

Chapter 1: Proponent's Environmental Assessment Summary

1.1 Introduction

1.1.1 Introduction to the PEA

The Nevada Hydro Company's (Applicant) proposed project (Project), as now before the California Public Utilities Commission (CPUC or Commission), is made up of two primary components: a Commission-licensed high-voltage transmission line for which an application has been submitted for a Certificate of Public Convenience and Necessity (CPCN) and a federally-licensed pumped storage facility for which an application has been submitted to the Federal Energy Regulatory Commission (FERC) (FERC Project No. 11858) for a license to construct and operate under the Federal Power Act of 1920 (FPA).

Of these primary components, only the high-voltage transmission line (TL), the associated substations, switchyards, and system upgrades are subject to CPUC jurisdiction. The Applicant does not seek a CPCN for the generation (pumped storage) facility which would be operated in accordance with a federally-issued hydropower license subject to the exclusive jurisdiction of FERC.

While the transmission and pumped storage components constitute disparate and separate State and federal regulatory processes, in order to ensure compliance with the provisions of the California Environmental Quality Act (CEQA), both components need to be consolidated under the broad umbrella of a single environmental compliance review. More specifically, construction of the transmission line and ancillary facilities for which the Applicant seeks the CPCN would serve to further the construction and operation of the pumped storage facility. In order to ensure that environmental considerations are not piecemealed, CEQA stipulates that the lead agency consider the "whole of the action, not simply its constituent parts." Within the meaning of CEQA, the transmission and pumped storage components of the Project constitute the "whole of the action" (14 CCR 15003[h] and 15379[a]).

The transmission component, often identified as the Talega-Escondido/Valley-Serrano 500 kV Interconnect (TE/VS Interconnect), is the subject of the Applicant's request for a CPCN from the Commission. The TE/VS Interconnect is a new approximately 32 mile long, high-voltage TL, inclusive of all appurtenant facilities and system upgrades associated therewith, linking Southern California Edison Company's (SCE) existing 500 kV Valley-Serrano transmission system in western Riverside County and San Diego Gas & Electric Company's (SDG&E) existing 230 kV Talega-Escondido transmission system in northern San Diego County.

The pumped storage component, often identified as the Lake Elsinore Advanced Pumped Storage Project (LEAPS), will be an advanced pumped storage hydropower facility located in western Riverside County and northern San Diego County. LEAPS will pump waters from Lake Elsinore into a new water body to be constructed within the Decker Canyon area of the United States Forest Services' (USFS or Forest Service) Cleveland National Forest – Trabuco Ranger District (TRD or National Forest), at an elevation approximately 1,500 feet higher than Lake Elsinore. Operating at a cycle efficiency of about 83.3 percent, LEAPS would create an impoundment of kinetic energy allowing stored off-peak power, including wind from the

Tehachapi area and geothermal from the Imperial Valley, to be available during peak-hour periods. LEAPS would be capable of nominally providing 500 megawatts (MW) of electricity for up to twelve hours, and have a storage capacity of 6,000 megawatt hours (MWh).

In order to understand why the Applicant's PEA is not confined to those elements which are the subject of the CPCN, that is, why the LEAPS project is part of the "whole of the action" within the meaning of CEQA, it is first important to understand the Project's derivation, the requirements of CEQA, and how those factors dictate the subject of this filing. In February 2004, TNHC, acting in the capacity of co-applicants with the Elsinore Valley Municipal Water District (EVMWD), filed a hydropower license application with FERC under the provisions of the FPA, as codified in Title 16, United States Code (U.S.C.) Parts 791(a)-825(r).

Under Section 797(e) of the FPA, FERC is authorized "[t]o issue licenses to citizens of the United States, or to any association of such citizens, or to any corporation organized under the laws of the United States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any government dam, except as herein provided: provided, that licenses shall be issued within any reservation only after a finding by the FERC that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations."

In January 2007, acting in compliance with the National Environmental Policy Act (NEPA), FERC and the Forest Service released a "Final Environmental Impact Statement – Lake Elsinore Advanced Pumped Storage Project, FERC Project No. 11858, FERC/FEIS-0191F"¹ (FEIS) addressing both LEAPS and a "transmission line only project." With regards to those facilities, the FEIS identified and described a preferred "staff alternative" which specified general facility locations and a 500-foot wide transmission alignment extending between SCE's Valley-Serrano line on the north and SDG&E's Talega-Escondido lines on the south.

