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Marin Clean Energy (“MCE”) utilizes its load forecasting model/methodology for three primary purposes: (1) for portfolio management and procurement; (2) for the development of financial projections; and (3) for Resource Adequacy compliance with the California Public Utilities Commission (“CPUC”) and the California Independent System Operator (“CAISO”). Due to the nature of MCE’s business as a rapidly growing Community Choice Aggregator which has experienced a constantly changing customer base since its inception in 2010, the adopted load forecasting methodology focuses primarily on the projected customer counts within the MCE service territory and incorporates historical per capita usage data to derive the load forecast. At present, the MCE service territory includes all of Marin and Napa Counties and parts of Contra Costa and Solano Counties.

The load forecast is developed for each of the thirteen major customer class served by MCE. These classifications correspond with the customer categories for which statistical hourly class load profiles are published by Pacific Gas & Electric (“PG&E”). These include the following customer classes:

Load Profile Group	Classification
E-1	Residential
A-1	Small Commercial
A-6	Small Commercial
A-10	Medium Commercial
E-19-S	Large Commercial – Secondary Voltage
E-19-P	Large Commercial – Primary Voltage
E-19-T	Large Commercial – Transmission Voltage
E-20-S	Industrial – Secondary Voltage
E-20-P	Industrial – Primary Voltage
E-20-T	Industrial – Transmission Voltage
Ag	Agricultural and Pumping
TC	Traffic Control
SL	Street Lighting

MCE’s electricity demand forecast starts with a forecast of customers by end-use classification (residential, commercial, etc.). Monthly energy consumption estimates, derived from historical data, are applied to yield a monthly energy forecast by customer class. Hourly class-specific load profiles are then used to break down the monthly energy forecast into more granular time-of-use and peak demand values. Certain adjustments are incorporated in the base forecast to account for factors not reflected in the historical data. MCE also makes explicit adjustments to this forecast to account for the load impacts of its DER programs and emerging market factors such as growing electricity demand related to electric vehicle (“EV”) charging.

MCE’s load forecasting methodology utilizes four sources of data: (1) Pacific Gas & Electric (“PG&E”) “Item 16” monthly usage data for customers that have been served by MCE for less than twelve months; (2) MCE historical usage data for customers that have been served by MCE for at least twelve months; (3) and PG&E dynamic and static hourly load profiles as published on PG&E’s website; and (4) MCE’s forecast of incremental energy efficiency, distributed generation, and EV load. Each time MCE expands into a new territory, PG&E provides MCE with monthly historical usage data for every eligible customer (Item 16), which is adjusted for assumed customer opt-outs and utilized for MCE’s load forecast until

MCE has twelve months of historical information on the new group of customers. MCE aggregates individual customer monthly usage by customer class and then applies hourly load profiles to the monthly class values. MCE utilizes the PG&E class hourly load profiles to translate the monthly usage data into hourly values (PG&E class profiles are used due to the constant MCE customer base expansion and to consistently align with CAISO settlements requiring use of load profiles for specified customer classes) in order to develop peak demand forecasts for Resource Adequacy and Congestion Revenue Rights obligations. Furthermore, MCE utilizes a four-year rolling average for the PG&E hourly load profiles in order to normalize for weather or other short-term events and anomalies that impact the hourly load profiles.

For the portion of the customer base that has been served by MCE for less than twelve months, MCE applies an assumed opt-out rate to the eligible customer accounts (and associated electric loads) that are offered service. Throughout its history beginning in 2010, MCE has experienced a wide range of customer opt-outs associated with each of its major customer enrollment phases. Early phases resulted in opt out rates in the 20% to 25% range, while more recent expansions have realized opt-out rates of approximately 10%.

MCE utilizes historical consumption data to calibrate and adjust its load forecast. However, due to several service territory expansions that have significantly changed MCE's customer base, there is very limited year-over-year steady-state data to use in calibration of the load forecast. The calibration process is run monthly and compares the most recent monthly KWh and peak KW usage data to the forecast values. The forecast is tracked relative to both the initial usage estimates (T+3) reported to the CAISO as well as the final reported usage (T+55). To the extent that the monthly forecast error exceeds a 5% threshold, MCE evaluates the potential causes of the variance and, if such error is deemed likely to persist, adjusts the forecast going forward.

MCE assumes a baseline long-term annual growth rate of 0.5%, and adjusts for the incremental impacts of program expansions, energy efficiency, distributed generation, and electric vehicle demand, factors that are not reflected in historical trends. MCE's load forecast for 2020 and beyond includes the effects of its planned program expansion in April 2020, which will entail offering service to customers residing in Unincorporated Solano County. A 10% opt-out rate has been assumed for this expansion.

MCE does not have a long-term history for its current customer base with which to compare the reasonableness of the projected long-term growth rate. However, MCE believes that it is generally consistent with the net growth rate in the PG&E service area as a whole.