



Co-Located Load Guidance

Tim Horgner

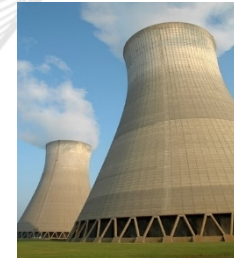
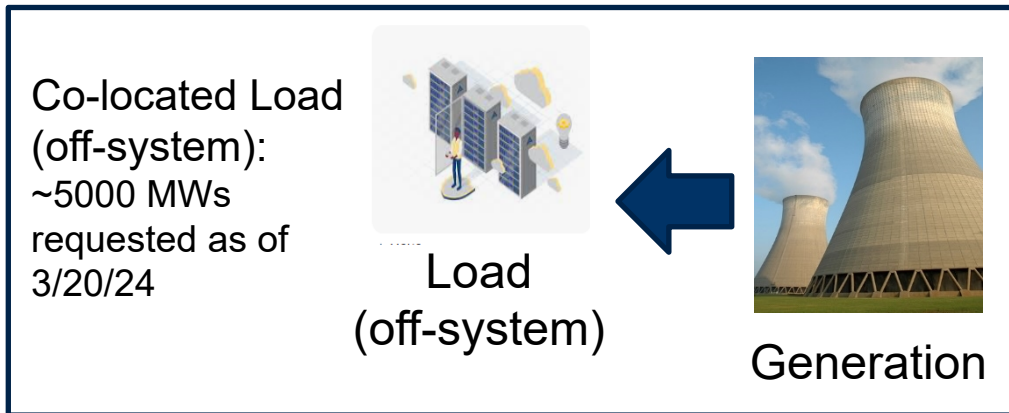
Senior Director, Forward Market Operations &
Performance Compliance

Market Implementation Committee

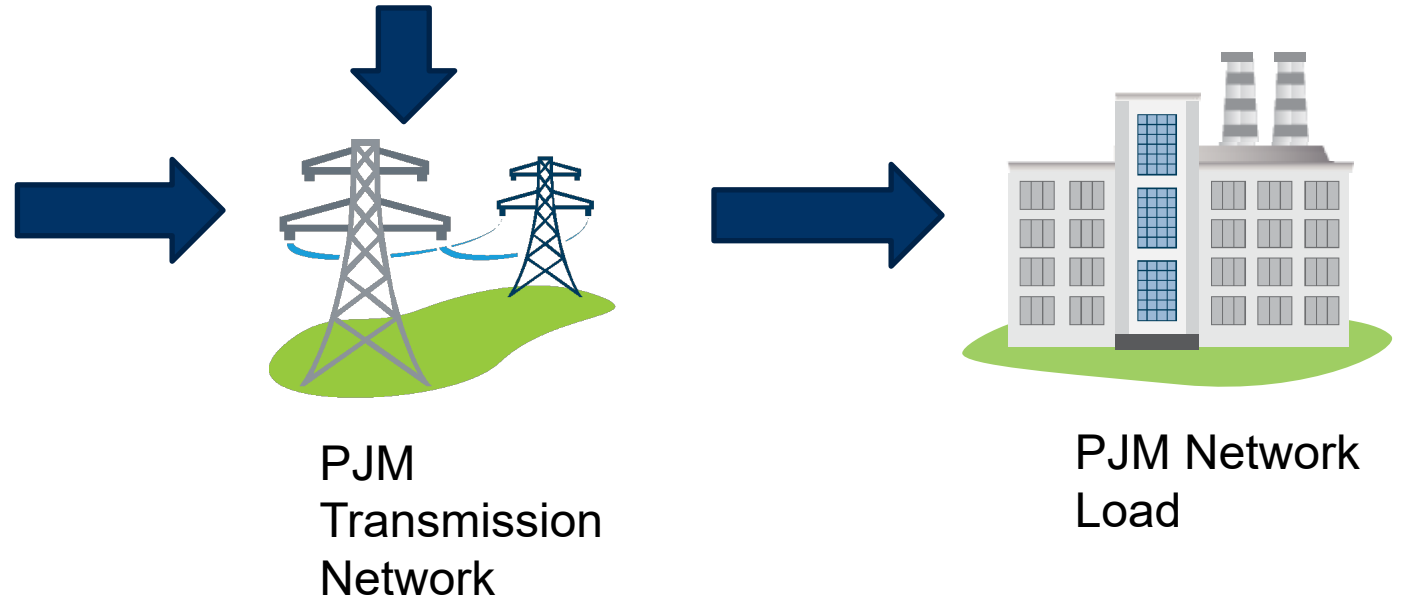
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- Co-located load configurations continue to significantly increase (~5000 MWs requested).
- PJM posted a guidance document that clarifies existing rules as applied to co-located load configurations.
<https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/pjm-guidance-on-co-located-load.ashx>
- PJM recommends that all co-located load be served from the PJM Transmission System as PJM Network Load with applicable firm transmission service.
- PJM must be notified of any planned modifications to Customer Generation facility and a Necessary Studies process will evaluate the potential reliability impacts.
- Co-located load that is not PJM Network Load with applicable firm transmission service must have System Protection Facilities in place to prevent the unexpected injection or withdrawal of power at the POI for the co-located Customer Facility.

