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Weather Sensitive Demand Response

Electric Load Analysis/Customer Programs

Resource Adequacy Workshop R.14-10-010

San Francisco, CA

Feb 7th, 2017

Summary of SDG&E Proposal



Demand response programs that operate by curtailing air-conditioning use provide load impacts that vary predictably with weather.

These resources cannot provide the same load reduction in all weather conditions that may occur within a month.

The load impact protocols are well suited to determine the Net Qualifying Capacity (NQC) for weather sensitive DR programs because they are based on historical performance and take into account forecasted weather conditions.

A working group should be created to discuss how to appropriately bid variable DR resources into the market.

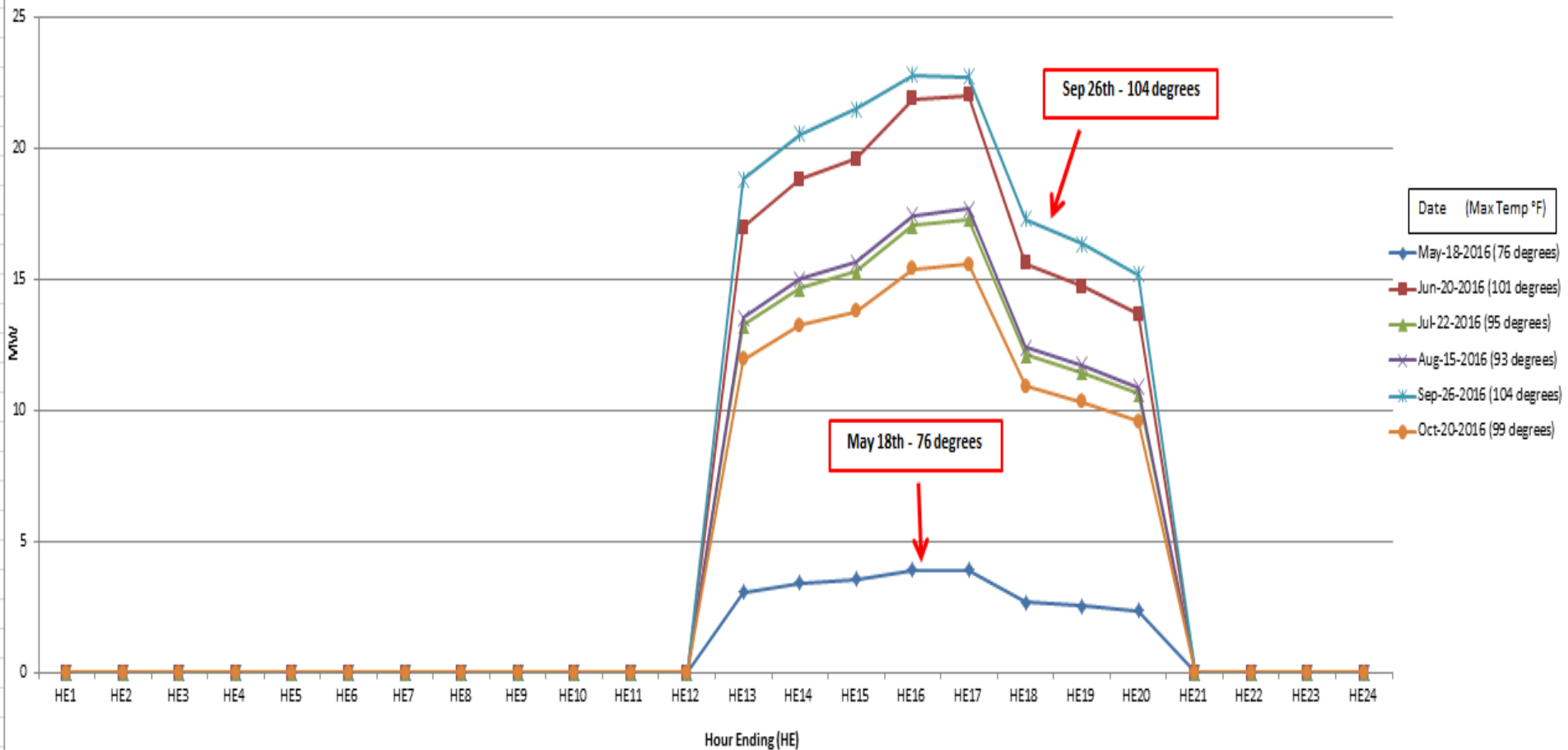
Potentially demand response providers could bid variable DR into the CAISO market based on a weather forecast.

