

ISO NEW ENGLAND PLANNING PROCEDURE NO. 14

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

EFFECTIVE DATE: March 1, 2025

REFERENCES: ISO New England Transmission, Markets, and Services Tariff (“Tariff”)
 ISO New England Operating Procedure No. 5 – Resource Maintenance and Outage
 Scheduling (OP-5)
 ISO New England Operating Procedure No. 14 - Technical Requirements for Generators,
 Demand Response Resources, Asset Related Demands and Alternative Technology
 Regulation Resources (OP-14)
 OP-14 Appendix F – Wind Plant Operator Guide
 OP-14 Appendix H – Solar Plant Operator Guide
 North American Electric Reliability Corporation (NERC) GADS – Data Reporting
 Instructions (DRI)
 NERC GADS Wind Turbine Generation – DRI
 NERC GADS Solar Generation – DRI

Contents

1.0	Purpose	3
2.0	Generator Type Definitions & Applicable Entities	3
2.1	Generator Type Definitions.....	3
2.2	Applicable Entities	3
3.0	Data Submission Timeline	4
4.0	Eligibility Criteria and Data Submission Process	4
4.1	Eligibility Criteria and Data Submission Process for Conventional Generators.....	4
4.1.1	ISO GADS Reporting Requirements.....	4
4.1.2	NERC GADS Reporting Requirements.....	4
4.1.3	Performance Data Reporting	5
4.1.4	Event Data Reporting.....	5
4.2	Eligibility Criteria and Data Submission Process for Wind Plants.....	8
4.2.1	ISO GADS Reporting Requirements.....	8
4.2.2	NERC GADS Reporting Requirements.....	8
4.2.3	Performance Data Reporting	8
4.2.4	Event Data Reporting.....	9
4.3	Eligibility Criteria and Data Submission Process for Solar Plants	10
4.3.1	ISO GADS Reporting Requirements.....	10
4.3.2	NERC GADS Reporting Requirements.....	11
4.3.3	Performance Data Reporting	11
4.3.4	Event Data Reporting.....	11
4.4	Energy Storage Plants	13
4.5	ISO Data Validation.....	13
5.0	Revision History	13

1.0 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 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 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. GADS data has been used for many years in the calculation of the ISO's Installed Capacity Requirement (ICR) and related values. Specifically, GADS 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 GADS data 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.

2.0 Generator Type Definitions & Applicable Entities

2.1 Generator Type Definitions

For GADS purposes, generator type definitions are based on the GADS unit types as follows:

- **Conventional:**¹ fossil (steam), nuclear, hydro & pumped storage, gas turbines/jet engines, combined cycle/co-generators, internal combustion/reciprocating engines, fluidized bed combustion, and miscellaneous (including multi-boiler/multi-turbine, geothermal, other miscellaneous conventional generating units [such as variable fuel – biomass, landfill gasses, etc.] used to generate electric power for the grid and similar in design and operation as the other units listed).
- **Wind:** onshore and offshore wind turbine plants (including facilities with co-located energy storage).²
- **Solar:** photovoltaic generator plants (including facilities with co-located energy storage).³
- **Energy Storage:** stand-alone inverter-based energy storage plants (excluding pumped storage hydro).

2.2 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, the ISO leads the process for GADS event and performance data collection. The ISO provides a software portal (PowerGADS) for LMPs to submit their data. The ISO is also responsible for administering the process to validate the accuracy of the submitted GADS data.

¹ Same definitions as Table III-1 of the NERC GADS DRI.

² See NERC GADS Wind Turbine Generation DRI Chapter 2 for definition of a wind "plant."

³ See NERC GADS Solar Generation DRI Chapter 2 for definition of a solar "plant."

- **LMP:** the LMP is responsible for providing generator event and performance data for all conventional generators and wind/solar plants that meet the eligibility criteria described in Section 4.1 of this PP.

3.0 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	Month _N 1 00:00 – Month _N [Last Day] 23:59
ISO GADS submission window opens	Apr 1 00:00	May 1 00:00	Month _{N+1} 1 00:00
ISO GADS submission window closes	Apr 21 00:00	May 21 00:00	Month _{N+1} 21 00:00

Note: NERC only requires GADS data to be submitted quarterly, but the ISO requires all data to be submitted monthly.

