**ISO NEW ENGLAND PLANNING PROCEDURE NO. 14**

**DATA COLLECTION FOR GENERATING AVAILABILITY DATA SYSTEM (GADS) EVENT AND PERFORMANCE DATA**

EFFECTIVE DATE: March 1, 2025 (Proposed)

REFERENCES: ISO New England Transmission, Markets, and Services Tariff (“Tariff”)

ISO New England Operating Procedure No. 5 – Resource Maintenance and Outage Scheduling (OP-5)  
North American Electric Reliability Corporation (NERC) GADS – Data Reporting Instructions (DRI)

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# Purpose

This Planning Procedure (PP) outlines the data collection process by which a Lead Market Participant (LMP) reports event and performance data to the ISO New England (ISO) Generating Availability Data System (GADS). This PP also establishes the process for the ISO to administer the ISO GADS, validate data that LMPs submit, and support the NERC GADS data reporting requirements.

GADS event data has been used for many years in the calculation of the ISO’s Installed Capacity Requirement (ICR) and related values. Specifically, GADS event data is used to calculate a generator’s Equivalent Forced Outage Rate on demand (EFORd) to serve as an indicator on future performance in probabilistic reliability simulations. The duration, magnitude, and cause for each event is critical in the proper calculation of the EFORd metric. EFORd is used in the resource availability assumption for the ICR and related values.

Timely and accurate event reporting is crucial to system reliability and calculation of the region’s resource requirements. This PP is intended to define the data submission process and validation of GADS event and performance data.

# Applicable Entities

This Planning Procedure is applicable to the following entities:

* **ISO:** As the Planning Coordinator and Reliability Coordinator for the New England Control Area, ISO New England leads the process for GADS event and performance data collection. The ISO provides a software portal (PowerGADS) for LMPs to submit their data on a monthly basis. The ISO is also responsible for administering the process to validate the accuracy of the submitted GADS data.
* **LMP:** The LMP is responsible for providing generator event and performance data for all conventional generators that meet the minimum reporting requirements described in Section 4.1 of this PP.

# Data Submission Timeline

LMPs shall submit event and performance data monthly, according to the following dates and times.

|  |  |  |  |
| --- | --- | --- | --- |
| **Procedure Step** | **March** | **April** | **Month N** |
| Data period to report | Mar 1 00:00 –  Mar 31 23:59 | Apr 1 00:00 –  Apr 30 23:59 | MonthN 1 00:00 –  MonthN [Last Day] 23:59 |
| GADS submission window opens | Apr 1 00:00 | May 1 00:00 | MonthN+1 1 00:00 |
| GADS submission window closes | Apr 21 00:00 | May 21 00:00 | MonthN+1 21 00:00 |

# Data Submission Process

## ISO GADS Reporting Requirements

GADS is a database model created and designed by NERC. The data is used to collect, record, and retrieve operating information for improving the performance of electric generating equipment. The ISO requires LMPs for generators to submit GADS data to the ISO GADS each month. LMPs are required to report GADS data to the ISO if each generator in their portfolio meets the following minimum reporting requirements:

* Conventional generator that is 5 MW nameplate or greater
* Intermittent generator that is 20 MW nameplate or greater

There are two parts to the GADS data submission: performance data and event data. Performance data are a summarized format pertaining to overall generator operation during a particular month in a given year. These data are needed to calculate unit performance, reliability, and availability statistics. Event data provide all the information needed to evaluate generator availability. An “event” occurs any time a generator’s operating status or capability changes. GADS receives reports on four general classifications of events: outages, derates, reserve shutdowns, and non-curtailing events. These event types are detailed in Section 4.4 of this PP.

LMPs shall submit data according to the timeline detailed in Section 3.0 of this PP. If data are not submitted on time, the ISO shall notify the LMP via email following the discovery. The LMP shall submit their data in the ISO GADS within 15 calendar days of the ISO’s notification.

## NERC GADS Reporting Requirements

GADS data reporting to NERC is mandatory at the end of each quarter for conventional generators that are 20 MW nameplate or greater, and if the LMP is on the NERC Compliance Registry:

* Go to: <https://www.nerc.com> 🡪 “Program Areas & Departments” 🡪 “Compliance & Enforcement” 🡪 “Organization Registration and Organization Certification”
* Scroll down to “Registration” à “Compliance Registry Files” à “NCR Active Entities List”

The ISO offers LMPs the option to select the ISO as their Delegated Reporting Entity (DRE). This means that the ISO will make the quarterly data submission to NERC on behalf of the LMP. To establish the ISO as the DRE, the LMP shall obtain an account within NERC’s GADS webPortal:

* Go to: <https://www.nerc.com> 🡪 “Program Areas & Departments” 🡪 “Event Analysis, Reliability Assessment, and Performance Analysis” 🡪 “Generating Availability Data System (GADS)”
* Scroll down to “Key Links” à “NERC OATI WebPortal User Registration Form”

## Performance Data Reporting

LMPs shall report performance monthly, together with event data. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS 05 file format. The ISO clarifies its use of the NERC GADS DRI[[1]](#footnote-1) in two manners:

1. When LMPs report the Net Dependable Capacity (NDC) for a generator, use the Seasonal Claimed Capability.
2. When the ISO calculates the EFORd value, the NDC is used instead of the Net Maximum Capacity (the NDC is adjusted for ambient limitations).

