New York ISO
Independent System Operator

UG 16

Generating Availability Data System (GADS) Portal User's Guide

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Revision History

| Version	Effective Date	Revisions
1.0	10/14/2014	Initial Release
2.0	08/25/2021	Recertification ➢ Branding & formatting updated ➢ Added PU and CO event requirement
2.1	09/19/2023	Recertified Global ➢ Updated branding and formatting ➢ Corrected broken hyperlinks

1. Introduction

Two types of data are reported in the NYISO's Generator Availability Data System ("GADS"): event and performance.

Event data are reported in the Event Report 1(07) format and performance data in the Performance Report (05) format. Each of these formats is described in detail in Sections III and IV of the NERC GADS DRI. Note, however, that although the formats are the same, the events and data are not necessarily the same and are governed by the NYISO's tariff and ISO Procedures. "GADS Data" is defined in the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff") as "data submitted to the NERC for collection into the NERC's Generating Availability Data System ("GADS")" and such other data required by the NYISO's. As used by the NYISO in the GADS Portal to which this User's Guide applies, it also incorporates other provisions in the NYISO's tariffs and ISO Procedures.

1.1   Web User Interface Login

The user interface (UI), shown in Figure 1 is the first screen displayed **after the User has been authenticated**.

Figure 1-1: Opening Screen
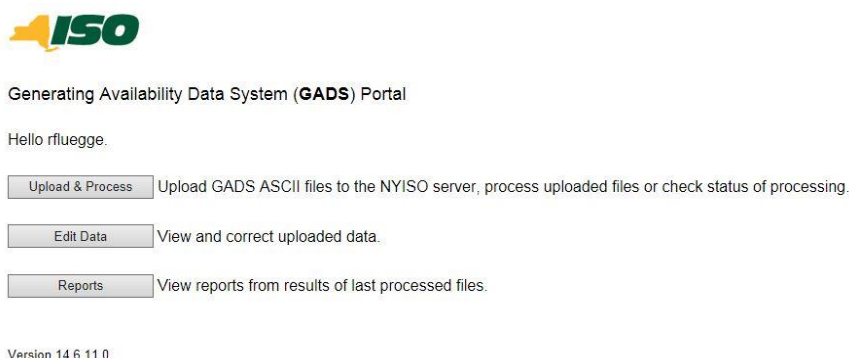
1.2   Start Up Screen

Figure 1-1 shows the options available to successfully upload GADS data each month.

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[1] Services Tariff at Section 2.7.

Upload & Process is the first step the User will initiate each month in the upload process.

If you successfully upload the performance and event GADS data files and have no File Check or Data Check errors, and Analysis runs error free, then you do not need to initiate the **Edit Data** option for the month.

Select the **Edit Data** option on the opening screen if you have:

1. Uploaded the GADS data files and have been notified that the data has errors,

2. Exited the Portal and need to correct the data manually using the Portal's data entry forms when you return to the Portal.

> *Note:* The User also has the option to correct the data records offline and upload the GADS ASCII files again using the **Upload & Process** option.

If you have successfully uploaded the performance (125 columns) and event (82 columns) GADS data files and have no errors, then you may not need to initiate the **Reports** option on the opening screen.

Select the **Reports** option if you want to print a report showing the calculated statistics for the selected period range (Starting Month and Ending Month).

1.3   Uploading GADS Data

The following steps assume that valid GADS ASCII data files have been created as required prior to logging into the GADS Portal.

> *Note:* The upload file(s) may be created by any software application that can create the required ASCII format.

1. To upload the ASCII file(s), press **Upload & Process**. Once the button is pressed you will see the web page shown in **Error! Reference source not found.**.

Figure 1-2: Data Upload Screen

Press **Browse** to locate the required file. Select a single file to upload on the screen shown in Figure 1-3. The user can upload data files in the formats defined in Attachment K of the Installed Capacity Manual (available from the NYISO Web site at the following URL: https://www.nyiso.com/documents/20142/2923301/icap_mnl.pdf/234db95c-9a91-66fe-7306-2900ef905338)

Figure 1-3: File Selection Dialog
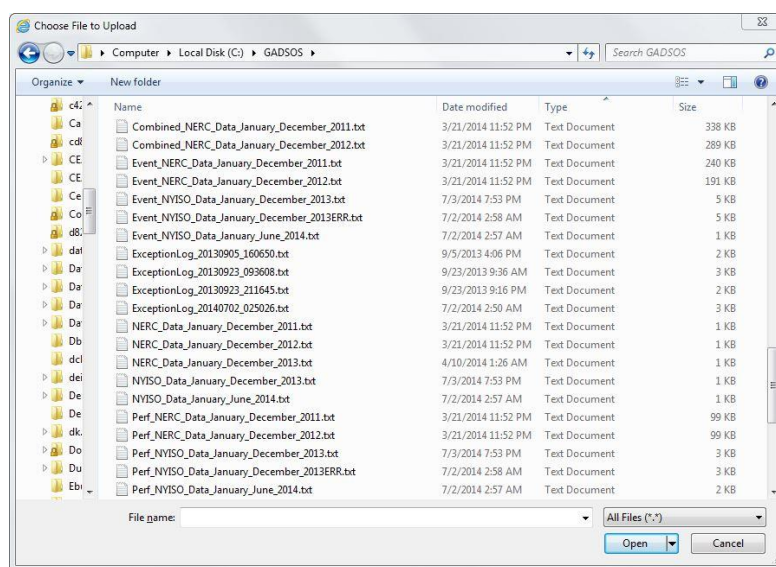
As the User selects each file, it is displayed as shown in Figure 1-4.

