Member Information Reporting Application (MIRA)

User Guide

Monitoring Analytics, LLC

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Member Information Reporting Application (MIRA) User Guide

The MIRA system includes multiple data reporting functions:

1) Power Plant Operations Report - Monthly (PPOR-M);
2) Power Plant Operations Report - Continuous (PPOR-C);
3) Fuel Policy (FP)
4) RPM/ACR
5) Black Start

This MIRA User Guide provides guidance on:

1) How to get started;
2) Technical instructions on the use of the MIRA system; and
3) Guidance on the format and content of the required data.

1 MIRA Account Setup and Access

All Market Participant companies should have their PJM Customer Account Manager (CAM) log in to the MIRA system, and designate users for the Power Plant Operations Report - Monthly (PPOR-M), Power Plant Operations Report - Continuous (PPOR-C,) Fuel Policy (FP), RPM/ACR, or Black Start functions.

A single user can be given access to report data for all reporting functions (PPOR-M, PPOR-C, FP, RPM/ACR or Black Start), or the roles and access to the screens can be split among different users.

1.1 Getting Started

1.1.1 Login Procedures

To obtain an account, see the instructions in sections 1.2 Customer Account Manager (CAM) Access or 1.3 Regular User Access.

The User ID must be unique to the user and must be set up as the user's primary email address. When an account is created, a temporary password must be assigned. However, for security purposes, it is advised to have the user reset their password using the MIRA "Forgot Password?" function as described in section 1.5.

The password is suspended temporarily after three failed attempts to log into the system.

1.1.1.1 Security

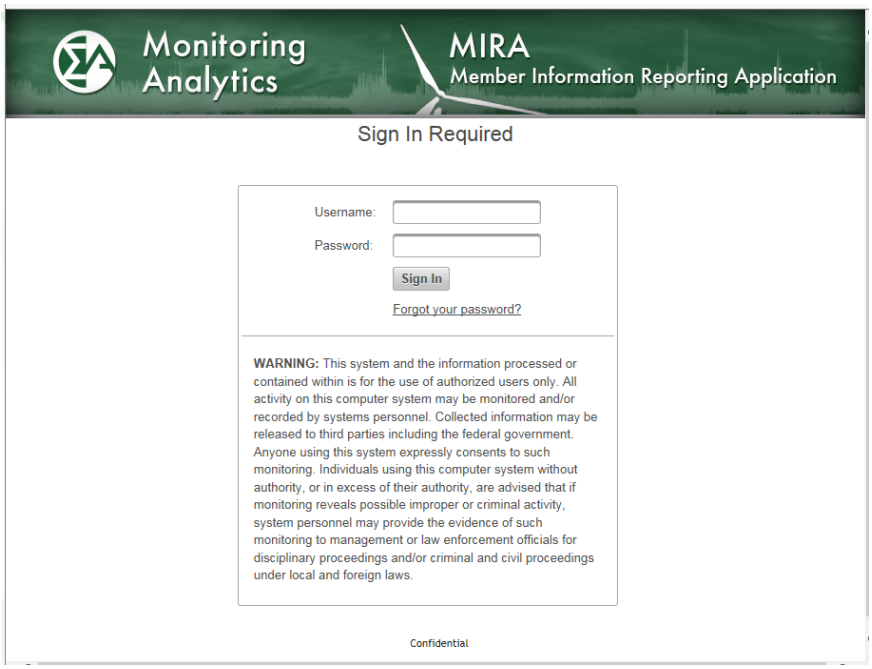
MIRA has the following security restrictions in place:

- Users are tracked when they are logged into the system. The user's IP address and date and time of the last log-off are recorded.
- Passwords are encrypted by the system before storing them in the database. Since the password is encrypted in the database, no one, including the MIRA administrator, can discern the password simply by examining it.
- The password is suspended for a short period of time after three failed attempts to log into the system.

1.1.1.2 Launching the System

- Launch Internet Explorer or other browser
- From the Monitoring Analytics website, tools page[1], click on the MIRA button to take you to the MIRA website address URL.

- You will see a screen similar to the following:



1 http://www.monitoringanalytics.com/tools/tools.shtml

- Type your user name (your full email address) in the "User Name" box
- Type your password in the "Password" box
- Click the "Sign In" button or press the return key

If you don't remember your password, or the system does not accept your credentials, please click on the "Forgot your password?" link to re-set a new password as detailed in section 1.5.

If you are unable to gain entry through the "Forgot your password?" utility, please contact the system administrator as described in section 3 Getting Help.

1.2 Customer Account Manager (CAM) Access

CAMs are associated with one or more market participant companies, and in MIRA, CAMs have the ability to create user accounts and assign reporting access rights for those companies for which they are CAM.

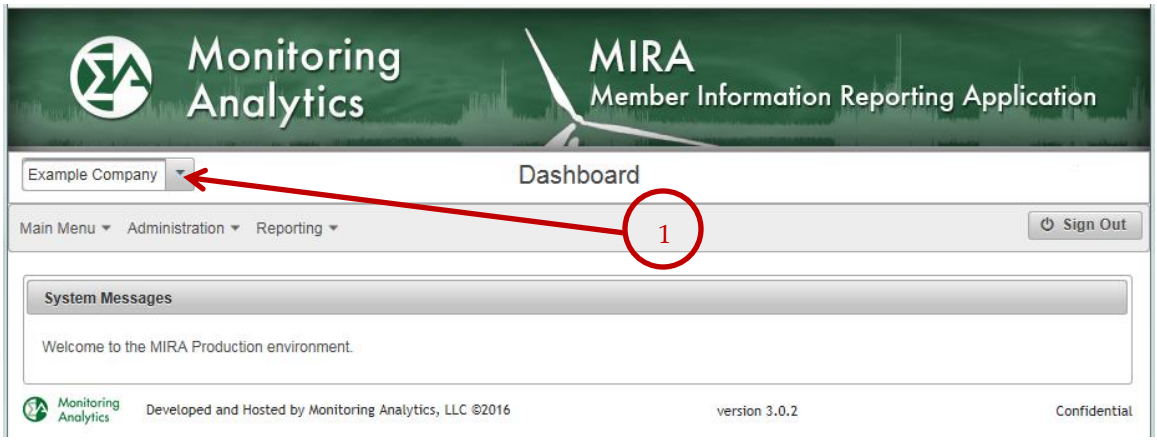
PJM maintains the list of credentialed CAMs. CAMs for companies with reporting responsibilities will be granted Account Manager access in MIRA.