## Event Data Reporting

LMPs shall report event data monthly, together with performance data. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS 07 file format.

If the generator is not producing power at full NDC, then the generator should be reported as being in one of the event states listed in the table below. If a situation’s proper event state cannot be determined, a detailed description of the issue must be submitted to [gads@iso-ne.com](mailto:gads@iso-ne.com) prior to the 15th of the month.

The following table lists all the possible event states for a generator with their definition for the purpose of this PP and reporting to ISO GADS. Their alignment with the NERC GADS DRI and OP-5 are provided for clarity.

* Each GADS event type has a two-character code (*e.g.,* IR, U1, PD, etc.) listed in the first column. That event type code is consistent between ISO GADS and NERC GADS.
* If the NERC GADS DRI column lists “consistent,” that means that the PP14 definition is fully aligned with the definition in the other document. If the column says “differs,” that means that the PP14 definition has a clarification compared to the NERC GADS DRI definition and the clarification is described.
* The ISO-NE OP-5 OUTAGE TYPE column in the table describes the corresponding outage type found in OP-5. In other words, if an event is classified as “XX” in ISO GADS, it should have a corresponding outage type in the Control Room Operations Window (CROW) outage request software platform.
* If either column has “N/A,” it means that the definition is not found in the corresponding document.

| **ISO GADS**  **Event Type** | **PP14 Event Type Definition** | **NERC GADS**  **DRI Definition** | **ISO-NE OP-5 Outage Type** |
| --- | --- | --- | --- |
| ***Inactive Event States*** | | | |
| IR – Inactive Reserve | IR is defined by IEEE Standard 762 and GADS as “the state in which a unit is unavailable for service but can be brought back into service after some repairs in a relatively short duration of time, typically measured in days.” | Consistent | N/A |
| MB – Mothballed | MB is defined by IEEE Standard 762 and GADS as “the state in which a unit is unavailable for service but can be brought back into service after some repairs with appropriate amount of notification, typically weeks or months.” | Consistent | N/A |
| RU – Retired | RU is defined by IEEE Standard 762 and GADS as “the State in which a unit is unavailable for service and not expected to return to service in the future.”  NOTE: Unit must also be retired in CAMS to be retired in ISO GADS. | Consistent | N/A |
| ***Active Event States*** | | | |
| PO – Planned Outage | An outage that must be requested with a minimum of 15 calendar days prior to start date and is typically scheduled for the purpose of performing annual maintenance or more significant work that is planned and coordinated well in advance. | Differs in timeline to determine classification. | PO – Planned Outage |
| MO – Maintenance Outage | An outage that can be deferred beyond the end of the weekend, but requires that the generator be removed from service within 14 calendar days of the outage start date. During any particular week, if an LMP requests an outage that cannot be deferred beyond the weekend, that outage shall be classified as a Forced Outage (FO): U1, U2, or U3. | Differs in timeline to determine classification. | MO – Maintenance Outage |
| PE – Planned Outage Extension | An overrun of a PO that may be requested up until the Thursday, or the week prior to, the scheduled return of a generator, to service. A PE is considered a subset of PO. The outage must be limited to the original Planned Outage work scope and must not be requested for newly discovered issues. | Consistent | Subset of Overrun Planned Outage (OPO) |
| ME – Maintenance Outage Extension | An overrun of a MO that may be requested up until the Thursday, or the week prior to, the scheduled return of a generator, to service. A ME is considered a subset of MO. The outage must be limited to the original Maintenance Outage work scope and must not be requested for newly discovered issues. | Consistent | Subset of Overrun Planned Outage (OPO) |
| Forced Outage | A Forced Outage (FO) is any outage or inability, in whole, of a Resource to provide its claimed capability, that has not been approved by ISO in the form of a PO or MO. An FO incident preceding a PO or MO shall not eliminate the requirement of the LMP to report an FO for the entire actual/estimated period to repair the component(s) associated with the FO. Among other things, an FO may occur by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of Section III of the Tariff and ISO New England Manuals.  NOTE: FO is not an event type option in ISO GADS, its definition is used in other event types. | N/A | FO – Forced Outage |
| SF – Startup Failure | This is an FO that results when a unit is unable to synchronize within a specified startup time following an outage or reserve shutdown. | Consistent | Subset of Forced Outage (FO) |
