Valley Rainbow project. The Board carefully drafted its Resolution so that its reliability need finding would apply to any project “such as Valley-Rainbow”, that is, any project that would provide the reliability benefits that Valley-Rainbow would have provided, pointing with particularity to Nevada Hydro’s project.

The ISO represented to the PUC not only that Valley-Rainbow was needed for system reliability but also that the determination of need was “simple.” In its July 12, 2002 Opening Brief in the PUC Valley Rainbow proceeding, ISO asserted that “the need for a project such as Valley-Rainbow has been amply demonstrated.”

Further, the PUC, in its “Interim Preliminary Report on Alternatives Screening” prepared in 2002 in connection with its processing of the application for the project, identified the TE/VS Interconnect as perhaps the only viable alternative to the route proposed by the project’s sponsor. Clearly, the PUC was aware, as was the ISO, of the potential difficulty of approving the connection over the route as proposed. The ISO, through the specific language of its approval resolution, and the PUC, through this analysis, were attempting to pave a path for this connection to be built, whether or not it was the project as proposed by SDG&E. .

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<sup>16</sup>/Draft Plan, page 95.

<sup>17</sup>/Both LEAPS and the TE/VS Interconnect were identified in the ISO’s Annual Transmission plans for 2006, 2007 and 2008, mysteriously vanishing from the following years without explanation.

<sup>18</sup>/“Valley–Rainbow Project” PowerPoint, Jeff Miller, ISO Grid Planning Department, March 30, 2001.

Although the Valley–Rainbow project failed to be approved by the PUC, Nevada Hydro can find no reference in past or present tariffs under which a prior determination of the ISO Board somehow “expires”. Notwithstanding, the ISO has steadfastly refused to honor the clear directive of its Board, and has continued to insist that Nevada Hydro submit to additional planning exercises. Now particularly, thanks to the forward thinking of SDG&E’s design engineers, Nevada Hydro’s TE/VS Interconnect remains identical to the Valley Rainbow design, and is able to meet needs unimagined in those early days: the loss of SONGS.

#### **2.2.1.2. Southwest Transmission Expansion Plan**

In 2004, the ISO Southwest Transmission Expansion Plan (“STEP”) Study Group was set up “to plan, coordinate, and implement a robust transmission system among Arizona, Nevada, Mexico, and southern California”. STEP provided a forum to facilitate stakeholder development of projects through the planning effort and was to work closely with regulatory and governmental agencies in developing facility plans in order to help enhance and streamline the permitting of these facilities and help reduce the amount of analysis required by siting agencies.

The ISO was the focus for planning activities for California projects. The two projects of interest to STEP were the TE/VS Interconnect and Sunrise (then known as Imperial Valley-San Diego Expansion Plan or ISEP). The ISO Grid Planning Department published findings in 2004 in which it detailed the reliability benefits of each project and the additional benefits to be realized if the two projects were combined. The focus was to investigate the “relative reliability benefits” of several transmission options for increasing import capability in San Diego, and concluded that Nevada Hydro’s Project would fulfill this need.

The STEP study reaffirmed the ISO Board findings in Valley Rainbow, finding both reliability and economic benefits to each project, and additional benefits if both projects are built. Although the STEP process met the planning requirements of the tariff in place at that time, ISO management did not present these findings relative to the TE/VS Interconnect to its Board.


#### **2.2.1.3. CAISO South Regional Transmission Plan**

Instead, two years later in 2006, the ISO created the ISO South Regional Transmission Plan (“CS RTP”) to study together the three southern California projects it was considering: SDG&E’s Sunrise Powerlink (then called Sunpath), SCE’s Tehachapi project and both the LEAPS pumped storage facility and the TE/VS Interconnect separately. Nevada Hydro was informed that its participation in this process was “mandatory.”

A September 19, 2006 staff presentation demonstrated the economic benefits of the TE/VS Interconnect. In addition the studies also show the combined value of both TE/VS Interconnect and Sunrise is higher than for each project individually. Consequently, the ISO divided the reliability benefits between the two projects, as shown in the following table<sup>19</sup>.

