

Energy Market Must Offer Requirements for Generation Capacity Resources

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Action Required

Action Required	Deadline	Who May Be Affected
Ensure energy market bids are submitted in accordance with the energy must offer rules	ASAP	Market Sellers owning or controlling the output of a Generation Capacity Resource
	10	



Purpose of Education

- Ensure that Market Sellers understand energy market must offer requirements for Generation Capacity Resources
- Review how to stay compliant with the must offer requirement
- Review acceptable usage of Maximum Emergency



Energy Must Offer for Resources Committed as Capacity

Generation Capacity Resources

For resources not rendered on generator planned, maintenance, or forced outage

Shall submit offers for available capacity, including any portion that is self-scheduled

Intermittent & Capacity Storage Resources

Shall satisfy the must offer requirement by either selfscheduling or offering the unit as a dispatchable resource

Hourly day-ahead selfscheduled values may vary hour to hour from the capacity commitment



Interpreting the Operating Agreement

- Generation Capacity Resources' energy offers shall be based on the ICAP equivalent of the Market Seller's cleared UCAP capacity commitment
- Must offer requirement applies to both the Day-Ahead(DA) and Real-Time(RT) Markets
- Example of DA/RT bidding requirement:
 - Unit A has an ICAP of 100 MW
 - Unit A's UCAP is 90 MW
 - If Unit A is committed at its UCAP of 90 MW in the capacity market, it will be required to offer its ICAP of 100 MW in the energy market



- Generation Capacity Resource must offer its ICAP economically
 - In Markets Gateway: Eco Max >= ICAP
- If resource cannot offer its ICAP economically, then it must do one of the following to be in compliance with Schedule 1 of the OA:
 - Submit a planned, maintenance, or forced outage into eDART for MW that are unavailable*; or
 - Designate unavailable MW as Maximum Emergency (must meet criteria in OA, Schedule 1.10.1A(d))
 - Market Seller must update the Operational Restrictions field in Markets Gateway with reason for designating MW as max emergency

*Forced outages must also be reported to GADS on a monthly basis



Maximum Emergency Criteria

Operating Agreement, Schedule 1.10.1A(d)

Offers may only be designated as Maximum Emergency offers to the extent that the Generation Capacity Resource falls into at least one of the following categories:

- i) Environmental limits. If the resource has a limit on its run hours imposed by a federal, state, or other governmental agency that will significantly limit its availability, on either a temporary or long-term basis. This includes a resource that is limited to operating only during declared PJM capacity emergencies by a governmental authority.
- ii) Fuel limits. If physical events beyond the control of the resource owner result in the temporary interruption of fuel supply and there is limited on-site fuel storage. A fuel supplier's exercise of a contractual right to interrupt supply or delivery under an interruptible service agreement shall not qualify as an event beyond the control of the resource owner.
- iii) **Temporary emergency conditions at the unit.** If temporary emergency physical conditions at the resource significantly limit its availability.
- iv) **Temporary megawatt additions.** If a resource can provide additional megawatts on a temporary basis by oil topping, boiler over-pressure, or similar techniques, and such megawatts are not ordinarily otherwise available.



Maximum Emergency Criteria

- Resources that are limited due to environmental or fuel issues should follow guidance in Manual 13, Section 6.4 for properly reporting such limitations
- In order to meet the criteria for temporary MW additions, a generation resource must demonstrate that MW have a time limitation or restriction.



- Acceptable documentation for justifying the use of temporary MW additions include, but are not limited to:
 - OEM documentation showing a time limitation on the MW
 - Air permit showing time restriction
- Scenarios that do not meet criteria for temporary MW additions:
 - Increased wear and tear or maintenance costs
 - Power augmentation such as duct firing, steam/water injection, evaporative cooling, inlet chilling, wet compression, or peak firing unless OEM specified limitations
 - Inability to provide temporary MWs on demand





- Market Sellers of Generation Capacity Resources should ensure that energy market bids are in accordance with must offer rules
- PS/IC approved for Max Emergency Changes for Resource Limitation Reporting
 - Education on Maximum Emergency will be presented at the April OC



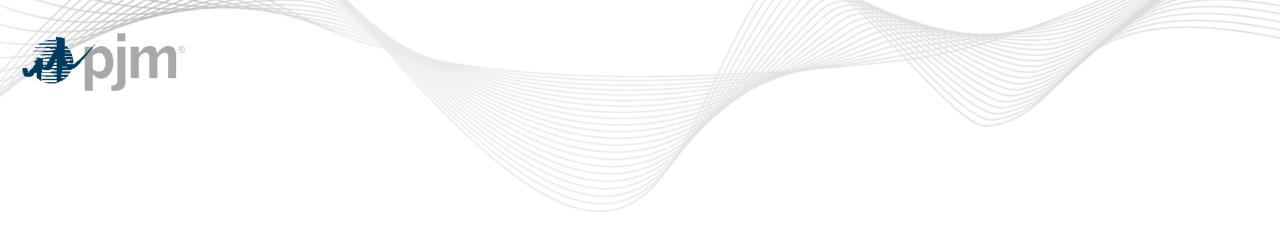
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Appendix

Resources



- Energy Must Offer
 - Operating Agreement, Schedule 1 Section 1.10.1A(d)
 - Manual 11, Section 2.3.3
- Maximum Emergency
 - Operating Agreement, Schedule 1 Section 1.10.1A(d)
 - Manual 13, Section 6.4



Common Acronyms

- **ICAP:** Installed Capacity. Also known as the maximum facility output.
- UCAP: Unforced Capacity. Installed capacity rated at summer conditions that is not on average experiencing a forced outage or forced derating.