4.0 Eligibility Criteria and Data Submission Process

4.1 Eligibility Criteria and Data Submission Process for Conventional Generators

4.1.1 ISO GADS Reporting Requirements

Each LMP is required to report GADS data to the ISO for each generator in its portfolio that meets the following eligibility criteria:

- **Conventional:** generator type as defined in Section 2.1 of this PP that is 5 MW nameplate or greater, with the exception of:
 - hydro & pumped storage 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 4.1.4 of this PP.

LMPs shall submit data in accordance with 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 a determination that data is missing. The LMP shall submit its data in the ISO GADS within 15 calendar days of the ISO’s notification.

4.1.2 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 if the LMP is on the NERC Compliance Registry, which can be determined by:

- Going to: <https://www.nerc.com> → “Program Areas & Departments” → “Compliance & Enforcement” → “Organization Registration and Organization Certification”
- Scrolling down to “Registration” → “Compliance Registry Files” → “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 by:

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

4.1.3 Performance Data Reporting

LMPs shall report performance data in accordance with Section 3.0 of this PP. 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 DRI⁴ for conventional generators in the following manner:

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

4.1.4 Event Data Reporting

LMPs shall report event data in accordance with Section 3.0 of this PP. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS 07 file format.

If a conventional 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 prior to the 15th of the month during the ISO GADS data submission window for the previous month’s data reporting period. The ISO will review the submittal and consult with the LMP for recording the appropriate event state.

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.

⁴ NERC GADS DRI: <https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx>

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)

ISO GADS Event Type	PP14 Event Type Definition	NERC GADS DRI Definition	ISO-NE OP-5 Outage Type
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 or not 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

4.2 Eligibility Criteria and Data Submission Process for Wind Plants

4.2.1 ISO GADS Reporting Requirements

Each LMP is required to report GADS wind data to the ISO for each plant⁵ in its portfolio that meets the following eligibility criteria:

- **Wind:** Plants that are 75 MW nameplate or greater

There are two parts to the GADS wind data submission: performance data and event data. Performance data are a summarized format pertaining to overall plant operation during a particular month in a given year. These data are needed to calculate plant performance, reliability, and availability statistics. Event data provide all the information needed to evaluate plant availability. An “event” occurs any time a plant’s operating status or capability changes based on the criteria described in Section 4.2.4 of this PP. GADS receives reports on three general classifications of events: planned, maintenance, and forced outages. These event types are detailed in Section 4.2.4 of this PP.

LMPs shall submit data in accordance with 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 a determination that data is missing. The LMP shall submit its data in the ISO GADS within 15 calendar days of the ISO’s notification.

4.2.2 NERC GADS Reporting Requirements

GADS wind data reporting to NERC is mandatory at the end of each quarter for wind plants that are 75 MW nameplate or greater if the LMP is on the NERC Compliance Registry, which can be determined by:

- Going to: <https://www.nerc.com> → “Program Areas & Departments” → “Compliance & Enforcement” → “Organization Registration and Organization Certification”
- Scrolling down to “Registration” → “Compliance Registry Files” → “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 Wind Application by:

- Going to: <https://www.nerc.com> → “Program Areas & Departments” → “Event Analysis, Reliability Assessment, and Performance Analysis” → “Generating Availability Data System (GADS)”
- Scrolling down to “GADS WIND” → “GADS Wind Application”

4.2.3 Performance Data Reporting

LMPs shall report performance data in accordance with Section 3.0 of this PP. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS Wind Workbook (Microsoft Excel template). The ISO clarifies its use of the NERC GADS Wind DRI⁶ for wind plants in the following manner:

⁵ For GADS purposes, a wind plant is defined as a collection of wind turbine groups at a single physical location managed by a single manager and operating out of a common Operations and Management building. See Chapter 2 of the NERC GADS Wind DRI for more details.

⁶ NERC GADS Wind DRI: <https://www.nerc.com/pa/RAPA/gads/Pages/GADS-Wind-DRI.aspx>

1. When LMPs report the plant total installed capacity⁷ (PTIC) for a wind plant, the ISO uses the Network Resource Capability⁸ (NR Capability) for the plant.
2. When LMPs report the plant available installed capacity for a wind plant, the ISO uses the Real-Time High Operating Limit⁹ (RTHOL) for the plant.

4.2.4 Event Data Reporting

LMPs shall report event data in accordance with Section 3.0 of this PP. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS Wind Workbook (Microsoft Excel template).