Co-located load configuration that is not PJM Network load



Generation





Interconnection Requirements: Co-located load (Guidance document provides more details)

- Co-located load configurations must be in accordance with the applicable PJM, federal, state and local requirements.
- PJM must be notified of any planned modifications to Customer Facility and a Necessary Studies process will evaluate the potential reliability impacts.
 - Failure to provide advance notification is a breach of the applicable PJM service agreement.
- Any applicable PJM service agreement (e.g., ISA, GIA, WMPA, CSA) must be executed and/or amended to reflect all changes resulting from the incorporation of a co-located load configuration.
 - Service to the co-located load pursuant to the co-located load configuration may not commence until the necessary PJM service agreement(s) has been fully executed by the parties, filed with and accepted by the Commission, and all required system reinforcements and metering are in place.



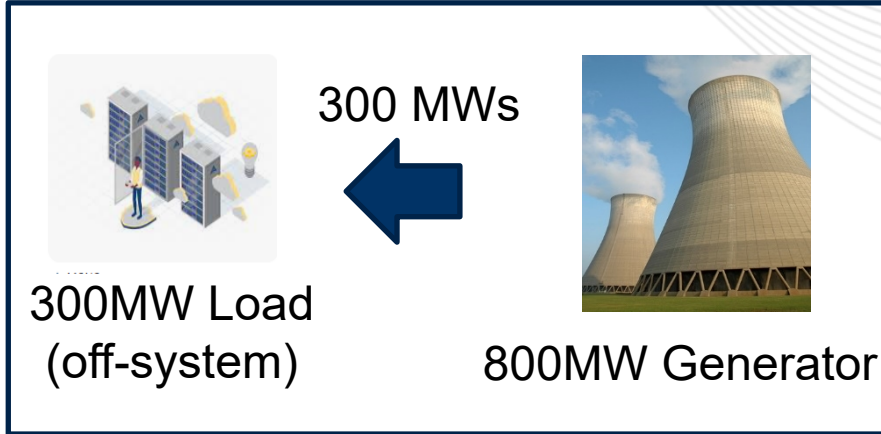
Additional Requirements: Co-located load (Guidance document provides more details)

