

DOCKETED

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Description:	SFPUC Hetch Hetchy Power third report to the CEC on its electric storage activities as required by AB2514.
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February 11, 2021

Rachel MacDonald
California Energy Commission
Via e-mail:
Rachel.MacDonald@energy.ca.gov and
efiling.energy.ca.gov

**RE: Hetch Hetchy Power Report to the California Energy Commission on
Storage Activities as Required by AB2514**

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Dear Ms. MacDonald,

Hetch Hetchy Power (Hetchy), the publicly-owned electric utility (POU) operated by the Power Enterprise of the San Francisco Public Utilities Commission (SFPUC) submits this update on its electric storage activities pursuant to the requirements of Assembly Bill (AB) 2514 (Skinner, Chapter 469, Statutes of 2010). While Hetchy is making modest investments in storage at customer sites, storage investment displacing Hetch Hetchy hydroelectric generation is not cost-effective. Hetchy is fully resourced with zero-greenhouse gas (GHG) energy, and the Hetch Hetchy hydroelectric system already provides many of the same benefits (such as the shifting of energy production between different time-periods, the self-provision of ancillary services, and system resource adequacy) that electric storage would provide. Hetchy continues to evaluate wholesale supply opportunities, and particularly with respect to resource adequacy capacity, expects to invest in storage when cost effective for our ratepayers.¹

London N. Breed
Mayor

Sophie Maxwell
President

Anson Moran
Vice President

Tim Paulson
Commissioner

Ed Harrington
Commissioner

Newsha Ajami
Commissioner

Michael Carlin
Acting
General Manager

¹ The SFPUC also serves as the community choice aggregator (CleanPowerSF) for San Francisco which is making extensive investments in energy storage for its resource adequacy and other benefits.

Hetch Hetchy Storage Report to the CEC

In response to AB2514, in 2014 the SFPUC evaluated the ability of energy storage to provide benefits to the Hetchy electric system. This evaluation concluded that storage was not a cost-effective option for Hetchy and that:

The SFPUC should not adopt an energy storage procurement target at this time; however, Power Enterprise staff should continue to evaluate energy storage as a procurement option and should treat it equally against other energy technologies and resources for purposes of fulfilling the SFPUC's on-going procurement needs...Staff should conduct additional research on the value of energy storage for SFPUC customer energy management, particularly the use of energy storage as an alternative to conventional back-up generation; and staff should investigate opportunities to develop an energy storage pilot project in San Francisco....²

The SFPUC Commission adopted this recommendation in Resolution 14-0147.

In its 2017 report to the CEC updating its storage activities, the SFPUC reconfirmed its 2014 conclusion, stating that, at the wholesale supply level:

Energy storage continues to not be a cost-effective option to meet the SFPUC's electric needs. The Hetch Hetchy system currently provides the same benefits that electric storage would provide.³

In 2017-2018 the SFPUC, as required by Senate Bill (SB)350, developed its Integrated Resource Plan (IRP) for Hetchy. An IRP is:

...A formal process undertaken by a utility to determine future resource requirements necessary for meeting forecasted annual peak and energy demand, with an adequate reserve to provide for system reliability and integrity. IRP's are also used to assess the ability of a utility to meet its environmental and policy goals.⁴

² SFPUC "Analysis and Recommendations Regarding Energy Storage Procurement Policy." (p. 1-2). This analysis evaluated the potential benefit of storage to: time-shift or arbitrage the use of energy, meet resource adequacy needs, provide ancillary services and spinning/non-spinning reserves, address transmission and distribution Infrastructure needs, provide congestion transmission relief, and offer customer energy management/power reliability services (p. 10-12).

³ SFPUC "Update on Power Enterprise's Electric Storage Activities as Required by Resolution 14-0147" submitted to the CEC on September 23, 2017.

⁴ "San Francisco Public Utilities Commission Hetch Hetchy Power Integrated Resource Plan Filing" (p. 7).

Hetch Hetchy Storage Report to the CEC

Hetchy's IRP was developed using Black & Veatch's production cost model, PLEXOS, which modeled Hetchy's electric system to determine the optimal mix of resources needed to meet demands under a variety of conditions.⁵ As required by SB350 and the CEC guidelines this analysis included an evaluation of storage resources.⁶

In determining and evaluating the optimal mix of resources needed to meet Hetchy's long-term resource needs through the year 2041, the IRP's modeling reconfirmed that storage was not a cost-effective option to meet Hetchy's energy resource needs.⁷

Hetchy's IRP was approved by the SFPUC Commission by Resolution 18-0187 on November 13, 2018. The CEC found that Hetchy's IRP was developed consistent with the requirements of SB350 on October 14, 2019.⁸

SFPUC Resolution 14-0147 directed staff to "continue to evaluate energy storage as a procurement option" and "investigate opportunities to develop an energy storage pilot project in San Francisco."

Since 2014 Hetchy has continued to evaluate storage opportunities in several areas: load shifting, demand management, and as a possible back-up source of power for essential public services. In 2020, Hetchy installed a 99 kW battery storage facility paired with on-site solar, at the San Francisco Police Academy and is in the initial design-phase of a second storage project (62 kW), also paired with solar, at a San Francisco Public Library administrative site.

Hetchy is evaluating further project opportunities for the use of local "solar plus storage" as part of its resiliency efforts.

⁵ Ibid. The "Validation of the methodology and execution of the model runs was accomplished through comparison of results with internal peer groups, manual spot checks, and discussions with SFPUC staff to verify the results" (p. 7).

⁶ Public Utilities Code Section 9621(b)(3) and the CEC Publicly Owned Utility Integrated Resource Plan Submission and Review Guidelines, Ch. 2, Section F.4., p. 9.

⁷ "San Francisco Public Utilities Commission Hetch Hetchy Power Integrated Resource Plan Filing" (p. 12).

⁸ "Resolution adopting the CEC determination finding the SFPUC's HHP IRP Filing consistent with requirements of SB 350" and accompanying "CEC Staff Review of San Francisco Public Utilities Commission's Integrated Resource Plan Filing" approved by the CEC on October 14, 2019.

Hetch Hetchy Storage Report to the CEC

Thank you for the opportunity to update the CEC on Hetch Hetchy Power's storage targets and programs. If you need any additional information please contact us at jhendry@sfgwater.org or at (415) 554-1526 [office] or during the current pandemic at (415) 867-9596.

Sincerely,

JAMES HENDRY
Regulatory and Legislative Compliance