SDG&E Summer Saver forecast

Monthly peak days in 2016



AC_Summer Saver (includes residential plus commercial) hourly load impact forecast
SDGE peak days in 2016

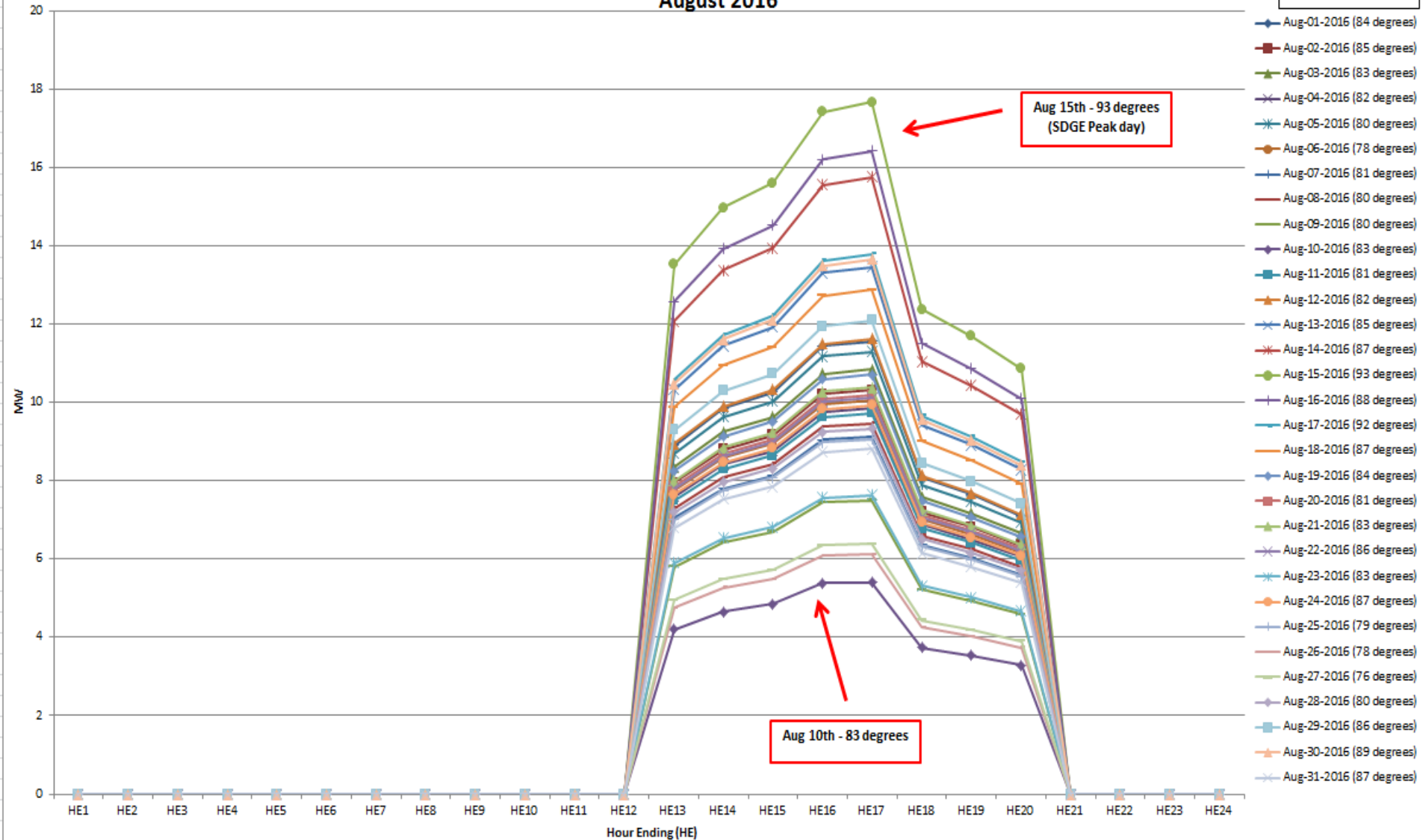


SDG&E Summer Saver forecast

August 2016



AC_Summer Saver (includes residential plus commercial) hourly load impact forecast
August 2016



Load Impact Protocols



- Two main sections: Ex-Post historical and Ex-Ante the forecast.
- If a third party DR providers choose to use the load impact protocols only the protocols relevant to the calculation of the NQC for RA would need to be used.
- Ex-Post protocols results require hourly load impacts to be calculated for the resource which is already done for settlement purposes.
- Ex-Ante protocols require an hourly forecast to be created for based on the historical results that takes into account monthly peak weather conditions.

Daily Forecasts



- Daily load impact forecasts similar to the forecasting methods used to calculate the NQC could potentially be used for bidding variable DR resources into the CAISO market.
- There are many issues that need to be considered therefore SDG&E proposes that working group be created to address the subject.