Figure 1-4: Data Upload Screen with Selected File
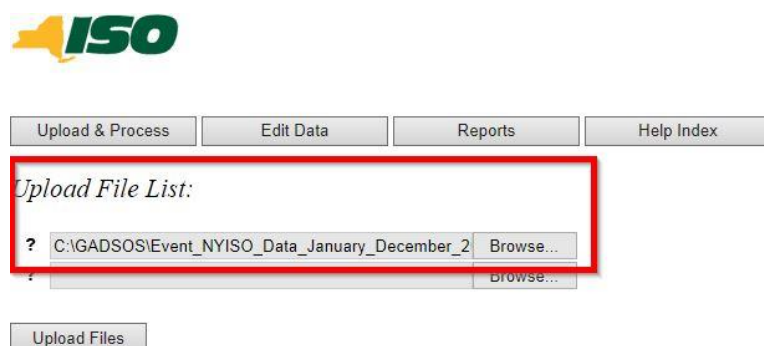
You may repeat this process up to a total of 20 files; however, each file in the set of 20 must have a unique name (i.e., two files in the selection list cannot have the same name, even if they are in different directories).

After you have selected the files to upload, press **Upload Files**.

There will be a message indicating the status of the upload as shown in Figure 1-5.

Figure 1-5: Screen Showing File Accepted Status
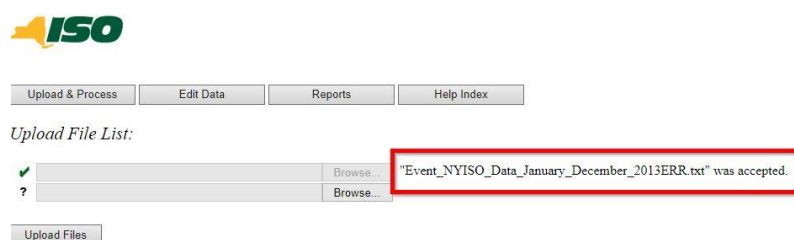
After you have successfully uploaded all the files, click on **Process Data** in order for the system to further validate the data, and to validate both the performance and event data for consistency.

As shown in Figure 1-6, the status of the processing is shown below the blue line. As indicated in the figure, the status is automatically updated approximately every one minute.

Figure 1-6: Processing Status
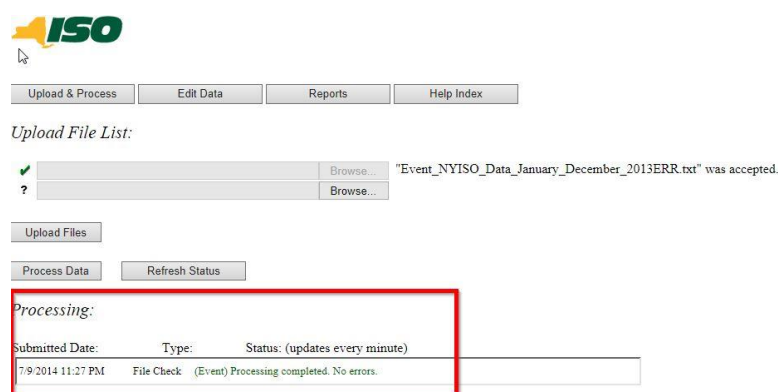
During the processing, the status displays the three phases that the uploaded data pass through:

1. File Check

2. Data Check

3. Analysis

These phases are displayed as the NYISO's system checks the files for a valid format, and the data for validity and consistency, then calculates the validated data and then stores the calculated results in the database.

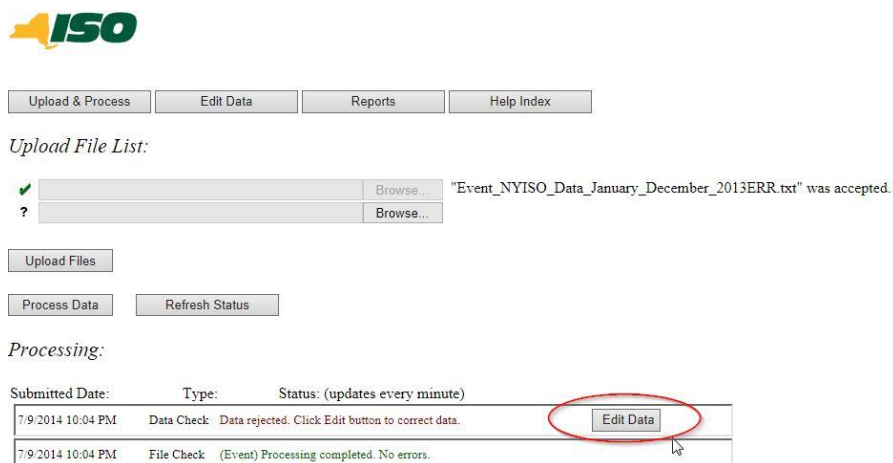During these phases, the status may be listed as one of the following:

- Waiting for processing...

- Working…

- Processing completed. No errors.

- Data rejected. Click Edit button to correct data.

- No processes in queue.

- Operation aborted.

- Invalid process request.

- Invalid file format. Correct file and re-upload.

If there are errors, you will have the opportunity to view and/or correct the errors online by clicking on "**Edit Data**" to the right of the status display, as shown in **Error! Reference source not found.**.

> *Note:* All online corrections should also be performed in the User's GADS database.

Figure 1-7: Error Status

If the uploading and processing results in no errors (**Processing completed. No errors.**), then the calculated data for each unit can be viewed for each month by pressing the **Reports** button. Any range of months can be selected, as shown in Figure 1-8.

Figure 1-8: History Display

This generates a report similar to the one shown in Figure 1-9.

