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APPENDIX A

NOTICE OF AVAILABILITY ON MID-TERM RELIABILITY ANALYSIS

CALIFORNIA ENERGY COMMISSION
715 P Street
Sacramento, California 95814

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CEC-70 (Revised 12/2020)

IN THE MATTER OF: *Mid Term Reliability Analysis*	Docket No. 21-ESR-01 NOTICE OF AVAILABILITY RE: Mid-Term Reliability Analysis

Notice of Availability for Mid-Term Reliability Analysis Supporting Data

The Mid-Term Reliability Analysis is a loss of load expectation study that simulates resource availability 10,400 times to determine the probability that the California ISO will experience an unserved energy event in summer. Supporting data for the Mid-Term Reliability Analysis[1] is available on the 21-ESR-01 docket, at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-ESR-01. The data is for the Order, R. ELCC scenario, which adds resources as scheduled in D. 21-06-035[2] under the incremental Effective Load Carrying Capacities published in August 2021[3].

Background

The Mid-Term Reliability Analysis was developed in summer 2021 to assess the procurement ordered in the California Public Utility Commission (CPUC) decision D. 21-06-035, which ordered 11,500 megawatts (MW) of preferred resources to come online between 2022 and 2026. The analysis generally found that the resources ordered were more than sufficient to meet a one in ten year loss of load standard for the years 2023-2026 under a variety of assumptions about resource types, timelines, and energy limitations.

Appendix A of the Mid-Term Reliability Analysis contains detailed information about the inputs and assumptions used for the analysis, and specifically for this scenario. Below is a list of inputs and assumptions that directly impact the results and should be considered when using the hourly results:

1 https://www.energy.ca.gov/publications/2021/midterm-reliability-analysis

2 https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=389603637

3 https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/20211022_irp_e3_astrape_incremental_elcc_study_updated_compared_to_20210831.pdf

1) The demand distributions are based on the 2020 California Energy Demand Forecast, using historical information to construct 140 demand profiles capturing 20 weather years and seven different starting days of the week for each weather year (Page A-5, Mid-Term Reliability Analysis).
2) Demand response was included in the model with a maximum dispatch of four hours a day and no more than 80 hours a year (page A-8, Mid-Term Reliability Analysis).
    a. Baseline demand response capacity is 2,195 MW for 2023 (page A-16, Mid-Term Reliability Analysis).
    b. Additional demand response for the "Order, R. ELCC" scenario totals 114 MW for 2023 (page A-26, Mid-Term Reliability Analysis).

Document Description
The supporting data, found at https://efiling.energy.ca.gov/GetDocument.aspx?tn=243084&DocumentContentId=76775, contains the raw results of the unserved energy in each hour of the simulation for the "Order, R. ELCC" scenario ran for the Mid-Term Reliability Analysis.

The "Hourly Information" sheet contains the sample number, date, and amount in MW of each hour unserved energy experienced in the 10,400 samples run for the study. Combinations of sample and date not listed had no unserved energy. Hours of unserved energy occurring in the same sample on the same date are also grouped into unserved energy events. The date, duration, and maximum amount of unserved energy are tabulated on the "Events Information" sheet. Statistics on the mean number of unserved energy hours/events and the amount of perfect capacity necessary to achieve a one in ten year loss of load standard are located on the "Summary" sheet.

Due to the way in which demand profiles were created, which included shifting the day of the week for January 1 such that each weather year is produced with seven different calendars, this data does not accurately estimate the probability that unserved energy will occur on a particular day of the week.

Public Advisor and Other CEC Contacts
The CEC's Public Advisor provides the public with assistance in participating in CEC proceedings. For information on participation or to request interpreting services, reasonable accommodations or other accommodations reach out via email at publicadvisor@energy.ca.gov, or by phone at (916) 957-7910. Requests for interpreting services, reasonable accommodations, and other modifications should be made as soon as possible but at least five days in advance. The CEC will work diligently to accommodate all requests.

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END OF APPENDIX