	Co-located Load PJM Network Load	Co-located Load Not PJM Network Load (off-system)
Generation Maximum Facility Output (MFO)	No change required	No change required
Generation Capacity Injection Rights (CIRs)	No change required except if designated as Behind the Meter Generation (BTMG) must be reduced by portion designated as BTMG	<ul style="list-style-type: none"> Reduced by quantity of co-located load Back-up generation may retain CIRs if meet Capacity and Operational requirements
System Protection	N/A: Load is already part of PJM Network	System Protection Facilities in place to prevent the unexpected injection or withdrawal of power
Settlements	<ul style="list-style-type: none"> The MW consumption of the co-located load and the MW output of the co-located generation Customer Facility (net of Station Power load) must be separately metered. If the co-located generation Customer Facility elects to be designated as Behind the Meter Generation (BTMG), it can net the co-located load directly against the output of the generation facility 	The MW consumption of the co-located load and the MW output of the co-located generation Customer Facility (net of Station Power load) are netted and reported as a single value to Power Meter to be used for PJM settlement purposes.
Metering	Real-time metering (MW & MVAR) and telemetry for the co-located load is required.	Real-time metering (MW & MVAR) and telemetry for the co-located load is required.
Demand Response	Eligible	Not Eligible

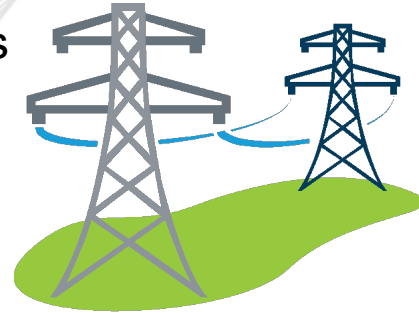
- PJM Generation Capacity Resources are dedicated to PJM and must be available when needed.
 - Capacity and Energy Must Offer requirements
- Back-up generation serving co-located load
 - Co-located load must first be reduced to zero before the back-up Generation Capacity Resource or Energy Resource can serve the co-located load.
 - Coordination with PJM Operations is required before the back-up Generation Capacity Resource or Energy Resource can serve the co-located load. If authorized by PJM Operations, an outage must be submitted in eDART with proper cause code for the period of service of the co-located Customer Facility. If not authorized by PJM, it is not acceptable to claim an outage.
 - PJM Operations may deny for reasons including but not limited to capacity related emergencies.

Example 1a – Unexpected Load Concerns

Before Co-located Load (off-system)

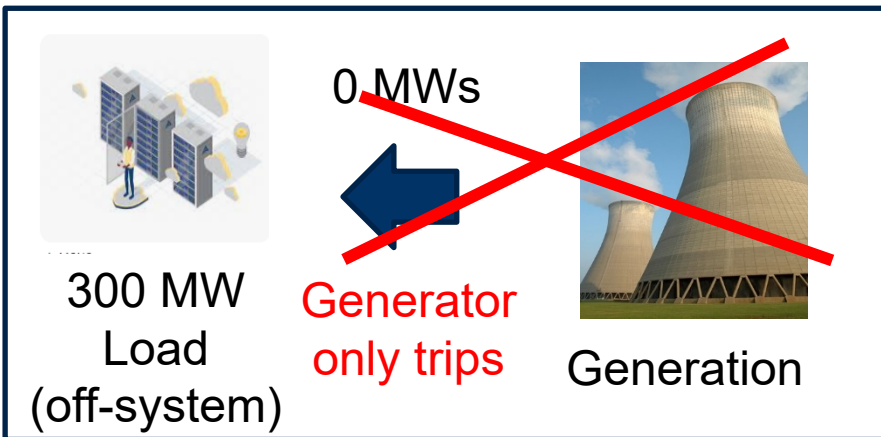


500 MWs



PJM
Transmission
Network

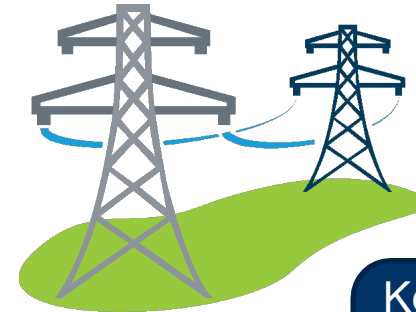
After Co-located Load (**now on-system**)



300 MWs



Unexpected
load on
system!