Figure 1-9: Standard NYISO EFORd Report

Unit Name	Month Or Total	Net Actual Generation	SH	RSH	OH	FO Count	EFDH	Attempted Starts	Actual Starts	Starting Reliability	Forced Outage Rate	EFORd	EAF	Net Capacity Factor	Period
	Jul 2013	103,899.00	464.77	257.40	12.10	2	0.00	23	23	100.00	2.54	2.13	97.07	49.52	Jul 2013 - Jun 2014
	Aug 2013	131,170.00	605.12	138.28	0.60	1	1.99	16	15	93.75	0.10	0.37	99.65	62.52	Jul 2013 - Jun 2014
	Sep 2013	53,631.00	256.30	349.70	0.00	0	0.00	2	2	100.00	0.00	0.00	84.17	26.41	Jul 2013 - Jun 2014
	Oct 2013	0.00	744.00	0.00	0.00	0	664.85	0	0			0.00	89.36	10.64	0.00	Jul 2013 - Jun 2014
	Nov 2013	0.00	0.00	0.00	721.00	1	0.00	0	0		100.00	100.00	0.00	0.00	Jul 2013 - Jun 2014
	Dec 2013	0.00	744.00	0.00	0.00	0	0.00	1	1	100.00	0.00	0.00	100.00	0.00	Jul 2013 - Jun 2014
	Jan 2014	66,308.00	279.38	415.33	4.33	1	0.00	3	3	100.00	1.53	1.46	93.38	31.60	Jul 2013 - Jun 2014
	Feb 2014	0.00	0.38	561.60	0.00	0	0.00	1	1	100.00	0.00	0.00	83.63	0.00	Jul 2013 - Jun 2014
	Mar 2014	16,454.00	80.05	662.95	0.00	0	0.00	1	1	100.00	0.00	0.00	100.00	7.85	Jul 2013 - Jun 2014
	Apr 2014	0.00	0.00	720.00	0.00	0	0.00	0	0			0.00	100.00	0.00	Jul 2013 - Jun 2014
	May 2014	0.00	0.00	744.00	0.00	0	0.00	0	0			0.00	100.00	0.00	Jul 2013 - Jun 2014
	Jun 2014	0.00	0.00	720.00	0.00	0	0.00	0	0			0.00	100.00	0.00	Jul 2013 - Jun 2014
	Jul 2013	2,265.00	12.70	0.00	0.00	0	2.01	1	1	100.00	0.00	15.79	1.44	1.07	Jul 2013 - Jun 2014
	Aug 2013	25,956.00	140.38	442.75	126.58	5	92.07	15	14	93.33	47.42	39.08	66.00	12.24	Jul 2013 - Jun 2014
	Sep 2013	2,850.00	93.75	338.25	0.00	0	61.87	7	7	100.00	0.00	14.32	51.41	1.39	Jul 2013 - Jun 2014
	Oct 2013	0.00	251.43	0.00	0.00	0	0.00	1	1	100.00	0.00	0.00	33.79	0.00	Jul 2013 - Jun 2014
	Nov 2013	0.00	721.00	0.00	0.00	0	0.00	0	0			0.00	100.00	0.00	Jul 2013 - Jun 2014
	Dec 2013	0.00	744.00	0.00	0.00	0	0.00	0	0			0.00	100.00	0.00	Jul 2013 - Jun 2014
	Jan 2014	55,234.00	250.93	269.43	223.63	1	0.00	1	1	100.00	47.12	37.47	69.94	26.05	Jul 2013 - Jun 2014

During processing, you can abort the process by clicking on the **Abort** button to the right of the status display, as shown in Figure 1-10.

Figure 1-10: Abort Processing

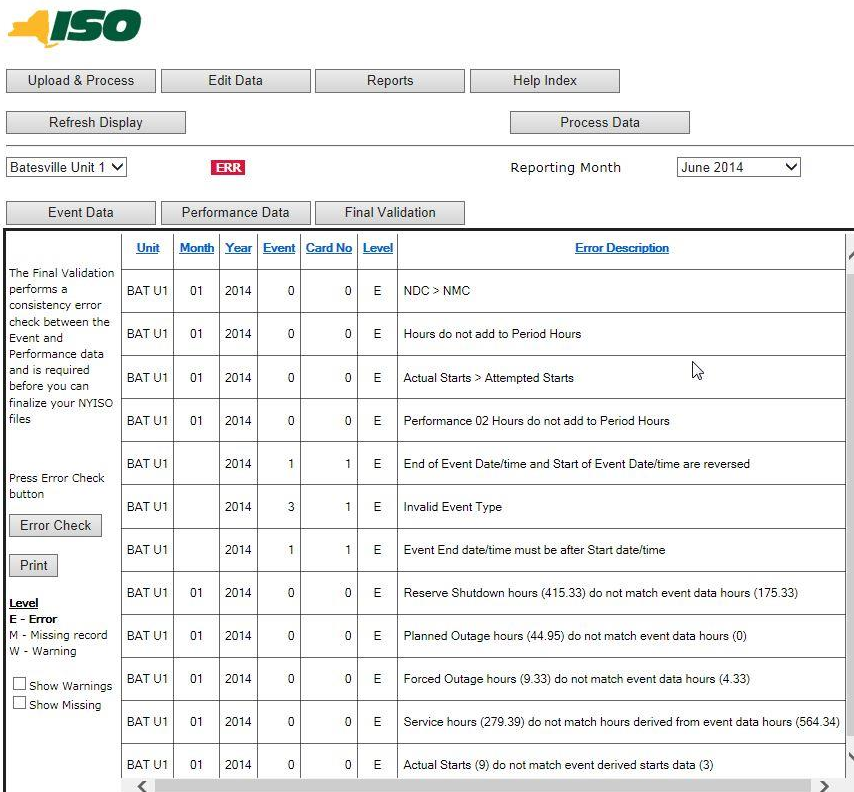**Figure 1-11: Results with No Errors**

If errors are identified, there are two ways for the user to resolve them:

- Correct the GADS data offline and reload only the Year-to-Date (YTD) data records for those units where errors were identified. If there are only performance data errors, you have the option to upload only YTD performance data file(s) for the unit(s) that have errors. Likewise, if there are only event data errors, you have the option to upload only YTD event data file(s) for the unit(s) that have errors.

- Correct the data using the Portal's data entry forms as detailed in the Input Data Requirements section.

> ***Note:*** All online corrections should also be performed in the User's GADS database.