Following the commencement of that federal hydropower licensing process, under its earlier Valley-Rainbow proceedings (A.01-03-036) and in response to a separate high-voltage transmission line proposal from SDG&E designed to interconnect SDG&E's Talega-Escondido and SCE's Valley-Serrano lines, the Commission identified the "LEAPS transmission line" as functionally and electrically equivalent to SDG&E's Valley-Rainbow Interconnect project. As a result of the Commission's independent studies, the "LEAPS transmission line" was identified

¹/ Federal Energy Regulatory Commission, Draft Environmental Impact Statement for Hydropower License – Lake Elsinore Advanced Pumped Storage Project, FERC Project No. 11858, FERC/EIS-0191F, January 2007.

by the FERC as a viable network upgrade and not only as a generation interconnection (gen-tie), as initially proposed by the Applicant as part of its original FERC filing.

Perhaps because of the location of LEAPS, situated between the two separate load centers of the San Diego and Los Angeles metropolitan areas, FERC concluded that the California Independent System Operator (CAISO or California ISO) and SDG&E would derive the “maximum benefit” through the construction of line segments connecting both centers, thereby enhancing reliability, reducing congestion, and improving access. Once so connected, the two transmission line segments functionally take on additional utility and become an interconnection between SDG&E’s 230 kV and SCE’s 500 kV transmission systems.

Thus the genesis of the “LEAPS transmission line” serving as a regional interconnect was the result of (i) the FERC’s conclusions, (ii) the Commission’s independent analysis of SDG&E’s Valley-Rainbow project and (iii) the CAISO’s independent determination that the Applicant’s TE/VS Interconnect was functional equivalent to the Valley-Rainbow Interconnection.

In light of the functions that the TE/VS Interconnect is to serve – transmission for LEAPS and third parties – the applicant is seeking Commission approval for a CPCN for this transmission component. While stating no position with respect to FERC’s licensing authority, it appears that as the TE/VS Interconnect will be part of the transmission grid and not merely a primary generator tie line for the pumped storage facility, it may be outside the scope of FERC’s exclusive hydropower-licensing authority. The scope of the required CPCN includes the approval, construction, operation, and maintenance of additional network upgrades, including such additional improvements to the SDG&E and SCE systems as may be required. This to accommodate the additional power flows that would be created once the Talega-Escondido and Valley-Serrano transmission lines are interconnected, allowing power to flow between them, and when the pumped storage facility is operational.

TNHC and the EVMWD have jointly submitted two separate special-use permit (SUP) applications to the USFS to allow for the approval, construction, operation, and maintenance of both LEAPS and TE/VS Interconnect on National Forest System (NFS) lands. Similarly, because LEAPS and the TE/VS Interconnect extend across the jurisdiction of two regional water quality control boards (Santa Ana and San Diego), TNHC and the EVMWD have jointly submitted separate 401 water quality certifications applications to the State Water Resources Control Board (SWRCB).

Approval of the Forest Services’ SUPs, the SWRCB’s 401 water quality certifications, and the Commission’s CPCN will allow the Applicant to construct such additional transmission and appurtenant facilities as may be required for the proper approval, construction, operation, and maintenance of the Project in excess of those works authorized by FERC.

In order to address the “whole of the action”, not simply the Project’s “constituent parts,” under CEQA, the Applicant must describe the entire action in as broad a fashion as may be reasonably possible to ensure that its possible environmental effects are fully considered, analyzed, and appropriately mitigated. Similarly, in the same fashion as FERC and the USFS previously worked cooperatively to prepare a single NEPA document, since the Project’s implementation will necessitate discretionary permits and approvals from both the Commission and other State

agencies, in order to promote permit streamlining, CEQA encourages the Commission to prepare a single environmental document that can then be used by each of those agencies in fulfillment of their independent CEQA obligations.

1.1.2 Introduction to the Project

The TE/VS Interconnect provides San Diego with access to the robust grid to its north, power from renewable resources and enables the San Diego transmission system to satisfy the reliability requirements of the CAISO. The proposed transmission line will provide the only 500 kV line to the San Diego load center from the north and provide San Diego with access to renewable resources from the Imperial Valley and Mojave Desert, Tehachapi, and San Geronio regions. Increased reliability will reduce market costs associated with maintaining Reliability-Must-Run (RMR) resources. The TE/VS Interconnect has been designated as a critical Statewide transmission resource in the California Energy Commission's (CEC) 2007 "Strategic Transmission Investment Plan, CEC-700-2007-018-CMF."²

The TE/VS Interconnect is primarily located on federal lands within the TRD and the Commission approved right-of-way for the existing Talega-Escondido 230 kV line. The proposed transmission alignment through NFS lands was developed jointly by FERC and the USFS and, to the maximum extent possible, will avoid or minimize impacts to privately-owned property both within and outside National Forest boundaries. As conditioned, the transmission alignment through the TRD has been accepted by the USFS and constitutes an authorized use of NFS lands.