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<sup>19</sup>/The table is extracted from “ISO South Regional Transmission Plan for 2006 (CS RTP-2006), Findings & Recommendation on Sun Path Project Presentation to the ISO Board, August 3, 2006, page 19. At the time SDG&E was calling its Sunrise Powerlink project the “Sun Path project”.



California Independent  
System Operator Corporation

## LCR Benefit for Sun Path Project

**Calculated based on RMR Capacity Cost Savings\*  
(in 2006\$)**

	Year 2010	Year 2015
Projected RMR capacity payments, no new projects	\$71.55M	\$81.12M
Projected RMR capacity payments with Sun Path	\$28.24M	\$37.81M
Projected RMR capacity payments with Sun Path and LEAPS	\$0	\$0
<b>Sun Path RMR savings</b>	<b>\$43.31M</b>	<b>\$43.31M</b>
RMR savings with Sun Path and LEAPS	\$71.55M	\$81.12M
<b>RMR savings attributed to each project</b>	<b>\$35.78M**</b>	<b>\$40.56M**</b>

\* All benefits calculated based on CAISO's 2-year average RMR capacity payment of \$43.31/kW-yr for San Diego Area  
 \*\* We have divided the savings equally between the two projects

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Nevada Hydro agreed to participate in the CS RTP process based on Staff's representation that the ISO would collectively evaluate and simultaneously present to its Board recommendations concerning all three projects. This plan was announced and publicized to all parties including interested members of the public, regulatory agencies and project sponsors.

Months later, Nevada Hydro learned that even though the ISO staff has not yet completed its analysis, ISO management has decided to sidestep the consultative CS RTP process it so carefully set up and submit a recommendation to the ISO Board that the Sunpath project be approved alone. Nevada Hydro also learned that management did not intend to make recommendations concerning its projects. Once again, findings relative to the value of the TE/VS Interconnect, made in compliance with ISO tariff requirements, were not brought before the ISO Board for its approval of the TE/VS Interconnect. Although clearly the TE/VS Interconnect should have been approved by the Board to realize the reliability benefits allocated to it, that action never occurred.

Nevada Hydro notes that one of the most important reliability issues that resulted from the completion of the Sunrise Project, and the denial by CAISO of completion of the TE/VS Interconnect, was that the most devastating contingency in the southern California area became the loss of the 500 kV line from Imperial Valley to Miguel followed by the loss of the 500 kV Sunrise line from Imperial Valley to Suncrest, a classic N-1-1, Category C contingency. The second most challenging contingency is now the loss of the Otay Mesa generating plant followed by the loss of the Southwest Power Link anywhere east of Imperial Valley, a classic G-1,N-1 contingency. Essentially, the primary route to import power into San Diego went through Imperial Valley. The flows south through Path 44 under normal conditions were low. This was acceptable while SONGS provided a 2,500 MW backstop to troubles on the single path that led through Imperial Valley.

However, it should be seen as a poor planning decision to place so much reliance on a single import path backed up by a single generating station. This decision came front and center when the SONGS plant was forced to shut down.

### **2.2.2. FERC's Order on the reliability benefits of the TE/VS Interconnect has been ignored**

In March 2008, the FERC granted certain rate incentives for the TE/VS Interconnect. The premise for the FERC's action was its finding that, "Nevada Hydro, through independent evidence provided in this proceeding, has adequately demonstrated that its TE/VS Interconnect project will ensure reliability, consistent with the requirement of Order No. 679."<sup>20</sup>

In reaching its conclusion, the FERC relied on "independently supplied reliability studies," which were largely prepared by ISO staff in connection with the ISO-sponsored planning processes described in Section 2.2.1. As the ISO itself stated in this FERC proceeding, "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."<sup>21</sup>

Based on evidence submitted, the FERC concluded 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. In its initial application, [Nevada Hydro] stated that the 2003 STEP Report 'concluded that a new high voltage electrical transmission line between Riverside and San Diego Counties is critically needed to serve future load growth.' If built, the TE/VS Interconnect would be the only 500 kV transmission line connecting SCE and SDG&E's transmission systems."<sup>22</sup>*

The FERC concluded that the "TE/VS Interconnect project will ensure reliability, consistent with the requirements of Order No. 679"<sup>23</sup> 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 ISO grid."<sup>24</sup> Yet, in spite of this directive from FERC, the ISO refused and has continued to refuse to approve the TE/VS Interconnect as a reliability project.