The Error Detail screen, illustrated in **Error! Reference source not found.**, allows you to easily identify which performance or event record is in error.
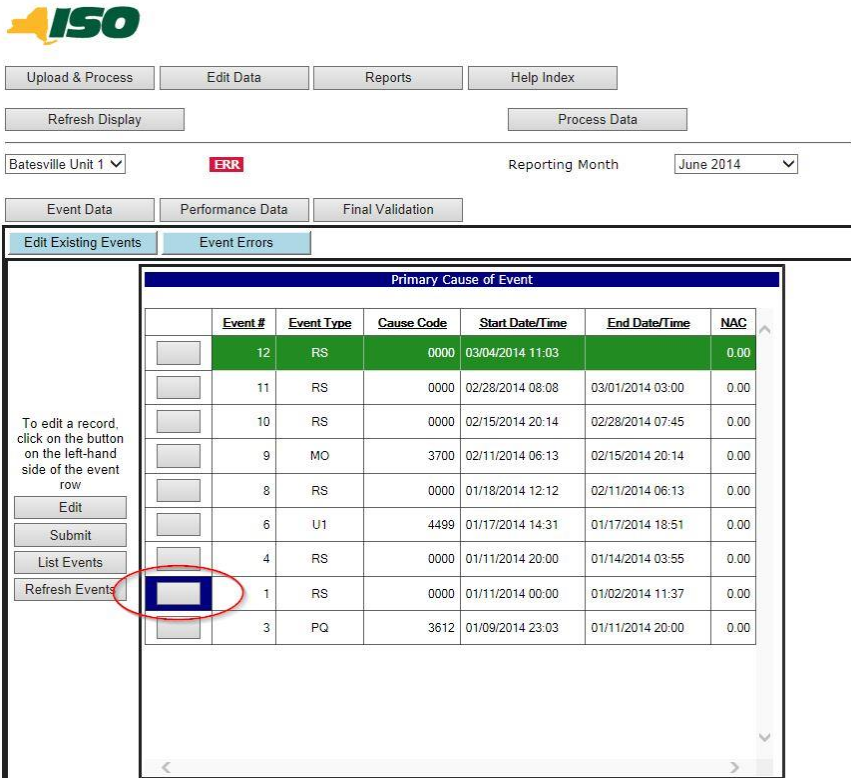
Figure 1-12: Example Error Detail Screen

If the errors are event errors, click on **Edit Existing Events** to bring up the Error Correction screen, as illustrated in **Error! Reference source not found.**. The appropriate record can be revised offline and then reloaded, or the data can be revised using the Portal's data entry forms. If you choose to revise online, click the button next to the record you wish to revise. The area behind the button for the selected record will turn dark blue.

> *Note:* Using the Portal's data entry form submits online corrections to the master database tables only if it passes the validation checks. All online corrections should also be performed in the User's GADS database.

Figure 1-13: Example Error Correction Screen

2. Navigating the GADS Portal

2.1 Input Data Requirements

The minimum required NYISO GADS format requires the following subset of the record identified above, specifically:

- Performance 01 record

- Performance 02 record

- Event 01 record

- Event 02 record

Note that there are additional data fields on these records not required by the minimum NYISO GADS format.

2.2 Main Menu

The "**Main** menu" is not actually a menu, but refers here to the top two portions of the screen, as illustrated in **Error! Reference source not found.**.

Figure 2-1: Menus

Selections on the **Main** menu are made by using your mouse pointer and "left-clicking" the buttons to perform the desired action.

The installation includes an online Help file that you can access at any time by clicking Help on the Main menu.

2.3 Selecting or Changing Units

The unit selection list box on the left side of the **Main** menu displays the generating units that the user is authorized to access.

When you first open the program, the software retrieves the performance and event data for the first unit displayed in the unit selection list box for the entire year based on the month displayed in the Reporting Month list box. For example, if the first unit displayed in the unit selection list box is Coffee Unit 1 and the Reporting Month is November 2014, then the software has retrieved from the database all event and performance records for Coffee Unit 1 for 2014.

As you input or edit the 2014 data for a unit you must click **Submit** on either the **Performance Data** or **Event Data** tab to ensure that the data is saved back to the master database tables.

> *Note:* If you change the year for the current unit OR change to another unit without saving the data input, all subsequent data input and any changes made since the last time the user clicked **Submit** will be lost.

When entering new Performance data for the current month, be sure to click **Submit** at least once before changing the selection to a prior month, even in the same year; otherwise, the Performance data for the month will be lost. Saving the data the first time "locks in" the month's data and subsequently selecting a different month does not result in the loss of the data on the Data Entry form.

> *Note:* Using the Portal's data entry form submits online corrections to the master database tables only if it passes the validation checks. All online corrections should also be performed in the User's GADS database.

The Event data is not affected by changes in Reporting Month unless the change results in a change to a different year.

In addition, since the Web UI requires session timeouts for security reasons, you must interact with the application on the server at least as frequently as prompted that the session will be timing out; for example, by clicking Submit. If the session times out *all new data and any changes made to both Event and Performance data since the last time you clicked Submit will be lost*.

It does no harm to click **Submit**; so click it often.

2.4   Selecting or Changing Reporting Month

The Reporting Month list box on the right side of the Main menu, displays the reporting periods that you are authorized to access and for which GADS data is available. Generally, this is determined by the Performance data.

When you first open the program, the software retrieves the performance and event data for the first unit displayed in the unit selection list box for the entire year based on the month displayed in the Reporting Month list box. For example, if the first unit displayed in the unit selection list box is Coffee Unit 1 and the Reporting Month is November 2014, then the software has retrieved from the database all event and performance records for Coffee Unit 1 for 2014.

As you input or edit the 2014 data for each unit you must click **Submit** on either the **Performance Data** or **Event Data** tab to ensure that the data is saved back to the master database tables.

> *Note:* If you change the year for the current unit OR change to another unit without saving your work, all new data and any changes made since the last time you clicked **Submit** will be lost. It does no harm to click **Submit**; so click it often.

When entering new Performance data for the current month, be sure to click **Submit** at least once before changing the selection to a prior month otherwise, the Performance data for the month will be lost. Saving the data the first time "locks in" the month's data and subsequently selecting a different month does not result in the loss of the data on the Data Entry form.