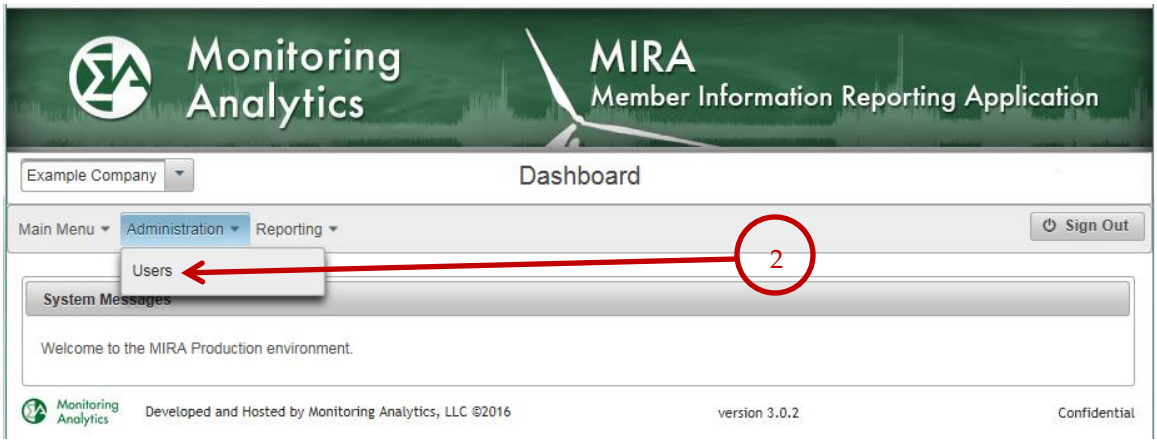
1.2.1 CAM Creating User Accounts

When a CAM logs in to the MIRA system, their "Dashboard" screen will look like the screen shot below.

Step 1: Select the Company to Administer

Upon logging in, the CAM should select the company for which they are administering accounts. The drop down selector shown in item 1 below allows the CAM the choice of only those companies for which the CAM's account has permissions. If the CAM only has permissions to one account, that company account will be selected by default.





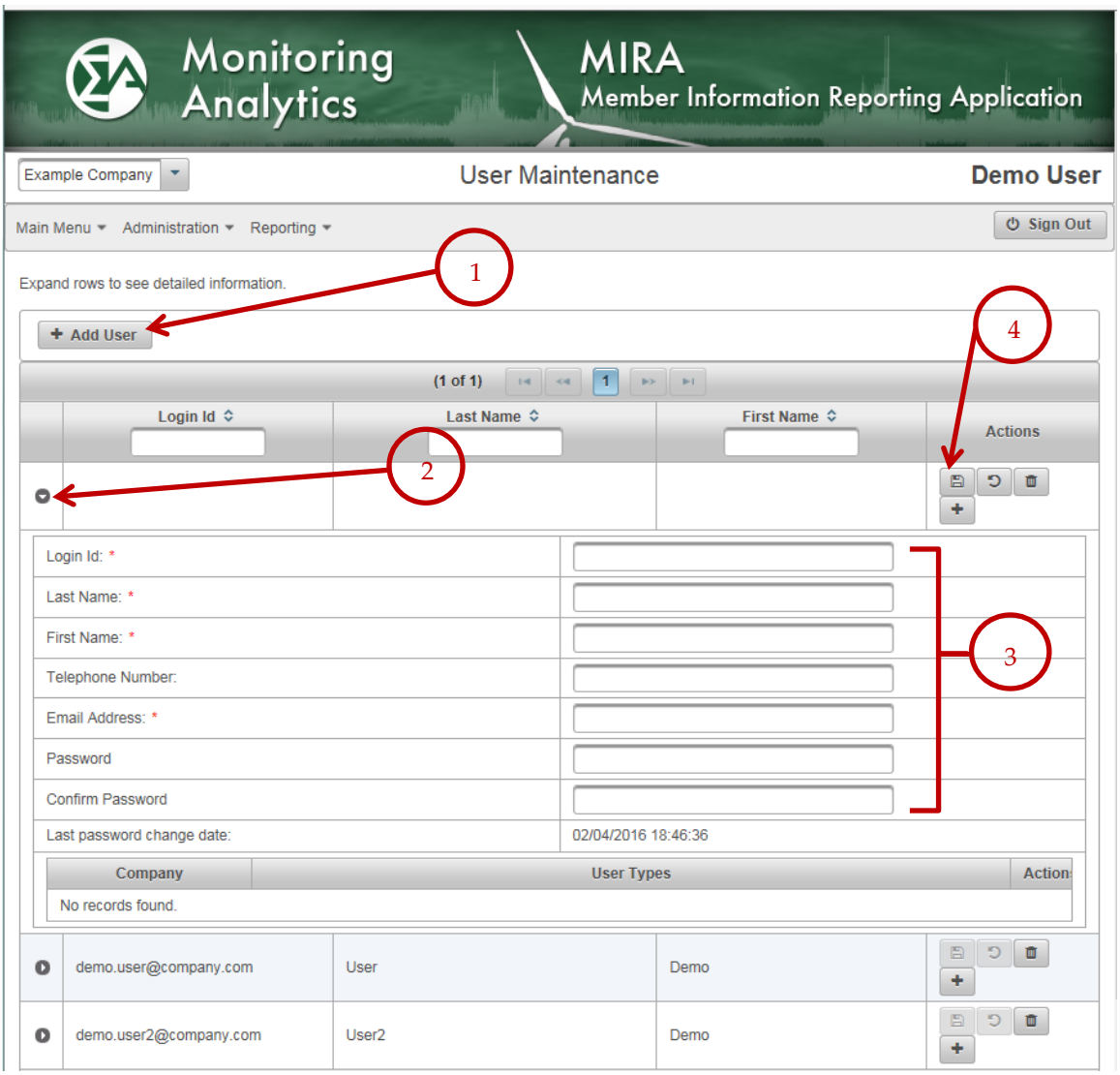
Step 2: Administer Users

To administer user accounts, the CAM should click on "Administration", then "Users" as indicated in item 2 above.

On the "User Maintenance" screen, follow the steps shown in the screenshot below:

Create a User	
Step 1	Select "Add User"(to create a new user, or proceed to step 3 to change an existing account);
Step 2	On the newly created User row, click on the arrow to the left of the row to expand the row and show the user input fields.
Step 3	Type in the new user's Login ID (this user name should be set = the user's email address), name, phone number, email address, and a temporary password;
Step 4	Remember to save the users credentials.

If you try to save the new user's record (Step 4) before populating the information in Step 3, you will get an error.



Step 3 shown above is where the new user's credentials are assigned. When the CAM clicks on the arrow in Step 3, to expand the new user record, the CAM will see the screen below.

