DOCKETED	
Docket Number:	23-IEPR-02
Project Title:	Electricity Resource Plans
TN #:	250890
Document Title:	CPA IEPR 2023 Demand Forecast Form 4
Description:	CPA IEPR 2023 Demand Forecast Form 4
Filer:	Jen-Ann Lee
Organization:	Braun Blaising and Wynne
Submitter Role:	Applicant Representative
Submission Date:	6/30/2023 3:36:57 PM
Docketed Date:	6/30/2023

Load Forecast Documentation

Data Sources

Clean Power Alliance ("CPA") receives AMI data for 2020-2022 for active customers. This dataset served as the primary source of data for CPA's energy and peak demand forecasts.

CPA also receives hourly historical loss factors aggregated by rate family.

Additional sources of data include the CEC's Integrated Energy Policy Report (IEPR) for growth assumptions and hourly weather data at four weather stations from AccuWeather. The weather stations are KBUR (Burbank), KLAX (Los Angeles), KCMA (Camarillo), and KFUL (Fullerton).

Methodology

CPA aggregated its customer interval data by rate literal, energy product (proportion of renewable energy), vintage, and CARE status. Aggregated energy by group was normalized based on customer counts. Each rate literal was forecasted independently and then aggregated to form a system level retail energy forecast. For the purposes of this report, residential is defined as customers with domestic rates, commercial is GS-1, GS-2, or GS-3 rates, industrial is TOU-8 rates, agricultural is TOU-PA-2 and TOU-PA-3 rates, and street lighting is street lights and traffic control rates.

The forecast model is a regression that controls for weather variables from 4 weather stations and calendar features. Growth is added exogenously based on the IEPR. Weather scenarios from 2013-2022 provided by AccuWeather are used to predict the forecast period. The resulting energy forecast is the average of the 10 weather scenarios.

Monthly peak forecasts are calculated based on historical load factors and the loss adjusted energy forecast. CPA identified the top 3 system level peaks for each month of the last 3 years of data available. We then found the coincident peaks of each rate family for each of the 3 years. The 3 peaks per month were then averaged for each rate family to form the denominator of the load factor calculation for that month and that group, with the average hourly load for that month and that group being the numerator. The load factor used for each month of the forecast period is the average of the three historical load factors for each month. September is forecasted to have the highest annual peak in each of the forecast periods. Losses are applied based on group distribution voltage, month, and hour of day.

Load Migration Assumptions

CPA assumes a steady-state opt-out rate for residential customers at 0.58% annually and a steady state opt-out rate for small commercial customers at 0.33% annually. Additionally, 41,000 residential customers and 33,000 small commercial customers will transition to either a Clean or default 100% Green retail product in October 2023. In October of 2024, 89,000 residential customers will transition to a default 100% Green product. For those customers undergoing a transition, we assume annualized opt-out rates similar to communities that have already transitioned to 100% Green energy products: 0.47% Paramount residential, 0.52% Paramount small commercial, 1.25% Alhambra residential, 0.84% Alhambra small commercial, and 0.92% Los Angeles County small commercial.

The communities of Hermosa Beach, Monrovia, and Santa Paula are assumed to transition to CPA in March 2024. We assumed opt-out rates based on opt-out rates experienced in enrollment Phases 2-4

and by examining the list of large customers. Assumed opt-out rates are: 4% domestic, 3% TOU-GS-1, 4% TOU-GS-2, 15% TOU-GS-3, 23% TOU-PA-2, 45% TOU-PA-3, 33% TOU-8, and 50% street lighting.

Incremental Demand Modifier Impacts

CPA does not currently add any incremental demand modifiers to the forecast, but plans to incorporate modifiers in future forecast versions.