> *Note:* Using the Portal's data entry form submits online corrections to the master database tables only if it passes the validation checks. All online corrections should also be performed in the User's GADS database.

The Event data is not affected by changes in Reporting Month unless the change results in a change to a different year. If the session times out

In addition, since the Web UI requires session timeouts for security reasons, you must interact with the application on the server at least as frequently as prompted that the session will be timing out; for example, by clicking **Submit.** If the session times out *all new data and any changes made to both Event and Performance data since the last time you clicked Submit will be lost*.

It does no harm to click **Submit**; so click it often.

2.5   Status Indicator

The data status indicator is displayed just to the right of the Unit Selection list box, and has three display values:

Display	Meaning
MOD	Data has been revised (modified), but Error Check has not been run.
ERR	Error Check has been run; there are errors that must be corrected.
OK	Error Check has been run; no errors found.

Data records with errors cannot be saved back to the master database tables

2.6   Event Data (07)

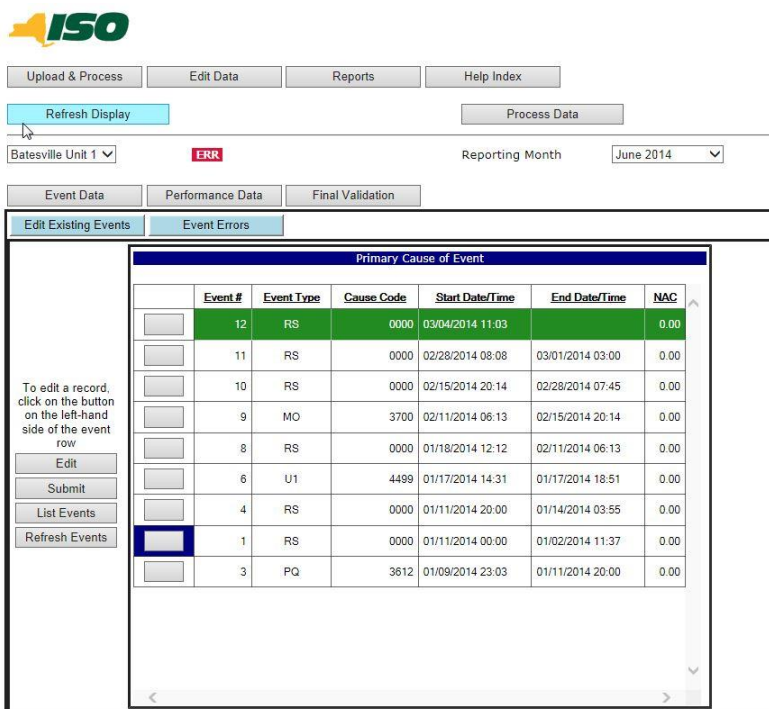Six general Event Data classifications are reported to GADS:

- Outages

- Deratings

- Reserve shutdowns

- Noncurtailing events (Not Required by the NYISO)

- Pumping

- Synchronous Condensing

Two distinct data make up the Event Report (07):

- Event Magnitude

- Primary Cause of Event

2.6.1 'Edit Existing Events' Tab

Figure 2-2: Edit Existing Events

The layout of the Event Data (07) tab, shown in Figure 2-2, displays a summary of all of the events that have occurred on the unit shown in the unit selection list box for the current calendar year shown in the Reporting Month list box. The event displays are not in any way tied to the "month" shown in the Reporting Month list box; only the year.

In addition, you can perform the following tasks:
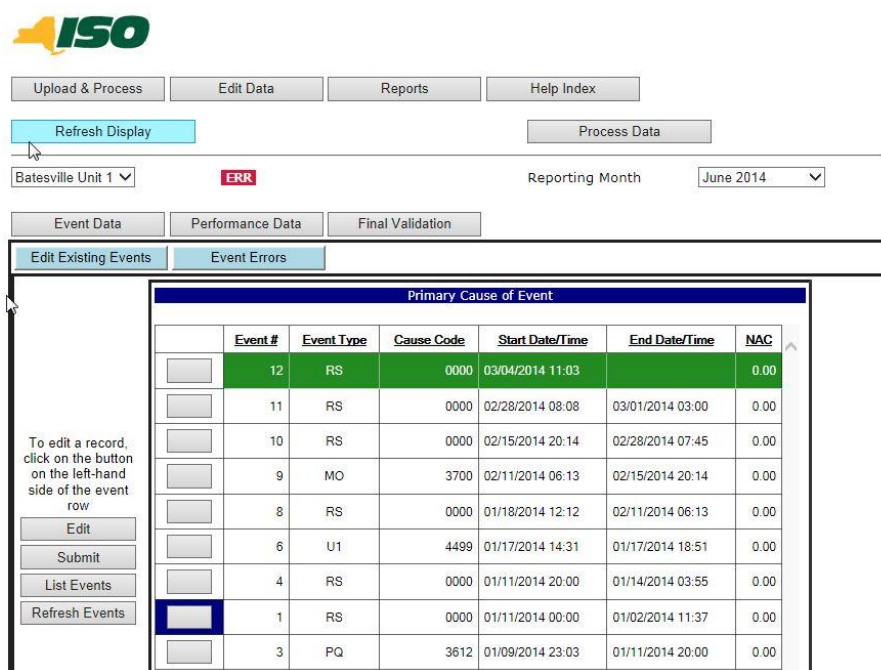
- Save any changed events back to the database server by clicking **Submit**

- List the event data by clicking **List Events**

- Refresh the displayed event data by clicking **Refresh Events**

Scroll bars allow you to scroll both up/down and left/right to view the full data set.

2.6.1.1 Editing an Event

To edit an existing Primary Cause of Event, highlight the event record in the Primary Cause section by clicking the button next to the record, and clicking on **Edit**, as shown in Figure 2-3.

