

Memorandum

To: ISO Board of Governors
From: Neil Millar, Vice President of Infrastructure and Operations Planning
Date: August 24, 2022
Re: **Decision on conditional approval to extend existing reliability must-run contracts for 2023**

This memorandum requires ISO Board of Governors action.

EXECUTIVE SUMMARY

Management requests that the ISO Board of Governors grant Management the authority to extend, through calendar year 2023, the reliability must-run contracts for the CSU Channel Islands Site Authority (CSU CISA), Midway Sunset Cogeneration Company (MSCC), Dynegy Oakland, LLC (DO) and Starwood Energy Group (SEG) generating units listed in *Attachment 1*.

Total capacity and the number of resources under reliability must-run contracts with the ISO has been significantly reduced since the implementation of the state's resource adequacy program and the addition of new grid facilities. However, reliability must-run contracts remain an important backstop instrument to ensure reliability when other alternatives are not viable.

Management exercises this authority to extend a reliability must-run contract or designate a resource as needed for reliability must-run service under any of the following conditions:

- A load serving entity does not purchase the capacity needed to satisfy local reliability criteria in the *ISO 2023 Local Capacity Technical Analysis* through a resource adequacy contract;
- The load serving entity purchases the needed capacity under a resource adequacy contract, but Management needs a reliability must-run contract to:
 1. Obtain from the unit a reliability service, such as voltage support, black start or dual fuel capability; or
 2. Mitigate local market power; or
 3. Protect availability of a given resource that could be jeopardized or reduced without a reliability must-run contract.

- A resource is otherwise needed to meet local or system reliability service including voltage support, black start or dual fuel capability and is not under a resource adequacy contract.

Where a reliability must-run contract augments a resource adequacy contract, Management will ensure that any fixed-cost recovery will compensate the unit owner only for the incremental costs of providing reliability must-run services. This will guarantee the owner is not paid twice for its capacity.

Management proposes the following motion:

Moved, that the ISO Board of Governors authorizes Management to extend reliability must-run contracts for the CSU Channel Islands Site Authority, Midway Sunset Cogeneration Company (MSCC), Dynegy Oakland, LLC and Starwood Energy Group generating units listed on Attachment 1 of the memorandum dated August 24, 2022, and consistent with the criteria described therein.

DISCUSSION AND ANALYSIS

The Dynegy Oakland, LLC resources are required to meet the 2023 local capacity requirement in the Oakland sub-area of the Bay Area local area. The sub-area local capacity requirement was determined to be 35 MW; the drop in local reliability need from 101 MW in 2022 to 35 MW in 2023 is caused by a few new transmission upgrades in the area and the remaining need is supposed to be met by direct participation in the ISO market of a new 55 MW battery energy storage unit (the repowering of the old Oakland Unit #2). At this time, the new transmission projects and the new Oakland Unit #2 battery are not in-service. The ISO expects the current Oakland Units #1 and #3 to be needed in 2023 during transmission clearances required for installation of the new transmission upgrades. The units will also provide a reliability mitigation in case either the new transmission projects or the Oakland Unit #2 battery are delayed due to unforeseen circumstances. The local need for the remaining Oakland resources is expected to come to an end at the end of 2023, after the Oakland Clean Energy Initiative¹ is in service.

Greenleaf II Cogen continues to be required to meet the 2023 local capacity requirement in the Drum-Rio Oso sub-area of the Sierra local area. The sub-area local capacity requirement was determined to be 750 MW, and there are only 558 MW (553 MW at peak) of total available resources in the sub-area including the Greenleaf II

¹ The Oakland Clean Energy Initiative is a combination of substation upgrades, in-front-of-the-meter energy storage, and preferred resources that together will eliminate the need for the local capacity requirement for the Oakland Generation Station. The transmission components were approved in March, 2018 as part of the 2017-2018 ISO Transmission Plan, available at: http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf. The other components are being pursued by PG&E through CPUC procurement processes.

Cogen unit. The Rio Oso 230/115 kV Transformers project, which will mitigate the reliability need, is scheduled for March 2024 operation.

In order to maintain reliability, the ISO must comply with several North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) standards in real-time. BAL-002-WECC-2a requires the ISO to carry approximately 6 percent of expected load as contingency reserves and an additional 1 percent as regulation reserves. The contingency reserves required under BAL-002-WECC-2a cannot be used for other types of operational needs other than contingencies unless the ISO is in an energy emergency alert. In addition, the ISO also requires unloaded capacity to meet operational needs like frequency response and regulation pursuant to BAL-003-2 and BAL-001-2. In order to assess the ISO's ability to maintain those reserve margins necessary for reliable service in real time operation, the ISO considered the capacity needs taking into account the overall outage rate of the existing fleet, which is currently about 7.5 percent. The ISO also based its assessment on meeting a 1-in-5 load forecast level. The combined effect of these requirements established a threshold need for an 18.5 percent margin above a 1-in-2 load forecast level.

Consistent with past studies² of system requirements conducted to ascertain the need for system reliability must run designations, the ISO has assessed the anticipated resources and requirements at the net peak hour during the month of September for both 2023 and 2024.

