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2023 IEPR

Form 4 Demand Forecast

Methods and Models

San Francisco Public Utilities Commission

Overview

The attached IEPR report for the San Francisco Public Utilities Commission (SFPUC), Hetch Hetchy Power Enterprise provides the long-term energy forecast including peak demand and customer count for the City and County of San Francisco, including the San Francisco International Airport, and surrounding counties, where applicable.

Form 4 Demand Forecast Methods and Models

The methodology used for load forecasting takes into consideration various load influencing factors including real estate development trends in our service territory, and major load changes among key customers including the San Francisco International Airport, and the San Francisco Municipal Transportation Agency (SFMTA). Airport loads are expected to grow 3.6 percent annually over the projection period due to load growth from new terminals and associated facilities, and other projects from the airport's master plan. The SFMTA growth is due to a bus electrification pilot and the central subway station project.

Retail non-municipal electric load growth is generally associated with large redevelopment projects and related customer growth in the southeastern portion of San Francisco, as well as some "infill" projects throughout the City, particularly affordable housing. Current redevelopment-area customers include Hunters Point, Treasure Island/Yerba Buena Island, Transbay Transit Center, Alice Griffith, Candlestick, Pier 70, Mission Rock, UCSF, and HOPE SF (Potrero and Sunnydale).

The forecasts include many adjustments to expected Hetch Hetchy Power volumetric sales forecasts to account for construction project delays. It is entirely possible volumes could exceed the base case loads, driven by favorable economic recovery and successful project execution.

Forecast Calibration Procedures

The annual load escalation factors were developed based on the above indicators and were calculated manually and reviewed and approved by our staff.

Unlike typical LSE's, the load served by Hetch Hetchy Power is mostly "municipal" loads (specifically, departments/services of the City and County of San Francisco, of which the San Francisco International Airport is the most significant from a load perspective) with a small component of retail loads. Hence,

for this report we have elected to submit the required information as a lump sum number for the entire enterprise.

Hetch Hetchy Power's customer base had remained mostly stable until the last few years when a fair number of residential customers were added. We expect this trend to continue. With the increase in the number of residential units being built in San Francisco, and served with Hetch Hetchy Power, a modest customer growth factor of 4 percent was used, year over year. The customer count presented shows active retail customers as of the last day of the calendar year (2021, and 2022).

Energy and Peak Loss Estimates

Electrical losses are estimated to be approximately 7.44 percent, and this includes transmission and distribution losses.

Historical Peak and Projected Peak Loads

The load forecasts for the extreme weather events were based on a recent report published by CEC, where peak load data was presented for the SFPUC service territory. The peak demand for the various scenarios were calculated based on the data contained in the above report, which predicts a 4 percent increase in peak demand for an event with a 20 percent probability, a 7 percent increase for an event with a 10 percent probability and an 8 percent increase for an event with a 5 percent probability.

The 2022 Power Rate Study was completed in Spring 2022, with Hetch Hetchy Power rates for Fiscal Year 2022-23 and Fiscal Year 2023-24 adopted based on cost of providing service to customers. Rates were adopted accounting for significant volatility in energy markets and supply chain disruptions caused by the pandemic and other environmental factors. The rates were presented, for reasons shared above, as an average for the entire customer base of the enterprise. In the years ahead, a breakdown of the rate categories can be expected, as we are working on developing a more granular methodology for presenting both energy and revenue.

Economic and Demographic Data

The current forecasting methodology does not account for economic and demographic factors, or peak demand modifiers, i.e. PV, storage, building electrification, etc. In future releases of the forecast, these factors are expected to be included in the analysis.