



REPORT TO CITY COUNCIL

To: Honorable Mayor and Members of the City Council

From: Grant Yates, City Manager
Prepared By: Barbara Leibold, City Attorney

Date: April 9, 2019

Subject: Lake Elsinore Advanced Pumped Storage (LEAPS) Project – Update on Federal Energy Regulatory Commission’s (FERC) Processing of Federal License Application and Discussion of City’s Position as Project Moves Towards Environment Review and Final Consideration by FERC

Recommendation

This item has been placed on the Agenda at the request of the Mayor for the City Council to consider taking a position relative to the LEAPS Project.

Background

The Lake Elsinore Advanced Pumped Storage (LEAPS) Project was originally conceived nearly 25 years ago. Because of this long history, and to provide context to the members of the public for the discussion that follows, the background section of this report is somewhat extensive.

1. Advanced Pumped Storage – the Basics. Advanced pump storage project store energy in the form of water in an upper reservoir, pumped from another reservoir or lake at a lower elevation. When electrical demand is high, water is released from the upper reservoir into large, nearly vertical pipes. The cascading water then moves through turbines, generating electricity much like a conventional hydropower dam facility.

During periods of low electrical demand (and when energy cost are cheaper), these same turbines also function as pumps, taking water from the lower reservoir or lake and pumping it to the upper reservoir, in effect recharging the stored energy. With modern turbines/pumps, the process is remarkably efficient with the energy generated being around 95% of the energy used to recharge the upper reservoir.

Approximately 40 advanced pumped storage projects are operating in the United States. While peak versus off-peak pricing is a key to their use, advanced storage projects also can improve grid reliability by filling in when a key generating facility unexpectedly goes offline or during very heavy peak demand.

Similar to the hydropower dams that advanced pumped storage projects mimic, these projects are extremely expensive to build. Cost estimates for the LEAPS project now stands at roughly \$2 billion. Also, because these projects are generally open loop system utilizing a natural source

of water (typically river water in which the lower reservoir is formed by a dam), the environmental impacts of such projects are significant.

2. LEAPS – the Basics

In 2004, the Nevada Hydro Company, along with co-applicant Elsinore Valley Municipal Water District (EVMWD), filed an application with the Federal Energy Regulatory Commission (FERC) to construct and operate a 500 megawatt advanced pumped storage project with the Lake serving as the “lower reservoir” with the upper reservoir to be constructed in the Cleveland National Forest. The powerhouse facility, located near Grand and Santa Rosa Drive, is connected to the “grid” by way of 500 kV transmission towers traveling primarily through the Cleveland National Forest, connecting to a proposed substation near Corona Lake to the north and existing transmission lines near Camp Pendleton to the south.

As this application was reaching the final stages of consideration by FERC in 2011, Nevada Hydro and EVMWD fell into a serious dispute regarding the scope and timing of construction of the transmission lines. When EVMWD abruptly withdrew its support as a project co-applicant, FERC dismissed the application.

However, Nevada Hydro filed the necessary request to continue to study the project and FERC issued a “preliminary permit” in 2012, giving LEAPS a new application number (Project No. 14227). Five years would pass with only minor activity on the application. In 2017, Nevada Hydro submitted a formal “notice of intent” to file a license application to FERC, notifying the City, a number of resource agencies, and other affected stakeholders of its intent to once again move forward with the application for the LEAPS project.

Despite objections from both stakeholders and resource agencies, FERC agreed to allow Nevada Hydro to piggyback on the certain studies and consultations that were conducted as part of the original application. However, FERC did ultimately order a number of updated studies requested by the City and other resource agencies.

Nevada Hydro has been methodically moving forward in the past 18 months, submitting the updated studies to FERC and responding the FERC’s requests for additional information. Once all of the studies or study plans have been completed to FERC’s satisfaction, FERC will issue a “ready for environmental assessment” notice and the project will proceed with the review and circulation of an environmental impact statement. Following the completion of that process, FERC will be poised to decide whether or not to grant the application to construct and operate the LEAPS.