### **2.2.3. Conclusion**

The ISO performed studies for this connection from roughly 2000 through 2008. Each study reached conclusions demonstrating the value of the connection and the needs it would address. These studies

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<sup>20</sup>/Federal Energy Regulatory Commission, *Order on Rate Incentives and Compliance Filing*, Docket Nos. ER06-278-000 et seq., issued March 24, 2008 ("2008 Rate Order"), at ¶ 27.

<sup>21</sup>/ *Motion to Intervene and Comments of the California Independent System Operator Corporation in Support of Lake Elsinore Advanced Pumped Storage Project*, Docket No. P-11858-002, at 3 (Apr. 2, 2004).

<sup>22</sup>/2008 Rate Order, at ¶ 26.

<sup>23</sup>/ *Id.*, at ¶ 27.

<sup>24</sup>/ *Id.*, at ¶ 57.

were undertaken by the ISO as part of proceedings that met tariff requirements in place at the time, and required Board approval of the project as a result.

With an Order from FERC and three separate planning conclusions demonstrating the reliability and economic benefits of the TE/VS Interconnect, it is clear that

1. The FERC Order does not require further ISO Board action to be implemented.
2. The ISO approved a connection “like” the TE/VS Interconnect when it approved the Valley Rainbow project, that this approval does not “expire” and should have been (and still could be) applied to the TE/VS Interconnect but was not.
3. The STEP and CSRTP proceedings were developed and implemented to meet the requirements for transmission expansion in the ISO tariff in place at that time and again, should have supported a Board decision on the project.

Nevada Hydro’s comments on previous transmission plans have largely been ignored. Although the TE/VS Interconnect is ideally located to fix the grid due to the loss of SONGS and the impending loss of once-through-cooling based generation, the ISO continues to pretend that the TE/VS Interconnect cannot remedy the situation or is simply not needed. Clearly also, as it connects to LEAPS and enables LEAPS to access the ISO grid, the TE/VS Interconnect could rightly also be considered a renewable energy-driven transmission project as described in section 4.3 of the Draft Plan. However, it was also omitted from consideration here.

Simply, the treatment of the TE/VS Interconnect at the hands of the ISO violates tariff provisions and FERC Orders. The Board must correct this mistreatment before approving this draft Plan.

### **2.3. Nevada Hydro options regarding the ISO’s systematic mistreatment of its projects**

The ISO cannot simply include the Nevada Hydro projects in its plans for 2006, 2007 and 2008, only to have them mysteriously disappear in the 2009 plan, without explanation. Then again last year, the TE/VS Interconnect appeared as a “Group II” project<sup>25</sup>, only to have it again be found of no present use.

Nevada Hydro is reaching the conclusion that the ISO has made itself irrelevant to the successful development of both the TE/VS Interconnect and LEAPS projects. Using techniques described above, for the last 7 years and ignoring its own findings and those of FERC, the ISO has made clear to Nevada Hydro that it neither wants nor needs its projects, preferring instead utility sponsored projects to try and solve problems it has yet to actually resolve. Today, rather than continuing to hope that it will ever be treated fairly by the ISO, Nevada Hydro is ready to rely on the following to complete development of the TE/VS Interconnect:

- The ISO Board approval of the Valley–Rainbow connection.
- FERC’s Rate Order that did not require additional action by the ISO.

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<sup>25</sup>/Group 2 projects were those the ISO concluded strengthened the “LA/San Diego connection – optimizing use of corridors into the combined area”. The 2013–2014 Transmission Plan noted that they were to [i]nitiate longer term analysis (10 to 20 year) in 2014-2015 or 2015-2016 cycle to assess the need for potential LA/San Diego connector projects (Group II) in light of evolving load forecasts and the potential for preferred resources and storage.

- The authority of the PUC to determine whether or not the TE/VS Interconnect provides ratepayer benefits through its transparent approval process, as opposed to the murky “black–box” planning method the ISO has used to keep private transmission developers effectively out of the California market.
- A detailed complaint filed at FERC under section 206 of the Federal Power Act that documents the years–long pattern of apparently intentional discrimination highlighted in this letter and in numerous past communications with ISO staff, and Boards.