Figure 2-3: Selecting an Event to Edit

After you press **Edit**, the software will display the form shown in [Figure 2-4](#). For existing events, the fields are populated with the current data. The cursor will automatically skip over all disabled fields as you move from field to field.

Figure 2-4: Editing Existing Events

As you enter data in each field and then move to the next, the program "validates" the data you just entered. However, in some cases, these validations are not done until you click **Submit** or **Save**.

In either case, you will be given clear indications of any errors that must be corrected before you can save the data back to the working copy of the database that you have loaded.

The screen includes a **Save** button and a **Cancel** button. **Save** records the data on the form in the database and returns you to the **Main** menu window. **Cancel** ends the current operation and returns you to the **Main** menu window.

If there are no errors on the Primary Cause of Event form, you can click one of the Save buttons to save the data and continue with data processing.

2.6.1.2 Additional Features

After Primary Cause of Event records have been created, the **Event Data (07)** tab form has several options and items of interest.

First, click **Submit** at any time to save the data. This is especially important when using a Web UI, since it has a "timeout" feature that requires that you save to the database server within the timeout window (30 minutes). Saving the data back to the database server resets the timer.

2.6.1.3 List Events

On the data entry forms you can list the event records for the currently selected unit and year by pressing **List Events**. This will display the report shown in Figure 2-5.

Figure 2-5: Sample Event Listing
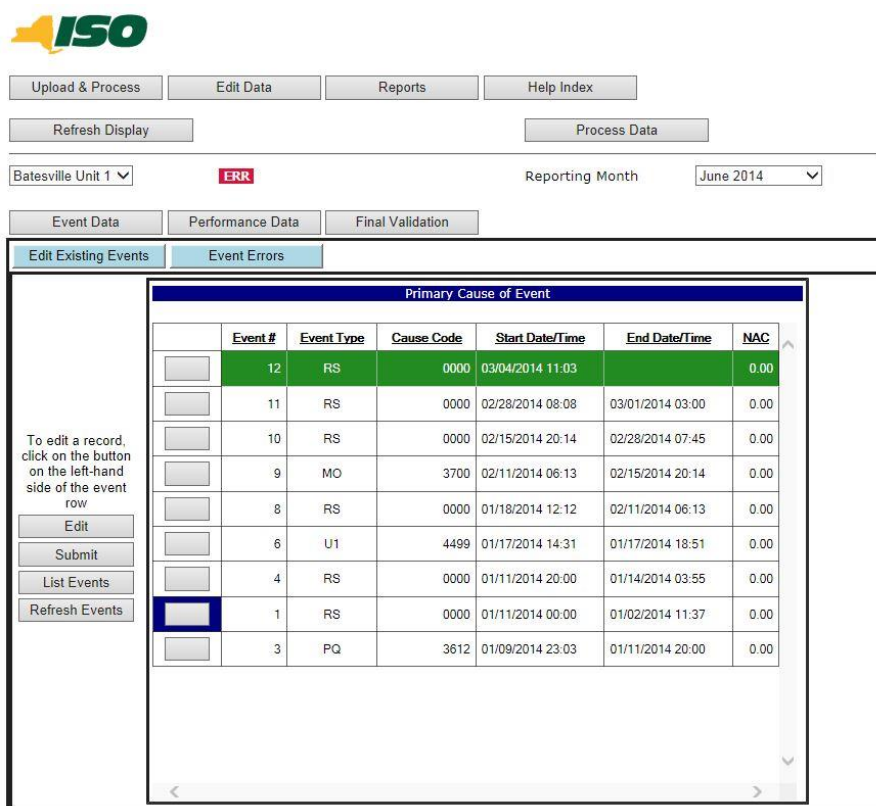
2.6.1.4 Display Features

All open-ended events (both full outages and deratings) with the End of Event date/time left blank are displayed in the Primary Cause of Event section with a green background, as shown in .
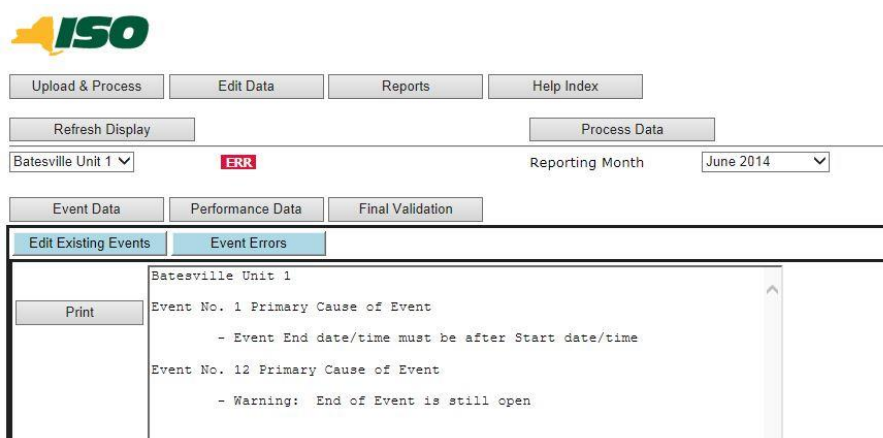
Figure 2-6: Main Window Color Codes

These color codes are visual clues to your event data status.

Clicking **List Events** provides an event data list that may be viewed online or printed.

2.6.2 'Event Errors' Tab

The **Event Errors** tab displays all warnings and errors existing on the units you are authorized to access, as shown in <u>Figure 2-7</u>. To reveal all warnings for your units, check the "Show Warnings" box and click on the Final Validation button. These can be printed to allow offline resolution of the indicated error or warning.

Figure 2-7: Event Errors

It is highly recommended that you review the list of errors and warnings to ensure that all error and warning messages are expected. Warnings do not necessarily need to be corrected—they are not fatal errors, but still might lead to unexpected problems.

