

San Vicente Pumped Storage Study - Supplemental Question and Answers
February 10, 2015

What are the components of a pumped storage facility?

Generally, the components of a pumped storage facility include a lower reservoir, upper reservoir, pump house with pump-turbines, inlet/outlet structure, penstock (pipeline that connects upper reservoir to the pump house located at the lower reservoir), electrical substation, and transmission lines.

What are three similar pumped storage projects recently completed and their forecasted performance versus actual performance?

Six hydroelectric projects (Big Creek Hydroelectric, Castaic Pumped-Storage Plant, Edward Hyatt Power Plant, Luis (William R. Gianelli) Power Plant, Helms Pumped Storage, and Iowa Hill Pumped Storage) were presented at the October 1, 2014 Hydropower Task Force meeting. All but Iowa Hill, currently under development, are operational. Due to the age of the existing projects and the public information available, we were not able to obtain the internal rates of return forecasted versus actual performance. Given that the existing projects are 30 to 100 years old and have been expanded upon numerous times is evidence of their sustainability. Staff's presentation on February 12 includes information on this issue.

What work is currently underway?

Work underway that has been approved by the Board includes evaluating the compatibility of the San Vicente Pumped Storage Study with Pure Water San Diego. We are phasing work and spending to align with such milestones. Staff's presentation on February 12 includes information on this issue.

What work is next?

The near-term work includes narrowing down the upper reservoir alternatives (site screening) and preparing the FERC preliminary application document. This funding has been appropriated by the Board but not yet approved for expenditure.

What is an owner's advisor?

An owner's advisor is a team with expertise specific to large scale hydro that provides professional services that would assist the Water Authority and City in determining next steps for the project. Funding for the owner's advisor is not yet in place. In June, we plan on returning to Board to request budget for procuring an owner's advisor. The Owner's Advisor will assist the Water Authority and City on analyzing various project delivery methods and recommending project delivery method for Board consideration that may or may not include entering into a power purchase agreement. To determine the project delivery method, the owner's advisor, in collaboration with the Water Authority and City, will refine the initial power market forecasts, capital and operating cost estimates, engineering configuration, financial analysis (including the value of storage), and risk/reward assessment.

What is the timing for entering into a power purchase agreement?

Entering into a PPA will come later, after the project delivery method is determined.

What is happening with the California Independent System Operator interconnect application request?

We are tracking storage policy at the state level with regulatory agencies and are looking at the optimum time to submit an interconnect application request to the California Independent System Operator. Right now, that timing looks to be April 2017. Staff would return to the Board to request funding for the application fee.

Will there be an impact to the City's Pure Water project as a result of SVPS?

The Water Authority and City are working together to ensure the SVPS project does not impact Pure Water San Diego project. Staff's presentation on February 12 includes information on this issue.

Why is a water agency(s) embarking on a power project?

Additional revenue from the project would assist the Water Authority and City in rate stabilization and achieving their respective missions, much like the current hydropower project at Lake Hodges.

Are we consulting with SDG&E?

Yes. We have discussed the project with SDG&E on a periodic basis.

Why are the internal rate of returns for the project low?

The IRR's forecasted fall in line with those of public agencies and are considered good.

What are we doing to address risk on this large project?

We addressed risk in the initial study and continue to work on identifying risks and mitigation measures that would address minimizing risk and maximizing rewards. The owner's advisor will perform additional risk analysis that will feed into the project delivery method recommendation.

Are we looking at the emerging/potential competing technologies?

Yes. This information was presented at the December 15, 2014 HPTF meeting. Staff's presentation on February 12 includes information on this issue.

Are there potential customers?

Preliminary information believes there are customers for power. The owner's advisor scope includes analyzing the market and outreaching to potential partners. Once the project delivery method is approved by the Board, the owner's advisor will assist the Water Authority and City with negotiating PPA and/or developer agreements.

Who are the potential off takers?

SDG&E, PG&E, SCE, etc. and other potential partners such as developers, as well.

When will we be talking with potential off-takers?

We have and are engaging with potential partners. Part of the owner's advisor scope includes identifying and outreaching to potential partners.