| U1 – Unplanned (Forced) Outage — Immediate | This is an FO that requires immediate removal of a unit from service, another outage state, or a reserve shutdown state. This type of outage usually results from automatic control system trips or operator-initiated manual trips of the unit in response to unit alarms but can also occur while the unit is offline.  Note: An amplification code T1 or T2 must be added to a U1. See NERC GADS DRI for description of T1/T2. | Consistent | Subset of Forced Outage (FO) |
| U2 – Unplanned (Forced) Outage — Delayed | This is an FO that does not require immediate removal of a unit from the in-service state, instead requiring removal within six hours. This type of outage can only occur while the unit is in service. | Consistent | Subset of Forced Outage (FO) |
| U3 – Unplanned (Forced) Outage — Postponed | This is an FO that can be postponed beyond six hours but requires that a unit be removed from the in-service state before the end of the next weekend. This type of outage can only occur while the unit is in service. | Consistent | Subset of Forced Outage (FO) |
| PD – Planned Derating | A derating that must be requested with a minimum of 15 calendar days prior to start date and is typically scheduled for the purpose of performing annual maintenance or more significant work that is planned and coordinated well in advance. | Differs in timeline to determine classification. | Subset of Planned Outage (PO) |
| D4 – Maintenance Derating | A derating that can be deferred beyond the end of the weekend, but requires that the generator be derated within 14 calendar days of the outage start date. During any particular week, if an LMP requests a derate that cannot be deferred beyond the weekend, that derate shall be classified as a Forced Derate: D1, D2, or D3. | Differs in timeline to determine classification. | Subset of Maintenance Outage (MO) |
| DP – Planned Derating Extension | An overrun of a PD that may be requested up until the Thursday, or the week prior to, the scheduled return of a generator, to service. A DP is considered a subset of PD. The derate must be limited to the original Planned Derating work scope and must not be requested for newly discovered issues. | Consistent | Subset of Overrun Planned Outage (OPO) |
| DM – Maintenance Derating Extension | An overrun of a D4 that may be requested up until the Thursday, or the week prior to, the scheduled return of a generator, to service. A DM is considered a subset of D4. The derate must be limited to the original Maintenance Derating work scope and must not be requested for newly discovered issues. | Consistent | Subset of Overrun Planned Outage (OPO) |
| Forced Derate | A Forced Derate (FD) is any outage or inability, in part, of a Resource to provide its claimed capability, that has not been approved by ISO in the form of a PD or MD. An FD incident preceding a PD or MD shall not eliminate the requirement of the LMP to report an FD for the entire actual/estimated period to repair the component(s) associated with the FD. Among other things, an FD may occur by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of Section III of the Tariff and ISO New England Manuals.  NOTE: FD is not an event type option in ISO GADS, its definition is used in other event types. | N/A | Subset of Forced Outage (FO) |
| D1 – Unplanned (Forced) Derating — Immediate | This is a FD that requires an immediate reduction in capacity. | Consistent | Subset of Forced Outage (FO) |
| D2 – Unplanned (Forced) Derating — Delayed | This is a FD that does not require an immediate reduction in capacity, but rather within six hours. | Consistent | Subset of Forced Outage (FO) |
| D3 – Unplanned (Forced) Derating — Postponed | This is a FD that can be postponed beyond six hours but requires a reduction in capacity before the end  of the next weekend. | Consistent | Subset of Forced Outage (FO) |
| RS – Reserve Shutdowns | This is an event where a unit is available for load but is not synchronized due to lack of demand. This type of event is sometimes referred to as an economy outage or economy shutdown. If a unit is shut down due to any equipment-related problems, whether the unit was needed by the system, report an FO, MO, or PO event type. **Do not** report a RS. | Consistent | N/A |
| NC – Non-curtailing Events | This is an event that occurs whenever equipment or a major component is removed from service for maintenance, testing, or other purposes that do not result in a unit outage or derating. | Consistent | N/A |

## ISO Data Validation

The ISO spot checks GADS data that the LMP submits monthly and compares it with the ISO’s internal data sources, including operator logs, market data, and the CROW software platform. If the ISO finds discrepancies (*e.g.,* failure to report an event, reporting the wrong event type, misreporting the duration of an event), it shall notify the LMP via email following the discovery. The LMP shall make corrections to their data in the ISO GADS within 15 calendar days of the ISO’s notification.

# Revision History

Rev. 0 Approved: RC – xx/xx/25; NPC – xx/xx/25; ISO-NE – xx/xx/25

1. NERC GADS DRI: <https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx> [↑](#footnote-ref-1)