For example, a derating that started in January and was inadvertently left "open" will only generate a warning since this is not necessarily an error, and may be correct; however, the calculated EFORd (Equivalent Demand Forced Outage Rate) and EAF (Equivalent Availability Factor) values calculated with this data in GADS will not be correct if the derating should have been closed back in January.
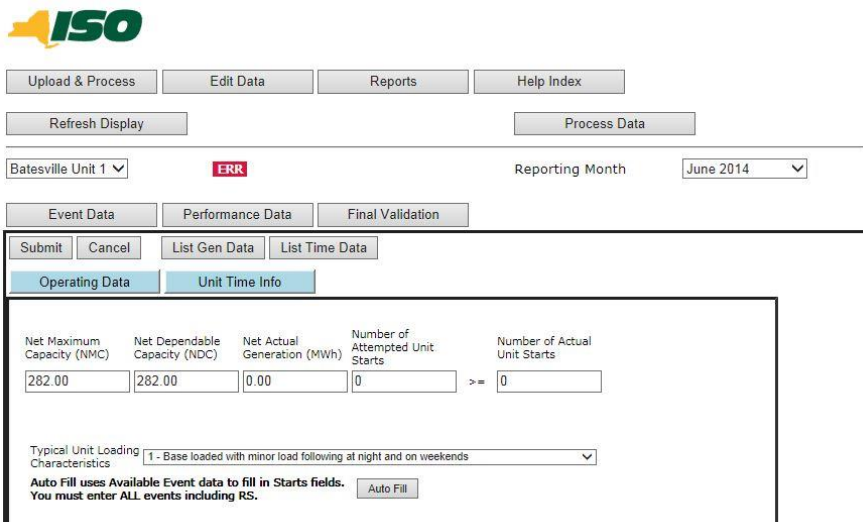
2.7 'Performance Data (05)' Tab

Performance data provide information, in a summarized format, pertaining to overall unit operation during a particular month in a given year.

2.7.1 'Operating Data' Tab

The data provided on the Operating Data tab, shown in Figure 2-8, are used to calculate performance statistics.

Figure 2-8: Operating Data
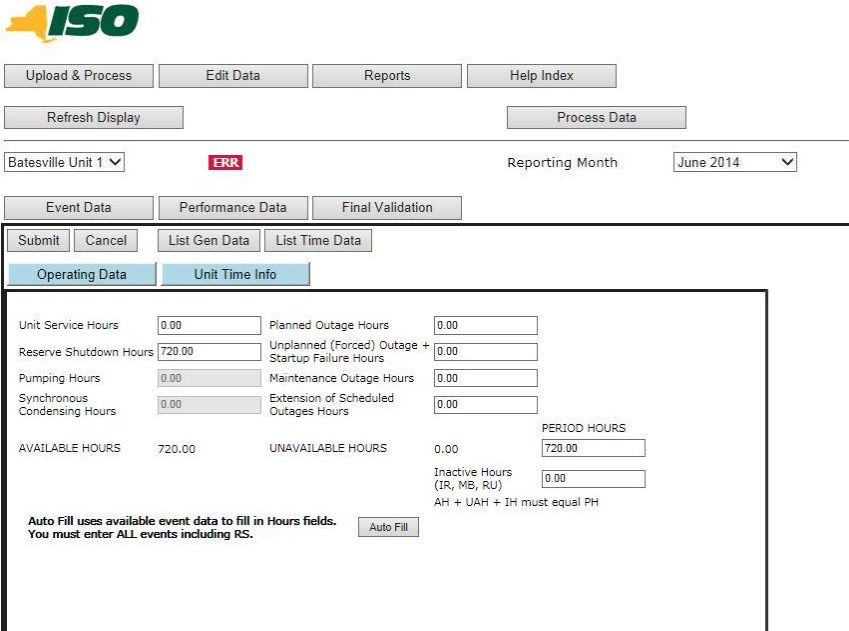

2.7.1.1 Auto Fill

Auto Fill uses available event data to fill in the Attempted and Actual Unit Starts fields. You must, however, fill in all event data, including RS events.

The starts entered into these fields should be derived independently, based on plant or control room logs. The program uses these start data as a cross-check with the event data, to determine if all full outage events have been entered correctly. While the feature is available for your use, please use with caution, and understand that using Auto Fill impacts data validation.

2.7.2 'Unit Time Info' Tab

Figure 2-9 displays the **Unit Time Info** tab. The unit's hours must be completed as specified by the NERC GADS DRI and the Installed Capacity Manual.

Figure 2-9: Unit Time Info
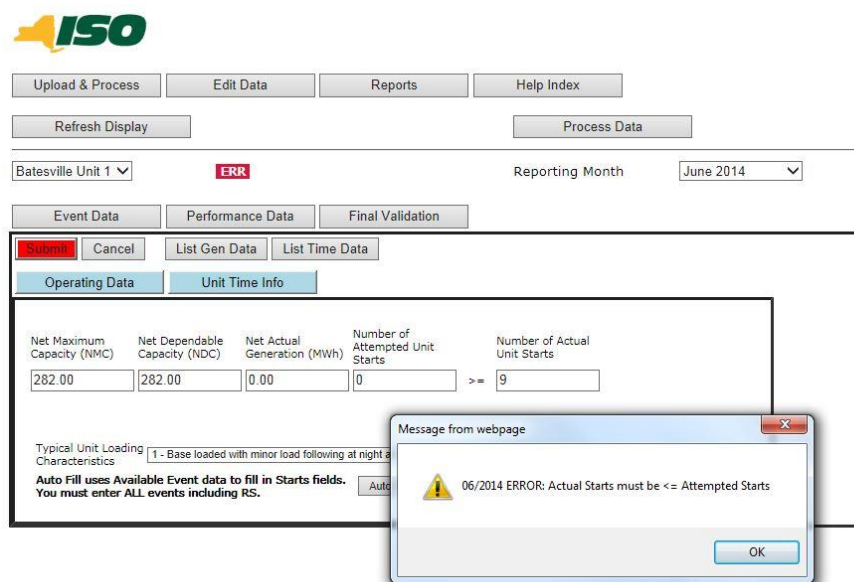

2.7.2.1 Auto Fill

Auto Fill uses available Event data to fill in the various hours fields, however, you must fill in all event data, including Reserve Shutdown (RS) events.

