Southern California Edison
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DATA REQUEST SET E D - S C E - 2 1

To: Energy Division
Prepared by: Hongyan Sheng
Job Title: Principal Manager, Modeling, Forecasting & Economic Analysis
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Question 21.1b: For battery storage specifically, what are the adoption assumptions, and are residential and commercial battery storage adoption both modeled? If so, how are the assumptions for battery dispatch/operations modeled and aggregated to the circuit level to estimate net load impact?

Response to Question 21.1b:
Behind-the-meter (BTM) storage systems were not considered prior to the 2019-2028 forecast because the previous directed Integrated Energy Policy Report (IEPR) forecast (i.e., 2016 IEPR Update) did not reflect a BTM battery storage adoption forecast. However, for SCE's most recent 2019-2028 forecast, SCE did develop disaggregation methodologies separately for residential and commercial storage forecasts based on 2017 IEPR's BTM storage forecasts. Below is a high-level description of SCE's BTM storage disaggregation methodologies.

Methodology to disaggregate **residential** IEPR storage forecast to SCE circuits:

> As SCE has observed so far, the majority of ES installations are paired with PV. SCE employed the forecasted circuit-level PV shares (from its disaggregated solar PV forecast) as the proxy for residential ES and applied the same shares from PV disaggregation to ES forecast based on CEC's 2017 IEPR ES forecast MW.

Methodology to disaggregate **non-residential** IEPR ES forecast to SCE circuits:

> SCE considers most of the non-residential customers are adopting storage systems to reduce their peak demand charges. Based on that, SCE generates a peak-to-energy ratio for each non-residential customer as a strong indicator for candidate ES adopters. The higher the peak-to-energy ratios, the more likely the customers are to adopt the energy storage systems. SCE chooses the customers who have relatively higher peak to energy ratios, the top 25% among all non-residential customers as the maximum potential adopters. SCE then calculates the number of potential adopters at each circuit and assign the share ratio (based on the number of potential adopters for each circuit divided by the total number of potential adopters) to each circuit. SCE then applied the circuit ratio share to the IEPR system-level storage forecast to establish the disaggregated storage forecast at each circuit.