Nevada Hydro has tried to get fair treatment from the ISO for its projects for many years. It submitted detailed comments to the draft plans submitted for the past few years, only to have its comments ignored. It cooperated with staff suggestions that it submit its projects to the Request Window, only to see the process used to try and reverse conclusions it and other agencies have reached about the benefits of the projects while ignoring legal mandates that it consider the project properly.

### **3.0. Contrary to ISO directives to Nevada Hydro, LEAPS has been excluded from the LTPP process**

It is Nevada Hydro understands that FERC’s designation of LEAPS as advanced transmission technology<sup>26</sup> would allow it to receive rate treatment under FERC’s authority under the Federal Power Act. ISO management has made it clear that they would not support this path, notwithstanding the mandates of Congress. Instead, at the meeting during which the ISO Board approved the 2013–2014 transmission plan, Nevada Hydro asked Mr. Berberich how the ISO wanted to address the operation and revenue needs for LEAPS. Mr. Berberich advised that LEAPS be submitted as a resource to the PUC’s LTPP process.

Nevada Hydro had some difficulty with that suggestion, as it was not until the Track 4 Decision in that proceeding that the PUC finally and explicitly acknowledged that “large pumped hydro facilities should not be excluded”<sup>27</sup> from the utilities procurement programs and that APS facilities, like all energy storage facilities, are to be treated as a preferred resource.<sup>28</sup>

As a result, Nevada Hydro responded to the RFO issued by SCE late last year. SCE would not consider the offer, telling Nevada Hydro that it could only procure electrical capacity exclusively within the Western LA Basin, using the locational effectiveness factors provided by the ISO to the LTPP proceeding to identify the most effective substations for interconnection. As LEAPS did not connect to any of these locations, SCE would not entertain an offer from LEAPS.

Nevada Hydro filed a complaint at the PUC, pointing out that while the ISO testified in the proceeding that some locations would be better than others, this was not a bright line test; the ISO did not conclude, as SCE contended, that location points outside of the Western LA Basin could not also be effective. Nevada Hydro noted that the ability of any resource to meet LCR needs results from a combination of both the characteristics of the resource itself and the location of its connection within the ISO grid. Nevada Hydro contended that resources that are more effective at meeting these needs can help although connected to potentially “less effective” connection points. As a result, the relative

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<sup>26</sup>/Described in Section 2.1.1.

<sup>27</sup>/Track 4 Decision, at page 99.

<sup>28</sup>/Id., at footnote 3.

values of the ISO's locational effectiveness factors analysis had been subverted, in Nevada Hydro's view, to become absolute values used to exclude from consideration resources, like LEAPS, that might help meet the need, although perhaps not as effectively as they might were they connected to a "more effective" substation.

This logic apparently fell on deaf ears as the PUC recently dismissed the complaint.

Although Nevada Hydro also submitted an offer for LEAPS to SDG&E in January, it has not had any response to date. As a result, and although the ISO directed the project to the PUC, it is becoming clear to Nevada Hydro that the LTPP process will not result in a path that would allow LEAPS to be constructed. With the ISO not supporting a transmission rate base for LEAPS, and with the PUC apparently not supporting contracting arrangements with local utilities under its authority, LEAPS has effectively been shut out of the market, notwithstanding the benefits most seem to agree APS facilities like it can provide. Nevada Hydro sees this treatment as contrary to the open market mandates FERC has set forth for the industry.

#### **4.0. Specific Comments on Draft TPP**

Although this letter is intended to convey the points addressed in the previous sections of this letter, below, Nevada Hydro provides a few comments on the Draft Plan itself.

##### **4.1. Reliability**

The ISO claims, in its discussion of reliability in the southern California basin that its "reliability assessment results did not indicate need for additional resources, beyond previously authorized amounts, to meet reliability requirements."<sup>29</sup> However, as the reliability assessment is based on full procurement of the Track 1 and Track 4 authorizations, the Draft Plan also acknowledges the risks if these goals are not met: a "resource deficiency"<sup>30</sup>. Further the Draft Plan, on page 147, also acknowledges the difficulties due to:

- "The overlapping N-1-1 contingency of 500 kV lines in southern San Diego area."
- "The overlapping outage of Otay Mesa power plant, followed by the Imperial Valley–North Gila 500 kV line."