The hours entered into these fields should be derived independently, based on plant or control room logs. The program uses these data as a cross-check with the event data to determine if event start and ending event date/times have been entered correctly. While the feature is available for your use, it should be used with caution, particularly because it can impact data validation.

2.7.2.2 Errors

Errors are identified and displayed. In some cases, holding your mouse pointer over the red indicator displays a tool tip detailing the error message, as shown in Figure 2-10.

Figure 2-10: Tool Tip Detailing Error

2.7.3 List Performance Data

On the **Performance Data** tab are two buttons, **List Gen Data** and **List Time Data**, to produce the reports shown in

[Figure](#) 2-12: Sample Performance Listing – List Time Data

and [Figure 2-12](#). These reports may also be exported to PDF format if desired.

Figure 2-11: Sample Performance Listing – List Gen Data

Figure 2-12: Sample Performance Listing – List Time Data

2.8 Final Validation

The Final Validation step performs a consistency error check between the Event and Performance data. This step is required before you can upload data to the master databases after making ONLINE corrections.

As you enter data on each form, it is possible to validate the data in some of the fields immediately (e.g., the validation can check if the date is a valid date.)
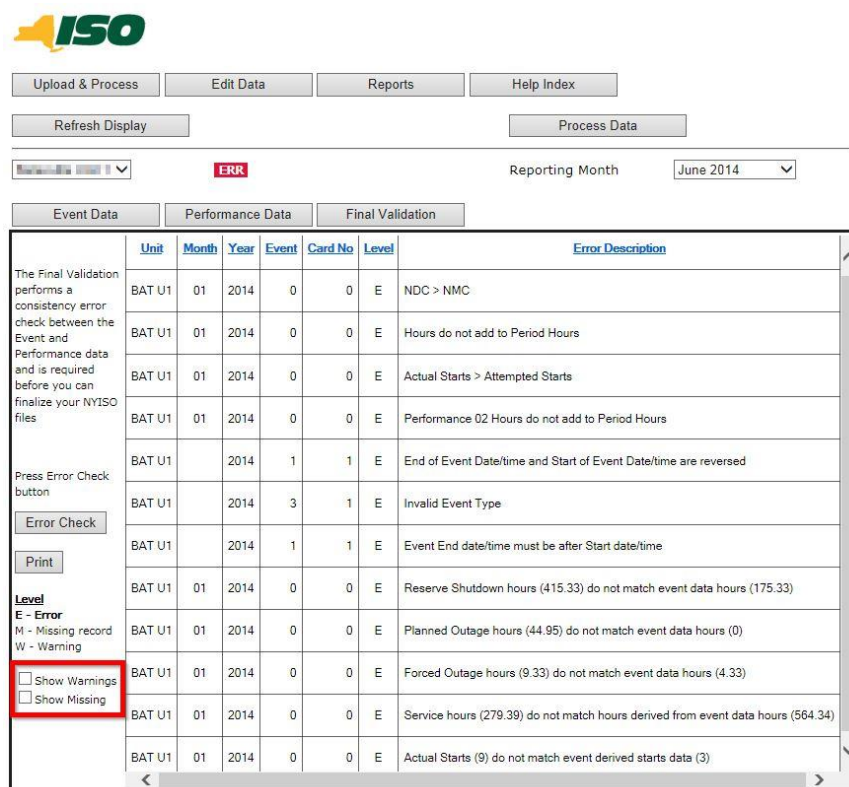
However, some data can only be validated when **Submit** is clicked on either the **Performance Data (05)** or **Event Data (07)** tab, as it depends upon consistency between two or more fields on a form (e.g., the validation can check whether the number of attempted starts is greater than or equal to the number of actual starts.)

On the **Final Validation** tab, clicking on **Error Check** causes the software to validate the consistency between the event and performance data. This process can only be done after all of the data for the month has been entered. Included in these validation checks are:

- Starts on the Performance 01 record versus the starts determined from the event data

- Hours on the Performance 02 record versus the hours calculated from the event data

- Derating available capacities being less than the dependable capacities on the Performance 01 record

While these are not the only validations performed, they indicate the types of consistency checking that is done before the data can be validated.

Figure 2-13: Final Validation

[Figure 2-13](#) shows a list of errors that can result from the final validation. Any errors that result from this error check will block the unit's data from being validated. "Warnings" do not block the data from being validated.

The fields displayed are:

- **Unit** – this is the short name for the unit

- **Month** – for performance errors, this is the calendar month that has the error

- **Year** – this is the calendar year in which the event or performance error occurred

- **Event** – for event errors, this is the event number

- **Record No**. – for event errors, this is the record number that has the error

- **Level** – this is either an **E** (error) or a **W** (warning). Errors are generally "fatal" and will prevent you from saving the data on this unit. Warnings are not fatal, but should be reviewed

- **Error Description** – a description of the error

The displayed error messages can be used as a map to correct the event and performance data as appropriate. Clicking on **Error Check** will show if all errors have been resolved. If errors still exist, repeat these steps as necessary until all errors are resolved.

It is highly recommended that you review the list of errors and warnings to ensure that all error and warning messages are expected. Warnings do not necessarily need to be corrected; they are not fatal errors, but may lead to unexpected problems.

For example, a derating that started in January and was inadvertently left "open" will only generate a warning since this is not necessarily an error; and it may be correct.

However, the calculated EFORd and EAF values calculated in GADS using this data will not be correct if the derating should have been closed back in January.

Therefore, it is important to review the list of errors and warnings each time the Error Check is run.

Figure 2-14: Process Data

Once all of the units have passed the Final Validation, press the Process Data button to finish the processing of your units' data including the Analysis portion of the Upload & Process.

2.9   Exiting the Program

Be sure to **Submit** your current work before exiting the program; otherwise, the data entered and work performed since the last **Submit** is not saved.

Exit the software by closing the browser window in your normal manner.