LEAPS provides the State with a variety of cost-effective enhancements, including increased reliability and more efficient use of grid resources through the use of a variety of mechanisms. Grid benefits include the full range of ancillary services, shifting on-peak to off-peak hours, and providing 500 MW of generation near the load pocket. The pumped storage component of the Project allows for the storage of energy produced during off-peak hours for use during peak-demand hours. This production can include off-peak power generated by efficient, baseload generation sources, including wind-generation facilities located in the Tehachapi region, solar thermal generation in the Mojave area, geothermal-generation facilities located in the Imperial Valley, and other existing and planned renewable resources located throughout and beyond southern California. In addition, the Project provides 500 MW of regulation and fast responding spin to support grid operations the integration of intermittent renewable resources, and provides highly responsive load following capability. This, combined with the ability to provide voltage support, will help the grid manager operate an increasingly complex grid in the southern California electrical region. The Project will provide at least 1,000 MW of reliable supply to the SDG&E service area under CAISO's N-1/G-1 contingency testing conditions.

Because LEAPS can store off-peak power, including wind, solar and geothermal energy, the facility's operation will further the objectives of California's Renewable Portfolio Standards (RPS) and greenhouse gas (GHG) emission-reduction standards. LEAPS can also forestall the need to construct new fossil fuel-burning power plants. The Project's dispatchable pumping load

²/ California Energy Commission, Strategic Transmission Investment Plan, Final Joint Committees Report, CEC-700-2007-018-CMF, November 2007.

will enable the most efficient plants on the southern California grid to operate more hours each day. The efficient baseload energy stored during non-peak hours can then be used to displace operation during peak periods of those generation plants that are the least efficient and most costly to operate.

Pumped storage facilities, such as LEAPS, are able to respond rapidly to continuously changing conditions and, thereby, assist in maintenance of system-wide reliability. Pumped storage generation provides unique strategic, operational, and economic benefits, resulting in reduced operating risks, increased total efficiency, increased critical system control and reliability, and providing more value to the ratepayers. Pumped storage is widely accepted as a mature technology with proven reliability and effectiveness. It is currently the only proven technology available for storage of large quantities of energy and is the most efficient.

1.2 Major Conclusions of the PEA

Substantial relevant environmental analysis has been conducted at both the federal and State levels for the purpose of assessing the potential environmental impacts associated with the Project, including the analysis found in the FEIS. Because the FEIS represents the independent analysis of the Project by the federal agency with primary responsibility for entitling the generation (pumped storage) component, including its associated transmission lines and ancillary facilities, the Applicant has elected not to substantially modify the contents or findings of that document. The Applicant generally accepts the environmental analysis presented in the FEIS and has agreed to implement those “environmental protection, mitigation, and enhancement measures” (PM&Es) identified therein.

As presented in the “Final Environmental Impact Report/Environmental Impact Statement – SDG&E Sunrise Powerlink Project, A.06-08-010”³ (Sunrise FEIR/FEIS), an environmental analysis of the Project has also been conducted by the Commission. Because the Sunrise FEIR/FEIS represents the independent analysis of the Project by the State agency, with primary responsibility for entitling the transmission component, including its associated system upgrades, the Applicant has elected not to substantially modify the contents of that document. With minor revisions designed to best reflect the Project, the Applicant generally accepts the environmental analysis presented in the Sunrise FEIR/FEIS and has agreed to largely implement those “additional mitigation measures” identified therein.

As indicated in the FEIS and/or Sunrise FEIR/FEIS, the Project’s implementation will result in one or more significant or potentially significant unmitigable environmental effects. Based on the continuing existence of significant unmitigable environmental effects, the Project will necessitate, under CEQA, the preparation of an environmental impact report (EIR) or equivalent environmental documentation.

1.3 Areas of Controversy

³/ California Public Utilities Commission (Aspen Environmental Group), Draft Environmental Impact Report/Environmental Impact Statement – SDG&E Sunrise Powerlink Project, A.06-08-010, January 2008; California Public Utilities Commission (Aspen Environmental Group), Recirculated Draft Environmental Impact Report/Environmental Impact Statement – SDG&E Sunrise Powerlink Project, A.06-08-010, July 2008.

Extensive opportunities have been provided to the general public and to public agencies to present comments to FERC, the Commission, and other parties with regards to the potential environmental impacts attributable to the Project. The totality of the FERC environmental review record, in combination with the information presented in the Commission's separate administrative record, of which the Sunrise FEIR/FEIS is a part, has allowed for a reasonable airing of relevant environmental issues and presents a factual basis for the identification of potential areas of controversy.

