Lake Elsinore Advanced Pumped Storage

LESJWA TMDL Task Force

January 17, 2018

FERC P-14227
The Lake Elsinore Advanced Pump Storage (LEAPS), FERC P-14227 a 500 MW advanced pumped storage project ~20 miles from the now-shuttered SONGS facility. Its 500 kV Interconnection connects LEAPS to the Talega-Escondido 230 kV line <10 miles from SONGS, and to SCE’s 500 kV Valley Serrano line.

Midway between Los Angeles and San Diego, Lake Elsinore has been deemed an optimal site for pumped storage.

LEAPS will be one of the most efficient storage facilities in the world.

Estimated total cost: $2 billion.
This large-scale pumped storage project will:
• Provide 500 megawatts of clean energy
• Support variable renewable energy generation in California
• Provide funding for water quality and quantity in Lake Elsinore
• Provide well-paying construction jobs
• Contribute to the tax base
• Will limit the need for new gas generation in the LA Basin
Project History and Milestones

• Original License Application Submitted 2004 in Docket P-11858 with Muni co-applicant.
• Final EIS issued February 2007.
• Application dismissed by delegated order July 2011 due to co-applicant dispute.
• New Permit Application submitted without partner July 2011 and Preliminary Permit issued October 2012.
• Large Generator Interconnection Agreements approved by FERC 2014.
• 2 year permit extension granted September 2015.
• New License Application submitted to FERC October 2, 2017
Pumped Storage: stability and reliability for the grid

• Lake Elsinore to provide source water, closed loop through upper reservoir in Decker Canyon.

• Two reversible pump turbine units pump water to upper reservoir using low-cost off-peak power, and generate power from water flowing downhill at times of high demand.
• California has committed to an aggressive renewables timetable
  • 40% renewables by 2024, 50% by 2030

• Renewables such as wind and solar need back-up for reliability
  • Sometimes the wind doesn’t blow and the sun doesn’t shine

• LEAPS is “nature’s battery” using potential energy stored in water
  • Instantaneous back-up for renewables for increased grid reliability
  • None of the GHG emissions of carbon-based generation
  • None of the issues of lithium batteries
• Rare combination of water, topography and opportunities for grid connection north and south of the proposed substation
• California needs reliable, environmentally-friendly power to support the grid that benefits all southern California residents
• LEAPS can contribute to providing additional water supply to Lake Elsinore
• Local trades can fill 5 million person-hours of construction employment
• Originates at substation, runs underground up the mountain to Decker Canyon, then north to the SCE system and south to the SDGE system.
• Towers will be sited and colored to minimize aesthetic impact
• FERC issued a final environmental impact statement describing a substantially similar project it could license, but no license was issued.

• We are working to keep our environmental studies and consultation with relevant agencies fresh.

• **FERC process calls for further updates to environmental studies in discussion with other agencies**
  • Biological studies – flora and fauna
  • Water studies – quality and quantity
  • Cultural Resources
  • Visual simulations and traffic study
• October 2 Final License Application just the beginning
  • FERC review, clarification and approval is a long process
• January Deficiency Letter and 90-day response part of the process
• Discussions with agencies
• Presentations to elected officials and municipal administrations
• Resident outreach
  • LEAPS website
  • FERC website
  • Mailings to affected stakeholders
  • Filing at local libraries (i.e. Lake Elsinore Branch Library, Graham Avenue)
  • Public meetings
Conclusion

• We are committed to meeting with stakeholders.
• The Final License Application is a key source of information about LEAPS and is available for review.
• Going forward, we will be meeting with interested parties, Tribes, municipal and state governments and agencies to discuss the project.
• There is time for us to provide additional information and for stakeholders to provide input.