

Appendix M – Differences Between NERC-GADS and ISO-GADS Data Collection and Uses

There are a number of differences between the NERC GADS and the GADS run by Independent System Operators (ISOs), known as ISO GADS. Some of these differences are minor; others are not.

NERC GADS collects equipment outage data on a national basis. NERC GADS is an equipment outage system with a focus on plant reliability and assessments. The ISOs are charged with the reliability of the bulk electrical grid, dispatching generating units in an economical manner, and running their electric markets. In order to do this the ISO's, in some cases, follow their own definitions for things like OMC events, as specified in their market rules, which may differ from the way NERC GADS defines the same things. As a result, there are differences between the NERC GADS DRI and the various ISO GADS data reporting instructions as per their market rules. This means that reporting companies in some cases have to report their GADS data as per the ISO rules rather than the NERC rules. NERC will accept either with the understanding that generating unit histories reported under the ISO rules are inconsistent with those reported under NERC rules.

Listed below are brief descriptions on how certain ISOs utilize GADS data to support their marketing functions, reliability calculations, and specifically how their GADS procedures differ from those established by NERC.

PJM Interconnection (PJM) – Uses GADS data for ISO reliability studies and determining capacity payments to the Generator Owners. Significant features of the PJM GADS are:

- PJM uses the GADS data to determine capacity payments. These payments are based on the following equation:

$$\text{Capacity Payment} = \text{ICAP} \times \text{Market Capacity Payment Price} \times (1 - \text{EFORd of unit})$$

- Any generator that participates in the PJM Capacity Market must report GADS data irrespective of capability.
- PJM provides an optional service to report GADS data entered in the PJM eGADS application to OATI/NERC.
- Commencing June 1, 2018, PJM will not recognize any events as OMC. Although OMC event cause codes can be used, they will be treated as non-OMC in all calculations for the markets and reliability calculations. Data forwarded to OATI/NERC will include the original OMC cause codes.
- GADS data is reported and calculated against the unit's NET DEPENDABLE CAPACITY (NDC), not its NET MAXIMUM CAPACITY (NMC). Many companies ensure that their generator NET DEPENDABLE CAPACITY (NDC) is equal to the respective generator's PJM ICAP value and its NMC.
- Maintenance Outages and Derates (Event Types MO & D4) are limited to 9 days duration during the PJM Peak Maintenance Season. The PJM Peak Maintenance Season is defined in PJM Manual 10.
- Planned Outages and Derates (Event Types PO & PD) are prohibited during the PJM Peak Maintenance Season.
- All Planned and Maintenance Outages and Derates must be scheduled in advance per PJM Manual 10.
- MB and IR events must be approved by PJM and require removing the respective generators ICAP from the PJM Capacity Markets for the duration of the respective event. MB events are considered deactivations by PJM and have further market and reliability implications.
- Data must be submitted monthly to PJM on or before the 20th of the following month.
- Errors in a previously submitted month require access approval from PJM to correct data.

- Generator Owners must submit summer and winter capability verification tests twice a year via the PJM eGADS application. Winter and summer test periods are defined in PJM Manual 21. Hydroelectric and pumped storage generators are required to conduct and report one capability verification test per year in the summer period.

New York Independent System Operations (NYISO) – Uses GADS data for calculation of derating factors for the Installed Capacity (ICAP) Market, NYISO, the New York State Reliability Council’s (NYSRC) Reliability Studies, and the determination of the Installed Reserve Margin (IRM) for the New York Control Area (NYCA). Differences between NERC GADS and NYISO generating unit reporting instructions include:

Item	NERC	NYISO	Implications
Weekend Definition	Friday at 2400 hours through Sunday at 2400 hours	Friday at 10:01:00 PM through Monday at 8:00:59 AM.	This impacts the determination of whether an event is categorized as a MO as opposed to a FO; EFORD
Plant boundary	High side of unit transformer	Generator Owner responsibility ends at the low side bushings of the generator step-up transformer	This impacts the applicability of the OMC code - 9300
Outside Management Control (OMC)		Exception permitted for equipment failure that involves equipment located on the electric network beyond the generator step-up transformer, and including the step-up transformer on the output side of the Generator (9300). This exception does not apply to fuel related outages or derates or other cause codes that might be classified as Outside Management Control (OMC) in the NERC GADS Data Reporting Instructions (DRI).	Only transmission related events (9300) are excluded from consideration in the EFORD calculation for ICAP
Maintenance Outage Definition (MO)	An outage that can be deferred beyond the end of the next weekend (Sunday at 2400 hours), but requires that the unit be removed from service, another outage state, or	An outage that received NYISO’s approval (with minimum two days notice) and there are no reliability issues if the unit is removed from service.	

Item	NERC	NYISO	Implications
	<p>Reserve Shutdown state before the next Planned Outage (PO). Characteristically, a MO can occur any time during the year, has a flexible start date, may or may not have a predetermined duration, and is usually much shorter than a PO.</p>		
Planned Derate (PD)	<p>A derating that is scheduled well in advance and is of a predetermined duration.</p>	<p>Planned/maintenance deratings must be coordinated by NYISO Operations with at least 2 days notice from unit's owner/operator.</p>	
Maintenance Derating (D4)	<p>A derating that can be deferred beyond the end of the next weekend but requires a reduction in capacity before the next Planned Outage (PO). A D4 can have a flexible start date and may or may not have a predetermined duration.</p>	<p>Approved by NYISO, and there are no reliability issues when the unit's output is reduced, flexible start time and does not require a predetermined duration</p>	
Derate	<p>Derates must be reported for capacity loss > 2% or capacity loss lasting more than 30 minutes</p>	<p>Derates must be reported for capacity loss > 3% or capacity loss lasting more than 15 minutes</p>	
Event Contribution Code		<p>NYISO only receives contribution code 1</p>	
Submission requirements	<p>Mandatory for 20 MW or larger conventional units in 2013</p>	<p>Required for ICAP suppliers</p>	
Weekend Definition	<p>Friday at 2400 hours through Sunday at 2400 hours</p>	<p>Friday at 10:01:00 PM through Monday at 8:00:59 AM.</p>	<p>This impacts the determination of whether an event is categorized as a MO as opposed to a FO; EFORD</p>