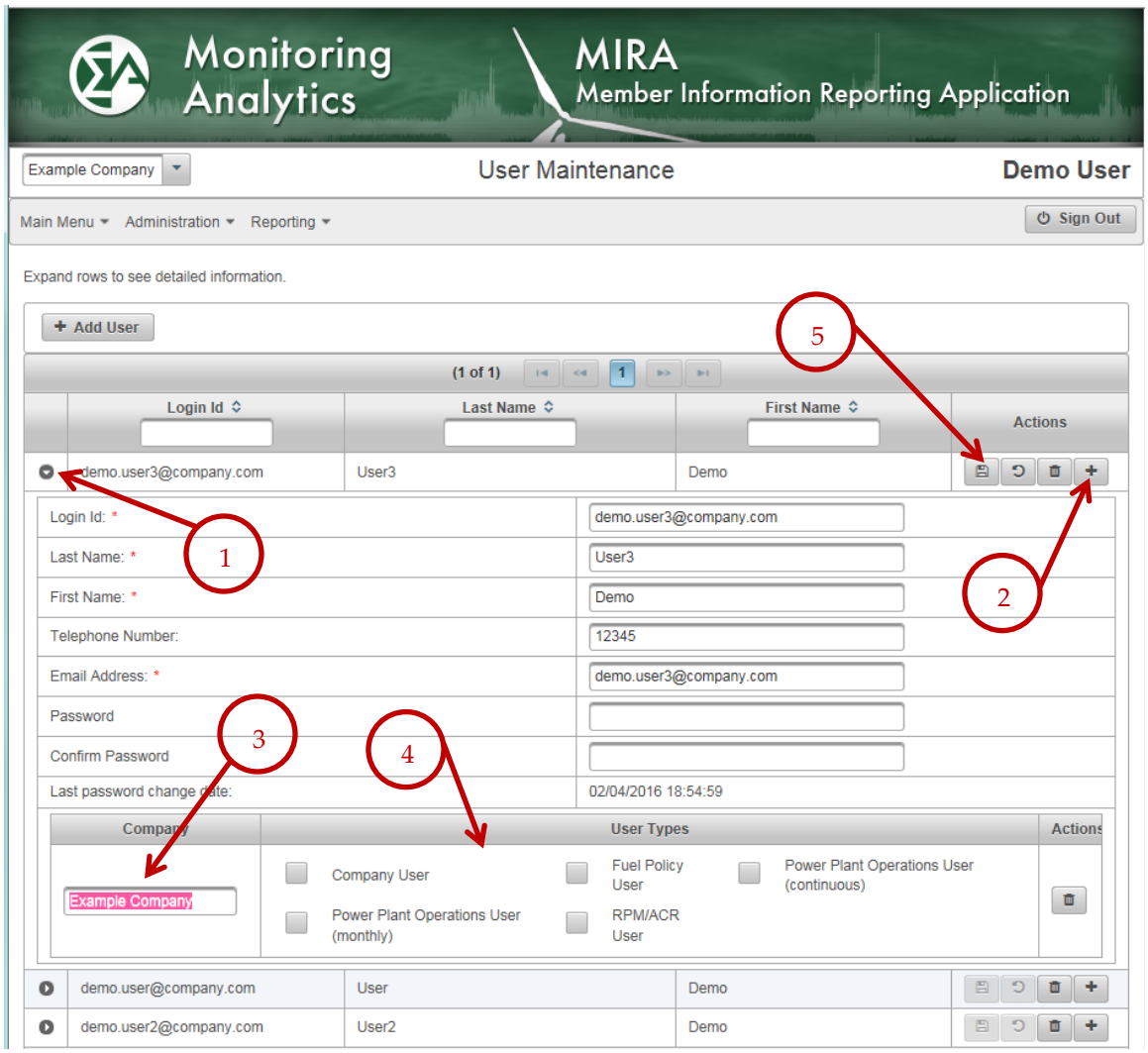
The CAM will enter the user's telephone number, email address, and a temporary password that will have to be changed on first instance of logging in. The temporary password can be communicated by the CAM to the user, or the user can simply set a new password using the "Forgot your password?" functionality (this is the recommended method).

Note: it is critical that the CAM use the correct email address in the "Email Address" field. This is the unique key that allows the user to use the "Forgot your password?" functionality.

If the system indicates that a user with the desired email address already exists in the system, the CAM cannot grant new access rights to that user. To grant these access rights, the CAM should contact Monitoring Analytics, and arrangements will be made to provide the appropriate access.

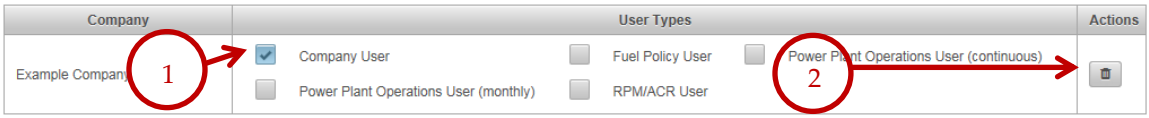
To specify a company and assign access to a reporting function for a user, the CAM will:

Assign User Access	
Step 1	Click the arrow to the left of the row to expand the row prior to adding company access.
Step 2	Click on the "+" sign to add a company access.
Step 3	Start to type in (and select from the generated drop-down list) the name of the company to assign access. The CAM can only assign access to the Market Participant company the CAM has access to.
Step 4	Check off the reporting functions for which the user should have access for that company.
Step 5	Save the user record.



In Step 4 above, if a CAM wishes to create a user account, but doesn't want to provide access to any functions for that company at the time of account creation, the CAM can assign the user access to the "Company User" role, which has no reporting ability. (See item #1 below).

In Step 4 above, if a CAM wishes to delete access to a company, use the "trash can" icon to delete the company access record from the user's account. (See item #2 below).



1.3 Regular User Access

When a CAM sets up a user account, the CAM should communicate the following information to the new user:

1) That their account ID is their email address.
2) The URL for the Monitoring Analytics "Tools" page (http://www.monitoringanalytics.com/tools/tools.shtml) and how to connect to the MIRA system.
3) To establish a new password, use the "Forgot your password?" function, as described in section 1.5.