The start of an event for wind plants is defined when the RTHOL is 20 MW or more lower than the NR Capability. The event ends when 95% of the of the difference between the NR Capability and minimum RTHOL during the event has been restored to service **AND** there is less than a 20 MW difference between the NR Capability and RTHOL. In other words:

- Event Start:
 - $RTHOL \leq NR\ Capability - 20\ MW$
- Event End (Both conditions must be met):
 - $RTHOL > RTHOL_{Min\ During\ Event} + 0.95 * (NR\ Capability - RTHOL_{Min\ During\ Event})$
 - $RTHOL > NR\ Capability - 20\ MW$

Note: The NERC GADS Wind DRI requires forced outage events to be reported, but planned and maintenance outage reporting is voluntary. However, the ISO requires LMPs to submit all events to ISO GADS.

If a situation's proper event state cannot be determined, a detailed description of the issue must be submitted to gads@iso-ne.com prior to the 15th of the month during the ISO GADS data submission window for the previous month's data reporting period. The ISO will review the submittal and consult with the LMP for recording the appropriate event state.

The following table lists all the possible availability states and event types for a wind plant with their definition for the purpose of this PP and reporting to ISO GADS. Their alignment with OP-5 is provided for clarity.

- Each GADS availability state and event type has a two-character code (*e.g.*, AC, MB, FO, MO, etc.) listed in the first column. That state/type code is consistent between ISO GADS and NERC GADS.
- The ISO-NE OP-5 OUTAGE TYPE column in the table describes the corresponding outage type found in OP-5. If either column has "N/A," it means that the definition is not found in OP-5.

⁷ See the NERC GADS Wind DRI for more details on the use of plant total installed capacity.

⁸ See Schedule 22 of the ISO-NE Open Access Transmission Tariff (OATT) for the definition of NR Capability.

⁹ See OP-14 Appendix F for the definition of a wind plant's RTHOL.

ISO GADS Wind Event Type	PP14 Wind Event Type Definition	ISO-NE OP-5 Outage Type
Availability States		
AC – Active	AC state in the time from when the subgroup is first declared commercially active until it moves to an inactive state (IR, MB, or RU).	N/A
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.”	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.”	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: Plant must also be retired in CAMS to be retired in ISO GADS.	N/A
Event Types		
PO – Planned Outage	Any event as defined in Section 4.2.4 of this PP 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.	PO – Planned Outage
MO – Maintenance Outage	Any event as defined in Section 4.2.4 of this PP that can be deferred beyond the end of the weekend, but requires that the portion of the plant be removed from service within 14 calendar days of the event 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).	MO – Maintenance Outage
FO – Forced Outage	A Forced Outage (FO) is any event as defined in Section 4.2.4 of this PP 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.	FO – Forced Outage

LMPs should follow all other definitions and instructions listed in the NERC GADS Wind DRI.

4.3 Eligibility Criteria and Data Submission Process for Solar Plants

4.3.1 ISO GADS Reporting Requirements

Each LMP is required to report GADS solar data to the ISO for each plant¹⁰ in its portfolio that meets the following eligibility criteria:

- **Solar:** Plants that are 20 MW nameplate or greater

There are two parts to the GADS solar data submission: performance data and event data. Performance data are a summarized format pertaining to overall plant operation during a particular month in a given year. These data are needed to calculate plant performance, reliability, and availability statistics. Event data provide all the information needed to evaluate plant availability. An “event” occurs any time a plant’s operating status or capability changes based on the criteria described in Section 4.3.4. GADS receives reports on three general classifications of events: planned, maintenance, and forced outages. These event types are detailed in Section 4.3.4 of this PP.

¹⁰ For GADS purposes, a solar plant is defined as a collection of inverter groups at a single physical location managed by a single manager and operating out of a common Operations and Management building. See Chapter 2 of the NERC GADS Solar DRI for more details.

LMPs shall submit data in accordance with 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 a determination that data is missing. The LMP shall submit its data in the ISO GADS within 15 calendar days of the ISO's notification.

4.3.2 NERC GADS Reporting Requirements

GADS solar data reporting to NERC is mandatory at the end of each quarter for solar plants that are 20 MW nameplate or greater if the LMP is on the NERC Compliance Registry, which can be determined by:

- Going to: <https://www.nerc.com> → "Program Areas & Departments" → "Compliance & Enforcement" → "Organization Registration and Organization Certification"
- Scrolling down to "Registration" → "Compliance Registry Files" → "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 Solar Application by:

- Going to: <https://www.nerc.com> → "Program Areas & Departments" → "Event Analysis, Reliability Assessment, and Performance Analysis" → "Generating Availability Data System (GADS)"
- Scrolling down to "GADS Solar" → "GADS Solar Application"

4.3.3 Performance Data Reporting

LMPs shall report performance data in accordance with Section 3.0 of this PP. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS Solar Workbook (Microsoft Excel template). The ISO clarifies its use of the NERC GADS Solar DRI¹¹ for solar plants in the following manner:

1. When LMPs report the plant total installed capacity¹² (PTIC) for a solar plant, the ISO uses the Network Resource Capability¹³ for the plant.
2. When LMPs report the plant available installed capacity for a solar plant, the ISO uses the Real-Time High Operating Limit¹⁴ for the plant.