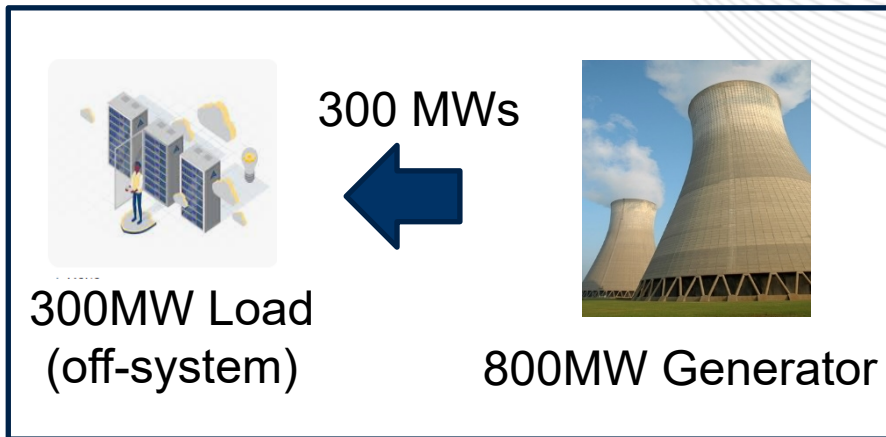


PJM
Transmission
Network

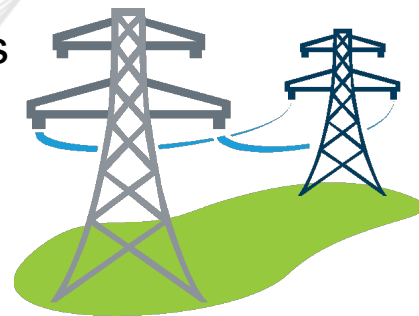
Key Point: System protection is required to avoid unexpected and unapproved load on the system

Example 1b – Concerns Resolved via Load Trip

Before Co-located Load (off-system)

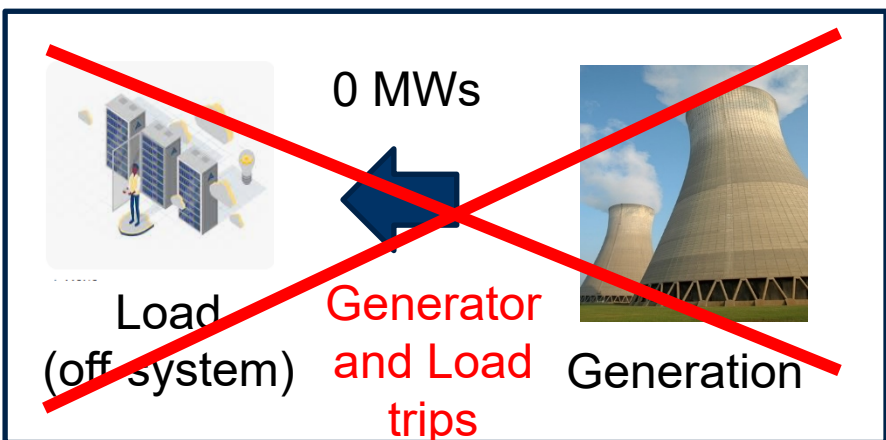


500 MWs



PJM
Transmission
Network

After Co-located Load (off-system)



0 MWs



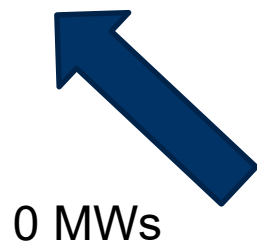
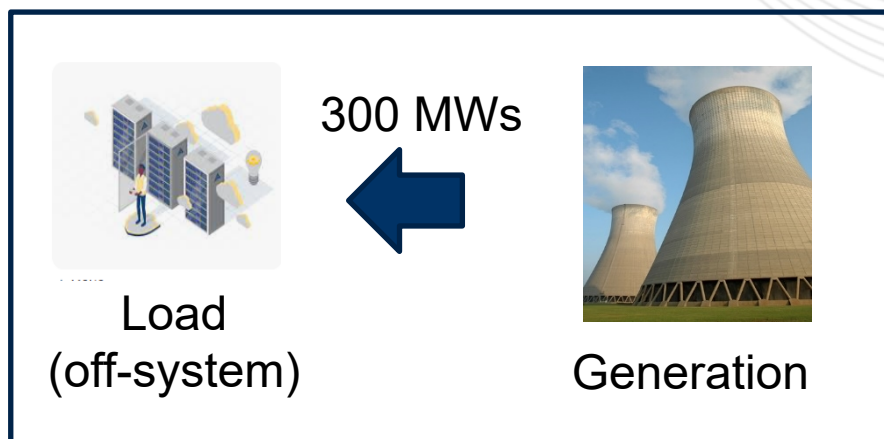
No
unexpected
load on
system