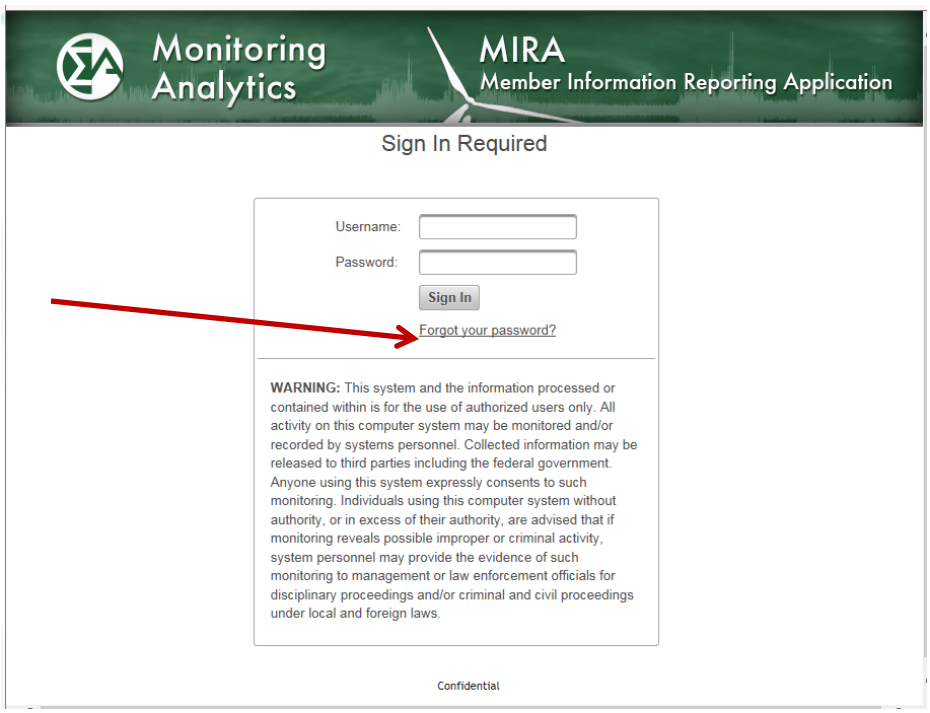
1.4 Password Rules

Passwords are encrypted by the system before storing them in the database. Since the password is encrypted in the database, no one, including the MIRA administrator can discern the password simply by examining it.

- Password must be at least 8 characters long.
- Password must contain characters from at least 3 of the following 4 categories; {ABCDEFGHIJKLMNOPQRSTUVWXYZ}, {abcdefghijklmnopqrstuvwxyz}, {0123456789}, {~!@#$%^&*_-+=`|\(){}[]:;'"<>,.?/}

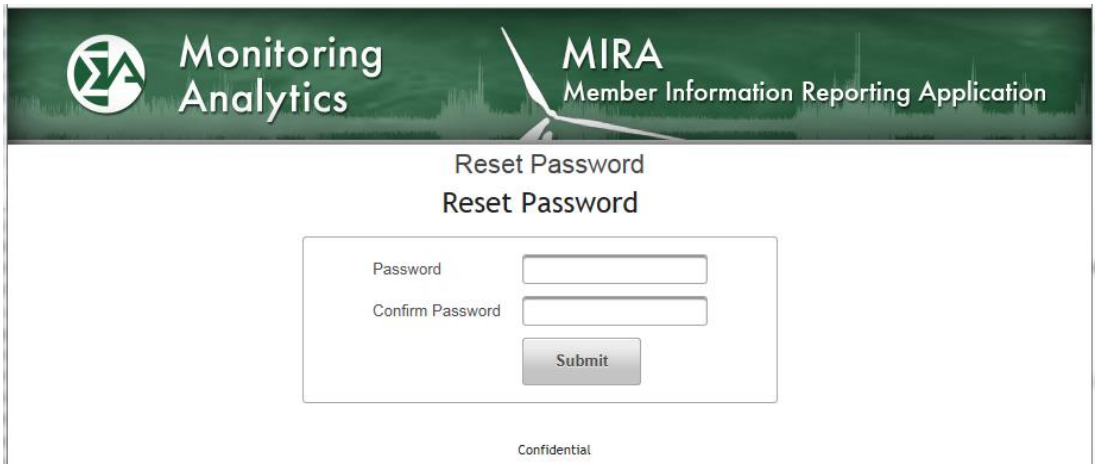
1.5 Forgot Your Password?

When first logging in, or whenever a CAM or a User forgets their password, they can reset their password with the "Forgot your password?" function. On the log in screen, click on "Forgot your password?":



The user will be prompted to enter their email address. If the email address matches the email of a user in the system, that user will be emailed a link. Clicking on the link will take the user to a change password prompt. Clicking on "Submit" lets the user return to the log in screen, where the new password will be effective.

If the user never receives the email link, it usually means that the email address is not set up correctly in the user profile in the system, or it means that the user's company firewall/spam filter is rejecting the email with the link. In either case, please contact the Monitoring Analytics system administrator as described in Section 3.



2 Technical Guidance

2.1.1 System Requirements

The following minimum system requirements should be met before attempting to access the MIRA system:

- You must have a personal computer with access to the MIRA website using Microsoft Internet Explorer 10 or more recent version, or the current version of Google Chrome browser. Other internet browsers can be used successfully, but the system is optimized for IE 10.
- If you are experiencing poor browser performance in the application, try clearing your browser's cache. To do so in Internet Explorer, go to Tools >> Internet Options, and under the General tab, select Delete.
- If your browser continues to perform poorly, contact the Monitoring Analytics system administrator as described in Section 3.

2.1.2 Menu Bar

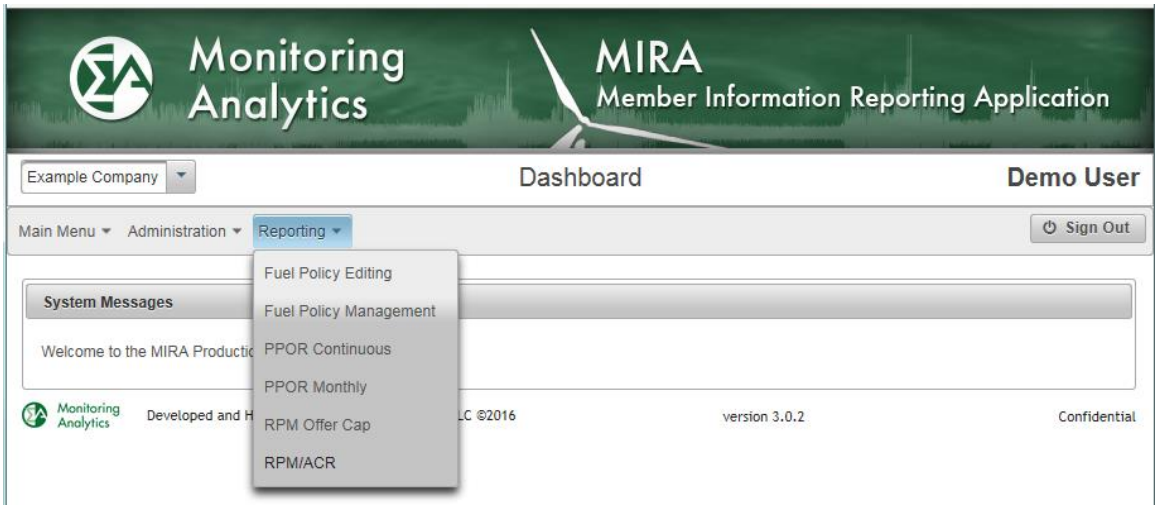
Once the user has successfully logged into the system, the main system "Dashboard" screen appears with a menu bar under the main banner. This menu bar allows the user to access user tools and reporting functionality in the MIRA system. The menu bar remains beneath the MIRA banner, no matter which screen in MIRA you navigate to.