	2023 with OTC resources	2024 with no OTC resources
CED 2021 1-in-2 forecast at September, hour ending 8 pm	46727 MW	47325 MW
Total resources (excluding potential System RMR) based on average Intertie RA showings	52766 MW	58730 MW
Forecast additions included in above total (September NQC)	2000 MW	6000 MW
Planning Reserve Margins at September 8 pm (solar at zero)		
With full procurement of mid-term reliability authorizations	20.8%	24.1%
With half of annual procurement	18.7%	17.6%
With no annual procurement	16.5%	11.2%

² <http://www.caiso.com/Documents/Decision-on-Kingsbury-Cogen-Reliability-Must-Run-Designation-Memo-Mar-2021.pdf> and <http://www.caiso.com/Documents/Decision-Conditional-Approval-Extend-RMR-Contracts-Memo-Sep-2021.pdf>

The critical concern at this time is the dependence on a significant volume of new construction required in 2026 – over 6000 MW of additional net qualifying capacity – to meet the mid-term reliability authorization amounts set out by the CPUC in Decision 21-06-035³. Further, this development is coming on the heels of two years of already aggressive development to meet 2022 and 2023 requirements. If half of the 2024 procurement is delayed, the ISO would fall below the 18.5% planning reserve margin requirement as set out above. Management considers this to pose a risk to reliability at this time.

Under long-established provisions of the existing *pro forma* reliability must-run contract, by October 1 of any year, the ISO must notify a reliability must-run unit owner that the ISO is exercising its right to extend the existing contract from January 1 through December 31 of the following year. If the contract is not extended by this date, the reliability must-run unit may not be designated again for one full year unless:

- The unit is needed due to the extended outage of another unit or a transmission element not known at the time of the contract expiration; or
- The unit is selected through a competitive process in which the unit owner participated.

The ISO must therefore consider not only the 2023 requirements in its decision to extend the RMR designations for 2023, but the likelihood of requirements in 2024. Accordingly, these requirements demonstrate that Channel Islands Power and the Midway Sunset Cogen units are required for the ISO to meet the 2023 and 2024 system-wide reliability needs. The ISO has already been notified that the Kingsburg Cogen facility has entered into a multi-year resource adequacy capacity contract, and therefore would not be receiving an extension of its RMR contract. Management will also engage in discussions with the Governor's Office and CDWR about the feasibility of the Midway Sunset and Channel Island units being considered for addition to the state strategic reserves in lieu of extending the system RMR designations for those units.

Accordingly, Management requests authority to extend the CSU Channel Islands Site Authority (CSU CISA), Midway Sunset Cogeneration Company (MSCC), Dynegy Oakland, LLC and Starwood Energy Group reliability must-run contracts (up to 434.7 MW of capacity) listed in *Attachment 1*. If additional resources are found to be needed for reliability must-run service, Management will seek further Board approval to enter into additional reliability must-run contracts to ensure reliability requirements are met.

The California Public Utilities Commission requires its jurisdictional load serving entities to provide a preliminary resource adequacy showing to the ISO by September 15, 2022, if they entered into a contract with any of the existing reliability must-run units. This

³ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M389/K155/389155856.PDF>

information will allow the ISO to potentially avoid an unnecessary extension of a reliability must-run contract. These showings are preliminary because the California Public Utilities Commission jurisdictional load serving entities have until October 31 to submit their final year-ahead resource adequacy showings. These final showings must demonstrate compliance with all California Public Utilities Commission-imposed year-ahead procurement targets (100% local capacity area resources and 90% of the load serving entities' demand forecast and reserve margin for the months of May through September).

Consistent with longstanding practice due to the timing required for annual extensions of the reliability must-run contracts, Management requests Board authorization to extend the term of the contracts for an additional year and delegate to Management the discretion to do so based on review of the preliminary resource adequacy showings and other changes in circumstances. As noted above, Management will also engage in discussions with the Governor's Office and CDWR about the feasibility of the Midway Sunset and Channel Island units being considered for addition to the state strategic reserves in lieu of extending the system RMR designations for those units. Management will update the Board on the results of reliability must-run contract extensions at the October Board meeting.

ATTACHMENT 1: 2023 Reliability Must-Run Contract Status

<i>RMR Units Extension Status</i>			
<i>Any Extended RMR Contracts will be effective January 1, 2023, thru December 31, 2023</i>			
<i>Any Released RMR Contracts will be terminated effective Midnight on December 31, 2022</i>			
<i>Owner</i>	<i>Unit</i>	<i>MW</i>	<i>Status</i>
Starwood Energy Group	Greenleaf II Cogen	49.2	TBD
CSU Channel Islands Site Authority	Channel Islands Power	27.5	TBD
Midway Sunset Cogeneration Company	Midway Sunset Cogen, Units	248.0	TBD
KES Kingsburg, LP	Kingsburg Cogen	34.5	Released
Dynergy Oakland, LLC	Oakland, Unit 1	55.0	TBD
	Oakland, Unit 3	55.0	TBD