Nevada Hydro's own studies show that its TE/VS Interconnect can solve for all of these contingencies, including that flowing from the loss of IV Miguel and IV Suncrest. Yet, by careful maneuvering around its assumptions, the Draft Plan concludes that potential reliability benefits from the TE/VS Interconnect are not needed.

As an aside, Nevada Hydro was pleased to note that SCE's proposed a DC line from Alberhill to Talega, as it indicated the value of Nevada Hydro's proposed TE/VS Interconnect. Simply, SCE has proposed a shrunken and less integrated form of the TE/VS Interconnect. Clearly also, SCE couldn't propose an AC

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<sup>29</sup>/Draft Plan, page 97.

<sup>30</sup> See for example Table 3.2–8 on page 147.



line without admitting that the TE/VS Interconnect is all ready to do the same thing with significantly less development time, and at far lower cost. And of course it would not be owned by SCE.

#### **4.2. Integrating renewables**

On page 9 and later on page 28 of the Draft Plan, the ISO notes that its “study work and resource requirements determination for reliably integrating renewable resources is continuing on a parallel track outside of the transmission planning process, but steps are taken in this transmission plan to incorporate those requirements into annual transmission plan activities”. The Draft plan notes further on page 28 the need for flexible resources, identifying a “trajectory scenario up to 4,600 MW of additional flexible resource capacity could be required” claiming further that there is some “existing fleet” of flexible resources available to the ISO up to 2020.

In a discussion on page 30 of the Draft Plan, the ISO warns that “the successfully mitigating reliability concerns remains dependent on materially higher forecast levels of preferred resources than have previously been achieved. Given the uncertainty regarding all of the forecast resources materializing as planned, contingency planning is necessary. The ISO anticipates continuing to monitor the development of the various resources, and is also exploring possible mitigations in the event they are found to be necessary,” referencing sections 2.6 and 3.3.

Yet, and notwithstanding all of these platitudes to a greener grid, the Draft Plan fails to assess LEAPS as it must to meet these needs.

#### **4.3. Aspen analysis ignored**

In the PowerPoint presented at its October 8, 2014 Imperial County Transmission Consultation Stakeholder Meeting (the “Imperial Meeting”), the ISO noted that Aspen Environmental Group (“Aspen”) and the California Energy Commission were going to provide a high level environmental feasibility analysis of the TE/VS Interconnect as it has been configured by Nevada Hydro. Previously, Aspen had provided such an assessment for a much larger project that included the TE/VS Interconnect as one small segment. In its report titled, “Second Addendum to Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS)”, Aspen noted that the “likelihood of successful permitting for Nevada Hydro’s project ranged from “challenging” to “possible but challenging”. While Nevada Hydro may quibble with portions of the analysis and conclusions,<sup>31</sup> Aspen’s designation of the TE/VS Interconnect as perhaps the least difficult of all alternatives presented to address the reliability challenges posed by the loss of SONGS should have been an important aspect in the ISO’s evaluation of the TE/VS Interconnect.

However, Table 2.6–9 of the Draft Plan purports to provide a summary “High-Level Environmental Assessments for the LA Basin / San Diego Area Backup Transmission Solutions”. The table claims that Aspen concluded that the TE/VS Interconnect has “serious siting challenges”, ignoring the updated

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<sup>31</sup>/Aspen ranked the route as “challenging” “to permit because, while a 2007 FERC EIS evaluated “most of this route, it is nearly all on federal land, and the USFS review process is more comprehensive than FERC’s process. In addition, environmental studies are out of date.” After working closely with the Forest and FERC for many years, Nevada Hydro does not see these issues as “challenging” especially when compared to many of the “challenging” issues identified with other alternative routes.

findings that the ISO had asked Aspen to undertake. This oversight needs to be corrected before the transmission plan is finalized.

#### **5.0. Conclusion**

Nevada Hydro and its development team is standing by to help in any way it can to alleviate the pending crisis. We hope that the ISO will allow us to contribute to a solution that is both ratepayer friendly while not contributing to GHG production.

Sincerely,

/s/ Rexford Wait  
Rexford Wait  
Vice President