Options in the menu bar include:

- **Company selection:** for accounts with access for more than one company, this drop down in the upper left corner lets the user select which company they are reporting for, or if the user is a CAM, which company they wish to administer accounts for.
- **Sign Out:** Users should always click on "Sign Out", in the upper right corner, under the user's name to end their session.
-
- **Main Menu**
    - **System Administrator Help (Help):** Opens a web browser window with information about the MIRA system.
    - **Market Monitor Help (Contact):** Opens a web browser window connecting to the Monitoring Analytics web page, with contact information.
    - **Dashboard:** during any session, this returns the user to the dashboard screen. The dashboard is the login landing page, and may include system messages about upcoming outages.
    - **Change Password:** Click here to change your password.
- Administration

- **Users**: If the user has Account Manager privileges, the Users link will go to the Users list, allowing administration of user access to the selected company.

- Reporting: each of the reporting modules that the user has access to for the selected company is accessed under this menu item.
  - Black Start
  - Fuel Policy Editing
  - Fuel Policy Management
  - PPOR Continuous
  - PPOR Monthly
  - RPM Offer Cap
  - RPM/ACR
-



2.1.3 Ending a Session in MIRA

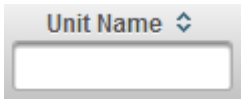
- Clicking on the "Sign Out" button in the upper left corner will bring the user back to the initial login screen.
- If a user is inactive for a set period of time, a session time-out process will be initiated. A warning will be presented to the user that session time out is about to occur. If the user does not respond to the warning within one minute (or within a timeframe established by the Monitoring Analytics system administrator) the session will be terminated, and the user will have to log back in to resume activity in the system.
- It is not recommended that a user terminate a session by closing the browser window while logged in. Using the "Sign Out" link will terminate the session.

Note: Before going to a different web site or closing the browser, the user should logout from the system. Abrupt termination (closing the browser while the application is

running) may cause the user account to remain connected for a period of time until the session times out. Attempts to connect to any page in the MIRA system during this period of time will return the user to their active session.

2.1.4 User Interface Operators

The following describes some of the buttons available to users to navigate the MIRA system.

Open	
Save	
Discard Changes	
Delete an item	
Expand an item	
Add a record	
Sort	
Filter: filters the contents of the column based on entered text	
Drop down box with the possible values for the field	

3 Getting Help

To get technical help with the MIRA system, please contact the Monitoring Analytics system administrator:

- Help Desk Email: mira@monitoringanalytics.com
- For additional information, the system administrator's MIRA web page is: http://www.monitoringanalytics.com/tools/tools.shtml
- ***Never give the system administrator or any other help desk support staff your passwords for any accounts.***

4 Reporting Enforcement and Data Confidentiality

Monitoring Analytics will review and enforce participation requirements.

Monitoring Analytics will use the data for verification and analysis of generator costs.

Monitoring Analytics treats all submitted data as confidential in accordance with the PJM Tariff and applicable non-disclosure agreements.

5 Reporting Function Overviews

When a user logs in to the MIRA system, and selects a company to report for, the user should then select which type of data they wish to report.

- PPOR (Monthly)
- PPOR (Continuous)
- Fuel Policy
- RPM/ACR
- Black Start

The choice of data reporting function can be made on the menu bar, as shown above in section 2.1.2. Only the reporting functions for which a user has been granted access for the selected company will be available to the user.

5.1 Power Plant Operations Report (PPOR) Overview

The Power Plant Operations Report (PPOR) consists of two components: Monthly plant level data and Continuous unit level data.

5.1.1 PPOR Monthly Plant Level Data Overview

PPOR Monthly data captures records of the fuel delivered and consumed at the plant each month, and the plant fuel stocks at the end of the month. This monthly data is similar to the data required by the Energy Information Administration (EIA) at the U.S. Department of Energy, in form EIA-923.

Form 923 collects information from all electric power plants, including data on electric power generation, fuel consumption, fossil fuel stocks, and delivered fossil fuel cost and quality. These data are used to monitor the status and trends of the electric power industry and analyses based on these data appear in many Energy Information Administration (EIA) publications.

In addition to the EIA 923 data, the MIRA PPOR Monthly data also requires reporting of a Fuel Index for fuel deliveries, which provides Monitoring Analytics with the ability to infer a price basis for the delivered fuel.

Data can be entered manually through a graphical user interface, or by uploading an XML, XLS, or XLSX file. The input files can be generated by entering the data into the interface manually, then exporting to an XML, XLS, or XLSX output file, which can be updated and re-imported for other months or other plants.

Participants must report PPOR Monthly data into MIRA within 45 days following the end of the data month.

(Example: August data must be reported by October 15.)

5.1.2 PPOR Continuous Unit Level Data Overview

PPOR Continuous data captures a snapshot of a unit's operating cost drivers, such as:

- Start and shutdown fuel quantities
- Station service energy and cost rates
- Variable Operations and Maintenance (VOM) and labor costs
- No load costs
- Heat rates

The data is referred to as "Continuous" because it is not reported on a monthly basis, it is reported in a single record for each unit, and that record remains continuously available to update when the unit's operating conditions change, and the record is continuously applicable to offer mitigation. Monitoring Analytics expects that the data reported for these cost elements will be updated frequently enough to maintain consistency with the underlying assumptions of the generating unit's cost based offers.

5.1.3 Power Plant Operations Report Data Revisions and Corrections

Contact the Monitoring Analytics if you need to update or correct any data from prior months. With Monitoring Analytics approval, prior months' records can be re-opened for editing.

5.2 Fuel Policy Overview

Any PJM market participant with a generating unit that may be mitigated or that offers into the energy market on a cost basis must submit a fuel cost policy to Monitoring Analytics for approval. All such generating units must have a Monitoring Analytics-approved fuel policy on record.