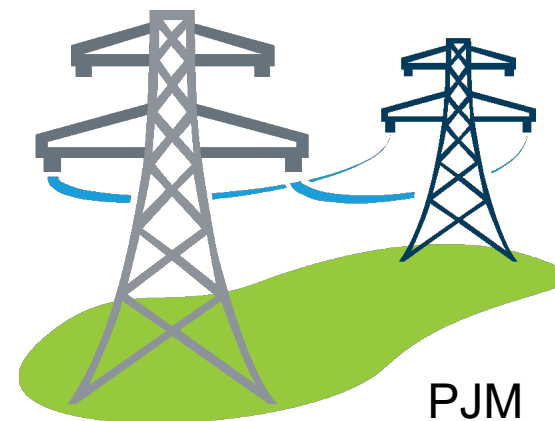
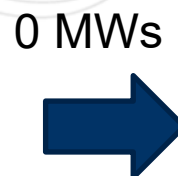
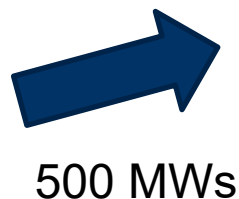
PJM
Transmission
Network

Key Point: System protection is required to avoid unexpected and unapproved load on the system

Co-located Load (off-system)



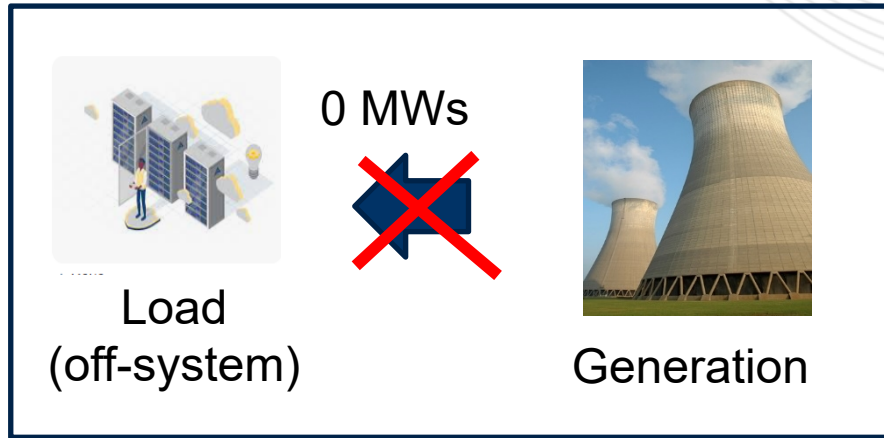
Back-up
Generation



PJM
Transmission
Network

Before
*(Back-up
generation
serving PJM load)*

Co-located Load (off-system)



After

(Back-up generation switch to serve co-located load)

0 MWs

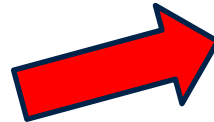


PJM
Transmission
Network

300 MWs



Back-up
Generation



200 MWs

Unexpected 300
MW withdrawal
on system

Key Points: To avoid unexpected withdrawal of power on the system the following is necessary:

- Co-located load must first reduce to zero
- Back-up generation must coordinate with PJM Operations before reduction of MWs

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Co-located Load Guidance



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