4.3.4 Event Data Reporting

LMPs shall report event data in accordance with Section 3.0 of this PP. It can be submitted manually through the PowerGADS software portal or it can be uploaded using the NERC GADS Solar Workbook (Microsoft Excel template).

The start of an event for solar plants is defined when the RTHOL is 20 MW or more lower than the NR Capability. The event ends when 95% of the difference between the NR Capability and minimum RTHOL

¹¹ NERC GADS Solar DRI: <https://www.nerc.com/pa/RAPA/gads/Pages/GADS-Solar-DRI.aspx>

¹² See the NERC GADS Solar DRI for more details on the use of plant total installed capacity.

¹³ See Schedule 22 of the ISO-NE Open Access Transmission Tariff (OATT) for the definition of NR Capability.

¹⁴ See OP-14 Appendix H for the definition of a solar plant's RTHOL.

during the event has been restored to service **AND** there is less than 20 MW difference between the NR Capability and RTHOL. In other words:

- Event Start:
 - $RTHOL \leq NR \text{ Capability} - 20 \text{ MW}$
- Event End (Both conditions must be met):
 - $RTHOL > RTHOL_{\text{Min During Event}} + 0.95 * (NR \text{ Capability} - RTHOL_{\text{Min During Event}})$
 - $RTHOL > NR \text{ Capability} - 20 \text{ MW}$

Note: The NERC GADS Solar DRI requires forced outage events to be reported, but planned and maintenance outage reporting is voluntary. However, the ISO requires LMPs to submit all events to ISO GADS.

If a situation's proper event state cannot be determined, a detailed description of the issue must be submitted to gads@iso-ne.com prior to the 15th of the month during the ISO GADS data submission window for the previous month's data reporting period. The ISO will review the submittal and consult with the LMP for recording the appropriate event state.

The following table lists all the possible availability states and event types for a solar plant with their definition for the purpose of this PP and reporting to ISO GADS. Their alignment with OP-5 is provided for clarity.

- Each GADS availability state and event type has a two-character code (*e.g.*, AC, MB, FO, MO, etc.) listed in the first column. That state/type code is consistent between ISO GADS and NERC GADS.
- The ISO-NE OP-5 OUTAGE TYPE column in the table describes the corresponding outage type found in OP-5. If either column has "N/A," it means that the definition is not found in OP-5.

ISO GADS Solar Event Type	PP14 Solar Event Type Definition	ISO-NE OP-5 Outage Type
Availability States		
AC – Active	AC state in the time from when the subgroup is first declared commercially active until it moves to an inactive state (IR, MB, or RU).	N/A
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.”	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.”	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: Plant must also be retired in CAMS to be retired in ISO GADS.	N/A
Event Types		
PO – Planned Outage	Any event as defined in Section 4.3.4 of this PP 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.	PO – Planned Outage
MO – Maintenance Outage	Any event as defined in Section 4.3.4 of this PP that can be deferred beyond the end of the weekend, but requires that the portion of the plant be removed from service within 14 calendar days of the event 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).	MO – Maintenance Outage

ISO GADS Solar Event Type	PP14 Solar Event Type Definition	ISO-NE OP-5 Outage Type
FO – Forced Outage	A Forced Outage (FO) is any event as defined in Section 4.3.4 of this PP 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.	FO – Forced Outage

LMPs should follow all other definitions and instructions listed in the NERC GADS Solar DRI.

4.4 Energy Storage Plants

NERC currently does not have a GADS database design for stand-alone energy storage plants, so there are no reporting requirements for ISO GADS at this time.

4.5 ISO Data Validation

The ISO spot checks GADS data that the LMP submits under the timeline required in Section 3.0 of this PP 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 a determination that there is a data discrepancy. The LMP shall make corrections to its data in the ISO GADS within 15 calendar days of the ISO's notification.

5.0 Revision History

Rev. 0 Approved: RC – 01/22/25; NPC – 02/06/25; ISO-NE – 02/28/25