The Fuel Policy Editing function provides for a workflow with the ability for market participants to edit, save, and submit fuel policy documents to Monitoring Analytics for approval, and allows Monitoring Analytics to review and approve or reject the fuel policies. Market participants have a Fuel Policy Management screen in which they can assign approved fuel policy documents to specific units. Fuel Policies documents

assigned to units may not be changed for a defined period of time (one year) without Monitoring Analytics approval. After one year of a fuel policy being associated with a unit, the assignment lock expires, and the market participant may choose to assign a different approved fuel policy to that unit.

A sample fuel policy document can be found on the Monitoring Analytics website at: http://www.monitoringanalytics.com/tools/tools.shtml.

The Fuel Policy Management function also provides for market participants to report the following data for every unit (where applicable):

- Inventory Cost method
- Spot Price Source
- SO_2, CO_2, NOx, Hg allowance price index sources
- SO_2, CO_2, NOx, Hg emissions rates
- Fuel VOM (handling cost)
- Pumping Efficiency
- Nuclear Fuel Cost

6 Power Plant Operations Report (PPOR) Monthly Plant-Level Data

6.1 Create a Monthly Report

This section of the MIRA User Guide describes the data that is required in the Monthly Power Plant Operations Report. Detailed steps for reporting monthly data are explained below.

Step 1: Add a monthly report

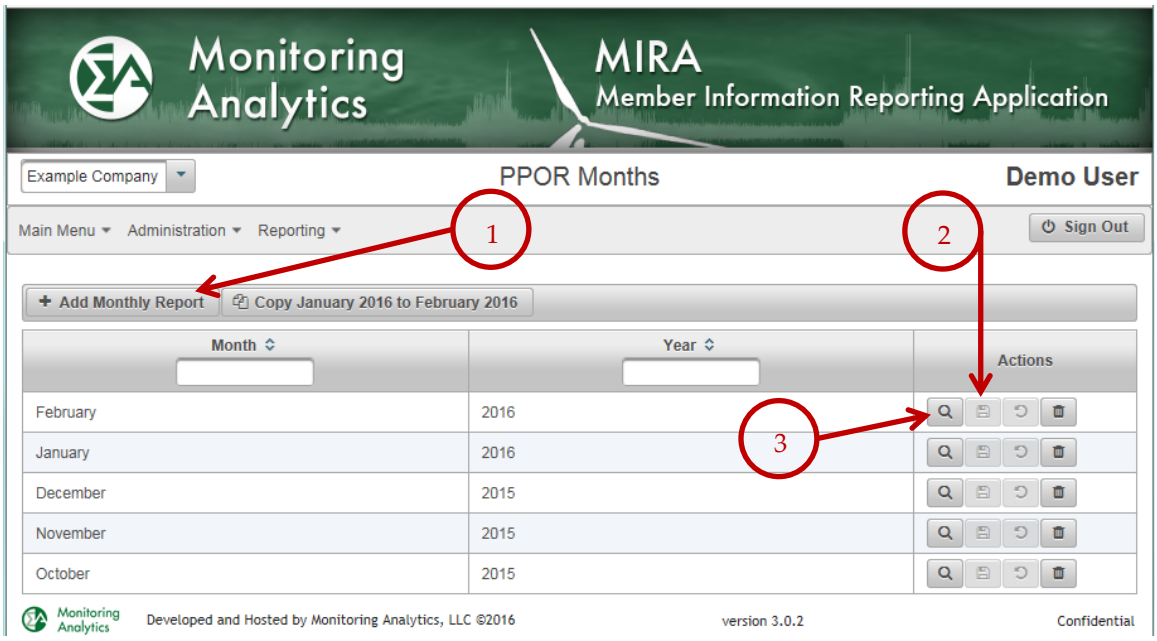
The PPOR Monthly function requires a new record to be created for each plant, each month. In the PPOR Monthly screen, to create a new monthly record, click on "Add Monthly Report", as shown in item #1 below. A new row will appear, showing the current month and year. If you wish to report for a prior month that is not locked, you can click on the month name, and select a different month. If the month is locked, you won't be able to save a monthly record for that month. You can contact Monitoring Analytics to request approval to unlock prior months.

Step 2: Save the monthly report

Once a monthly report has been initiated, save the month, as shown in item #2 below. Saving now creates a record in the database for the desired month. **NOTE:** The monthly report cannot be opened for reporting until it is saved.

Step 3: Drill into the monthly report to provide the required detailed data, as shown in item #3 below.

Once the monthly report has been created and saved, click on the "Magnifying glass" icon to open the monthly report and add data for each plant.



6.2 Create a Plant Record

The PPOR Monthly reporting function requires data for each plant. When the user drills into their monthly report, they can create a record for each plant, then drill in and report their fuel deliveries, consumption, and stocks.

Step 1: Add a plant report (or Add All Plants)

For each monthly report, the user must create records for each of the plants owned by the Asset Owner the user is reporting for. To add a plant, the user should click on "Add Plant" as shown in item #1 below. The user may also click on "Add All Plants" to create records for each plant owned by the reporting company.

Step 2: Select the plant to report

When a new plant record has been added, the plant name in the Plant column will say "No plant selected", as shown in item #2 below. When the user clicks on this text, the field becomes editable, and the user can begin to enter the name of the plant. The system will provide a list of plant names that contain the characters typed in, and the user can select the intended plant from that list.

Note: this process of manually adding the list of plants can be avoided in future months by exporting the completed monthly report for a prior month, and then updating the data for the current month, and re-importing the file, or the user can reimport the prior months export file into the current month, and manually edit the values that have changed. See Section 6.3 Importing/Exporting PPOR Monthly Data for details on importing and exporting data records.

Step 3: Save the plant report

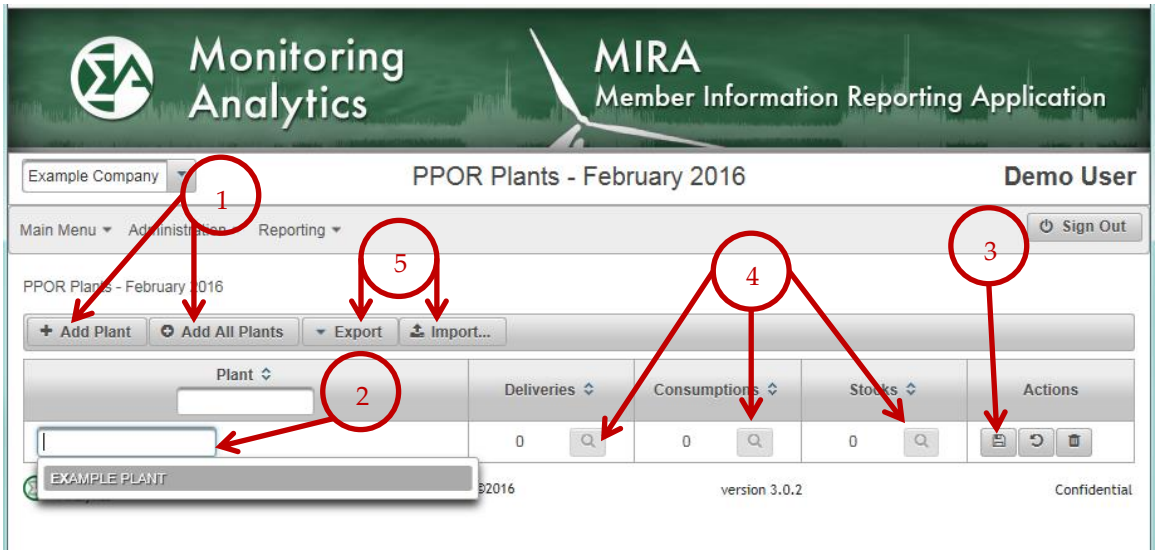
Once the plant has been selected, and before you drill into the details of the plant report, the user should save the plant record, as shown in item #3 below.