3. Water for the LEAPS. Following EVMWD’s withdraw from the application process for the original LEAPS, Nevada Hydro sued EVMWD, alleging breach of their joint venture agreement. In 2018, EVMWD and Nevada Hydro settled the case with EVMWD agreeing to obtain water for the LEAPS project and Nevada Hydro essentially paying EVMWD’s cost to secure that water. The water commitment is for a one-time 15,000 acre feet installation into the Lake, with 9,000 acre feet as “stored water” in the Lake and 6,000 acre feet for operations of the LEAPS. (Note that the Lake’s elevation level increases by about one-foot for every 3,000 acre feet of water installed in the Lake.) EVMWD will also secure water to make up for any evaporative loss of this so-called “pool of water.”

4. Money for LEAPS. The LEAPS is a privately funded hydro project. The project's *proforma* shows both equity funding and borrowing to pay for the massive upfront investment. However, last year, Nevada Hydro petitioned FERC to have the LEAPS project declared a "transmission asset" within the statewide electrical "grid." Such a determination would pave the way for LEAPS to receive a portion of revenue derived from the "tariff" (that is, a duty or charge) ultimately paid by the state's ratepayer as part of the cost of maintaining the grid. The entity that runs the grid, known as the California Independent System Operator or "CAISO," objected to the petition and FERC ultimately ruled that Nevada Hydro's petition was premature. However, securing this potentially reliable stream of income for the LEAPS will continue to be a priority for the applicant.

Discussion

To date, the City has submitted two formal responses to FERC concerning the latest LEAPS project application. In July 2017, the City (along with many other agencies) urged FERC to not allow the current LEAPS application to piggyback off of consultation and studies performed over a decade ago. FERC determined to allow some reliance of the prior application processes, submitting that "additional studies" could be performed to assess project impacts in which the prior studies were lacking due to the passage of time.

In December 2017, the City, again with other resource agencies and stakeholders, provided a comprehensive list of necessary additional studies that should be performed in connection with FERC's evaluation of LEAPS. FERC agreed that some updated studies were necessary, ordering additional studies regarding seismic hazards, geotechnical, water quality, threatened and endangered species, fire, visual impacts, traffic and cultural resources.

While the City's above-referenced submittals indicate the City's deep reservations about the LEAPS project and its impacts on the Lake and the community, the City has not taken a formal position with respect to either supporting or opposing the LEAPS project. Nor has the City Council weighed in on whether the City's reservations could be sufficiently addressed and mitigated such that the City would not oppose the project.

As the City Council is acutely aware, there are stakeholders that steadfastly oppose LEAPS. Notably, City and County residents on the southwestern side of the Lake will suffer through extended periods of noise and traffic impacts during the rather long LEAPS construction process. Not surprisingly, the most vocal opponents of LEAPS reside here.

On the other hand, Nevada Hydro has consistently argued that the LEAPS will improve the Lake's water quality by introducing more dissolved oxygen into the water and the installation of an additional 15,000 acre feet of water to the Lake.

There is a concern the LEAPS project has not done enough to demonstrate long-term material benefits to the Lake and the community to merit the City's support. While raising the Lake's elevation with the addition of 15,000 acre feet should not be entirely discounted, this one-time benefit does not align with the burdens placed on the Lake and the community by the LEAPS project. Impacts to both City and County residents along the Lake's western shoreline remain profound.

Final project studies, proposed mitigation and the license's operating requirements will be forthcoming later this year which could potentially impact the City's position as to the impacts of the LEAPS project. The City will continue to have opportunities to participate and comment in this evaluation process. Because that process is ongoing and as information develops, City staff believes that engagement with FERC and any related project processes remains crucial.

The following priority concerns have been developed by City staff for consideration:

1. The project should only operate when the Lake's elevation is at least 1,240 msl (which is considered the minimum optimal lake level).
2. Project specific water quality mitigation measures are needed that go farther than simply making minor improvements to Lake water quality as currently offered.
3. Community benefits, including, for example, compensation for property taken in constructing the project, enhanced recreational opportunities on the Lake, contribution to Lake operations expenses and regional water quality efforts, strong mitigation measures for construction related impacts, and resolution of ongoing jurisdictional issue related to the Lake from the Regional Conservation Authority and California Fish and Wildlife.

As part of the discussion, staff seeks comment and further direction from the City Council concerning priority concerns.

Fiscal Impact

None.