Since a substantial portion of the Project is located on federal lands, one often raised area of controversy relates to whether NFS lands should be utilized for the proposed endeavor and made available to a for-profit entity for non-public activities rather than retained exclusively for preservation, conservation, and wildlife protection purposes.

Since reasonable people can disagree, different conclusions can and often are drawn based on each individual's interpretation of available data, as influenced by personal experiences and other factors. As such, there likely does not exist a universal consensus with regards to the severity of a number of environmental effects (e.g., wildfire hazards), the appropriateness of the thresholds of significance criteria selected, the efficacy of the mitigation measures and other actions proposed in response thereto, and the level of significance of the post-mitigated environment.

Because of high energy costs, a growing segment of the population might be categorized as being disenchanted with energy producers and regulators. As such, there exists an increasing interest by some consumers to be "off the grid." Many off-the-grid advocates would proposed no further investment in central plant facilities and transmission lines but rather encourage regulators to redirect efforts toward distributed generation and resource conservation.

With regards to the Project, a number of comments have raised the issue of "one project or two," focusing on the concern that it is either the Applicant's intent or the likely consequence of market and other constraints that only the transmission component of the Project will be constructed and that the pumped storage component will not be built. Because the pumped storage component will necessitate a long-term source of water to operate, the implementation of the FERC project would reasonably be expected to include reasonable guarantees that water levels in Lake Elsinore would be stabilized. The nexus between LEAPS operation and lake stabilization can be established; however, that same linkage does not likely exist if only the transmission facilities were developed. Certain stakeholders believe that the development of the TE/VS Interconnect will result in the creation of significant locally adverse environmental consequences with few offsetting local benefits and that the benefits to the local area can only materialize through the implementation of LEAPS.

1.4 Issues to be Resolved

Until FERC issues the proposed hydropower license, the precise nature and extent of federal, entitlements cannot be determined. If operating only under the FPA, FERC may be precluded from licensing certain facilities associated with the Project. Conversely, Section 1223 of the Energy Policy Act of 2005 (EPA 2005) (16 U.S.C. 791a *et seq.*) encourages, as appropriate, the deployment of "advanced transmission technologies," defined as "a technology that increases the

capacity, efficiency, or reliability of an existing or new transmission facility, including pumped hydro. In an “Order on Rate Request,” issued November 17, 2006, FERC found that “the LEAPS facility is an advanced technology per EPAct 2005.” Since FERC has identified LEAPS as an “advanced transmission technology,” thus blurring, in some way, the distinction between transmission and generation (pumped storage), FERC may elect to include, as part of its own discretionary approval, all or some portion of the TE/VS Interconnect. In the event that FERC does license the entire Project, the implications of that action to pending State permits and approvals would need to be addressed among agencies.

It is noted that FERC and the state in which a FERC-licensed project is located generally do not share the final decision of any issues in a licensing proceeding (*First Iowa Hydro-Electric Cooperative v. Federal Power Commission*). Under the Commerce and Supremacy Clauses of the United States Constitution, the FPA preempts state law that would otherwise apply to FPA-licensed projects, except where the FPA reserves state authority over a specific issue (*Sayles Hydro Association v. Maughn*). The primary exceptions include: (1) water quality certification issued under Section 401(a) of the Federal Clean Water Act (CWA); (2) issuance and regulation of water rights necessary for project operation and to prevent injury to prior water rights (Section 27, FPA [16 U.S.C. 821]); (3) regulation of retail rates for electrical service (Section 16, FPA [16 U.S.C. 812]); and (4) authorization for a state or municipal agency to take over any licensed project, through a condemnation proceeding and on payment of fair-market value (Section 14(a), FPA [16 U.S.C. 807a]). FERC’s actions may preempt the need for the Applicant to secure other discretionary approvals that might otherwise be required absent that federal authorization.

Since the FERC preemption does not appear to include 401 water quality certifications, any CEQA documentation resulting from the filing of this PEA would need to identify the SWRCB as a Responsible Agency. Because that CEQA documentation would extend beyond that which might otherwise be required if the Project were confined to those activities subject to a CPCN authorization, the manner in which LEAPS and TE/VS Interconnect are integrated into a single environmental impact report (EIR) needs to be addressed by Commission staff, working in cooperation with the SWRCB and other State Responsible Agencies.