Step 4: Drill into the details

The PPOR Monthly reporting function has three reporting screens for each plant:

- Fuel Deliveries
- Fuel Consumption
- Fuel Stocks

These three reporting screens can be opened by clicking on the magnifying glass icon under each of the three columns shown in item #4.



6.3 Importing/Exporting PPOR Monthly Data

Users can import or export a PPOR Monthly record into XML, XLS, or XLSX format. This process can be started by clicking on the Import or Export buttons in the PPOR Plants screen within a monthly record, as shown in item #5 above.

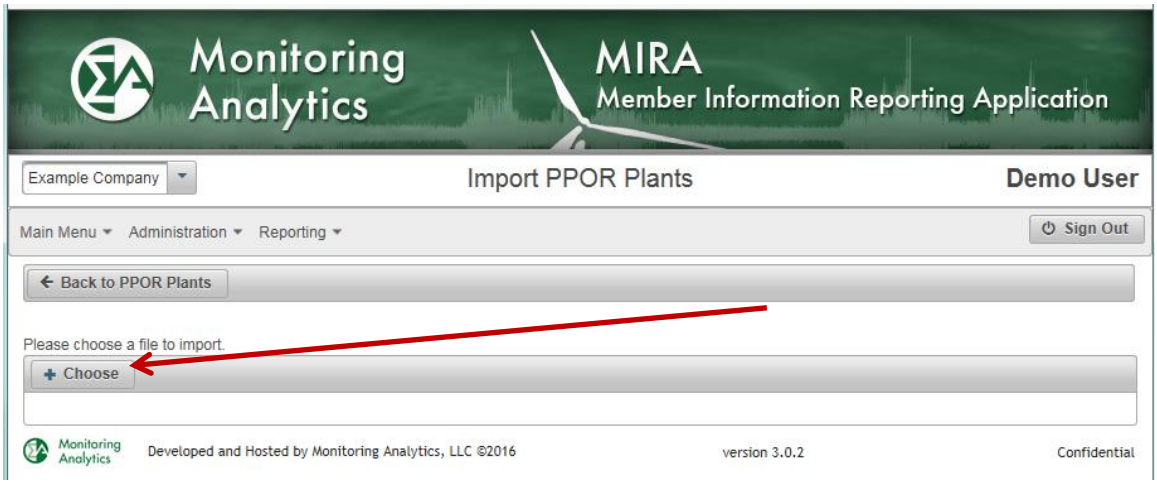
6.3.1 Exporting a PPOR Monthly Record

To Export a PPOR Monthly record, the user clicks on "Export" as shown above and must select the desired export file type (XML, XLS, XLSX). The record is then immediately generated.

Excel spreadsheet output files provide an output with four tabs: Plants, Deliveries, Consumptions, and Stocks. For XML output, a single output file is created with nested data tags to capture the entire PPOR Monthly report.

6.3.2 Importing a PPOR Monthly Record

To Import a PPOR Monthly record, the user clicks on "Import" as shown above, then uses the "Choose" button to navigate to and select the desired input file.



Note, if you are trying to import a file based on the export of an existing record, you will need to delete the contents of the "Delivery Code" column on the "Deliveries" tab, and delete the contents of the "Consumption Code" on the "Consumptions" tab. (The same rule applies to the equivalent codes for XML imports). Trying to re-import with a pre-existing Delivery Code or Consumption Code will result in a validation error (Delivery Code already exists) if you are importing for a new month, or it will overwrite the existing record if you are importing for the same month you exported the data from. Importing a record with null Delivery Codes or Consumption Codes will create new records.

Fields requiring selection of physical units (Type of Physical Units) must match the allowable values from the drop-down, which include (note the case of these items):

- barrels
- Mcf
- short tons
- MWh

Also note that the PPOR Monthly (Deliveries screen) values for the "No Receipts" and "Fuel Tolling Agreement" binary check boxes are to be formatted as "True/False" in the XML version, and as "Yes/No" in the XLS and XLSX versions of the input file for import.

Debugging Upload Errors

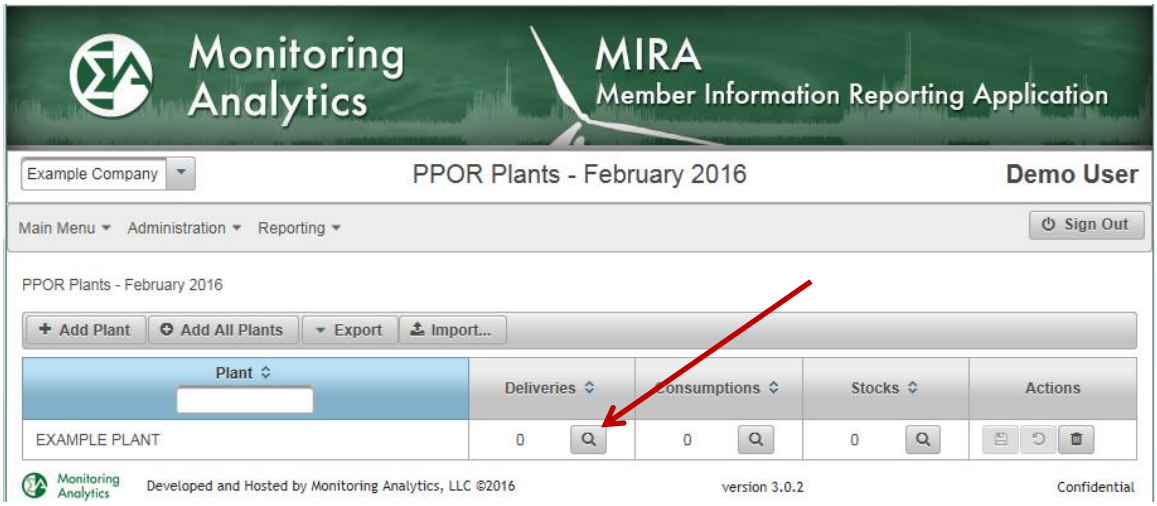
If the XML, XLS, or XLSX upload process encounters any errors, the entire upload is abandoned, and no MIRA records are updated. The entire file must be updated to fix any errors, and re-loaded. When an upload error is detected, a validation error message will appear, explaining the error. In the event that the error message does not provide adequate information about the nature of the error, please email the Monitoring Analytics system administrator, and include the error message that was encountered. The system administrator will assist in identifying the error and making corrections.