Although FERC’s FEIS identifies the location of specific facilities and the general alignment of the transmission lines, pending FERC’s publication of a “Record of Decision” (ROD) and issuance of the federal hydropower license, FERC may elect to authorize any of the alternative facility locations and/or transmission alignments identified in the FEIS.

Presented in this PEA is “whole of the action” as defined by the Applicant, the Applicant’s stated objectives, and a reasonable range of alternatives which, if implemented, would allow for the fulfillment, in whole or in part, of those objectives. Under CEQA, one of the issues that remain to be resolved is the choice among alternatives and whether or how to mitigate the Project’s significant effects.

1.5 Inter-Agency Coordination and Public Outreach

Following FERC’s acceptance of the TNHC’s preliminary permit application for filing, the Applicant prepared an “Initial Stage Consultation Document” (ISCD) and conducted an initial scoping meeting on June 12, 2001 to solicit comments concerning LEAPS and its associated

transmission facilities. Extensive notification occurred with each successive step in the FERC hydropower licensing and NEPA compliance processes. Commencing on March 19, 2001, a series of community outreach meetings were conducted by the Lake Elsinore Advanced Pumped Storage Oversight Committee (LEAPS/OC) and by the Lake Elsinore Advanced Pumped Storage Oversight Committee Technical Advisory Committee (LEAPS/TAC). The members of the LEAPS/OC and the LEAPS/TAC were appointed by the Board of Supervisors of the County of Riverside.⁴

Prior to the publication of the “Draft Environmental Impact Statement for Hydropower License – Lake Elsinore Advanced Pumped Storage Project, FERC Project No. 11858, FERC/EIS-0191D” (DEIS), FERC released two separate scoping documents, dated August 5, 2004 and January 25, 2005, and conducted public scoping meetings on September 8-9, 2006. Following the publication of the DEIS, FERC conducted additional scoping meetings on April 4-5, 2006. Each of those meetings was noticed as joint NEPA and CEQA scoping meetings. The FERC record includes evidence of extensive outreach efforts, noticing and notification, and public meetings conducted for the express purpose of soliciting comments on the potential environmental impacts attributable to the Project. Those efforts are describe, in part, in the following section.

1.5.1 Interagency Coordination

The Applicant has met with a wide range of federal, State, and local governmental agencies to discuss compliance obligations, to obtain each agency’s comments, concerns, and recommendations, and to identify those discretionary permits and approvals that may be required from those agencies. Permit applications have been filed with and are being actively pursued with a number of agencies, including the Forest Service, the State Water Resources Control Board (acting on behalf of the California Regional Water Quality Control Board, Santa Ana and San Diego Regions), and United States Army Corps of Engineers.

1.5.2 Section 7 Compliance

With regards to the Project, documentation of the United States Fish and Wildlife Service’s (USFWS) and the National Marine Fisheries Service’s (NMFS) compliance with Section 7 of the Federal Endangered Species Act (ESA) has been submitted to the Commission.

1.5.3 Tribal Governments

Acting under the provisions of 36 CFR 800.2(c)(4), the Applicant requested FERC and FERC conveyed to the Applicant authorization to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (NHPA) with the State Historic Preservation Officer (SHPO) and with the Tribal Historic Preservation Officers (THPOs) of pertinent Native American groups on behalf of FERC. The FERC environmental review record identifies the tribal governments that were part of those outreach efforts and the consultation that occurred as a result thereof.

^{4/} County of Riverside, District Agenda No. 3.1, Establishment of an Oversight Committee to Review Hydroelectric Plant Proposal – Lake Elsinore Area, December 15, 2000; County of Riverside, District Agenda 3.67, Modification of Oversight Committee Established to Review Hydroelectric Plant Proposal – Lake Elsinore Area, February 23, 2001.

1.5.4 Agencies/Organizations Associated with the Project

Presented in this PEA is a listing of those agencies, organizations, and individuals that are or may be associated with the Project. The list includes: (1) the Commission, acting in its capacity as the CEQA Lead Agency; (2) the Applicant; (3) the State and regional environmental clearinghouses; (4) potential Responsible Agencies that will or may be required to take one or more discretionary actions concerning the Project and who may be required to utilize the CEQA Lead Agency's final EIR as part of their own independent deliberations; (5) other federal agencies from whom discretionary permits or approval will or may be required; and (6) Trustee Agencies having jurisdiction by law over those natural resources affected by the proposed Project.

In preparing the list of potential Responsible Agencies, Trustee Agencies, and federal agencies, the Applicant has attempted to be inclusive of all agencies from which discretionary permits and approvals will or may be required for the approval and implementation of any portion of the Project. Other agencies may, however, be identified as further analysis of the Project is undertaken by the Commission.

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