If additional debugging is necessary, you may be asked to provide a copy of the file that is failing the upload validation process.

6.4 PPOR Monthly Fuel Deliveries: Detail

Market Participants are required to report the data for every fuel delivery received at each plant. If a plant receives numerous deliveries of the same fuel from the same supplier, these similar delivery records can be consolidated into a single delivery record. Please contact Monitoring Analytics for guidance on an acceptable level of consolidation.

To report Monthly Fuel Deliveries for the selected plant, click on the magnifying glass as shown below.



The PPOR Deliveries Screen will appear, giving the user the ability to report multiple fuel deliveries for the selected plant for the reporting month.

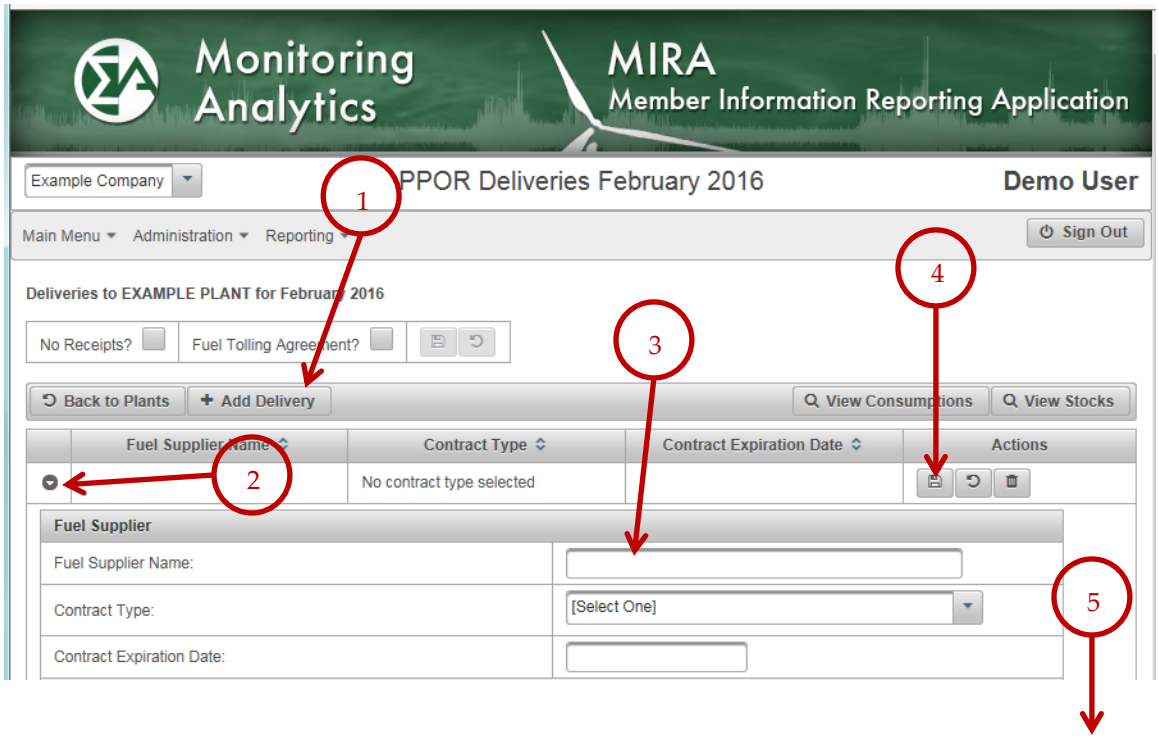
6.4.1 Creating a Delivery Record

To create a record of a delivery:

Create a Fuel Delivery Record	
Step 1	Select "Add Delivery"
Step 2	Click on the arrow to the left of the row to expand the row and reveal the data entry fields
Step 3	Enter the Fuel Supplier Name, the "Contract Type" for that delivery, and enter the Contract Expiration Date for that delivery.
Step 4	Save the new fuel delivery record.
Step 5	Scroll down within the delivery record and report the details for that fuel delivery.

Note: if a plant does not receive any fuel deliveries for that month, no delivery records are required, but the user should select the "No Receipts?" check box.

Note: if the plant has a fuel tolling agreement in place and doesn't have the fuel delivery detail, please check the "Fuel Tolling Agreement?" check box. Monitoring Analytics may follow up to gather additional information.



6.4.2 Reporting Details for a Fuel Delivery

When the Fuel Delivery row is expanded, the user sees the following screen. The user should enter the requested data prior to leaving the screen.

The details for each of the required data fields are documented in Sections 6.4.3 and 6.4.4.

Receipt	
Energy Source:	[Select One]
Fuel Index:	[Select One]
Quantity Purchased:	
Cost per Unit	
Total Delivered Cost:	
Commodity Cost:	
Quality of Fuel as Received	
Heat Content:	
Sulfur Content:	
Ash Content:	
Mercury Content:	
Fuel Transportation	
Natural Gas:	[Select One]
Predominant Mode:	[Select One]
Secondary Mode:	[Select One]
Coal Mine Information	
Coal Mine State:	[Select One]
Coal Mine MSHA ID:	
Coal Mine Type	[Select One]
Coal Mine Name:	
Coal Mine County:	

6.4.3 Data Detail: Delivery Contract Information, Receipts, and Costs

The required data in the PPOR Monthly records uses the same definitions as that for the EIA Form 923. Market Participants should report data in a consistent format with how they report to EIA.

6.4.3.1 Contract Information

1. Fuel Supplier Name:

Coal Receipts: Report data by supplier and mine source. (Purchased coal which will be converted to synthetic gas should be reported as it is received, i.e. as a coal product.) Coal received from spot-market purchases and from contract purchases should be aggregated separately. Data on coal received under each purchase order or contract with a supplier must be reported separately. Coal purchases cannot be aggregated unless supplier, purchase type, contract date, coal rank, transportation mode, costs, fuel quality, and all mine information are identical. If coal received under a purchase order or contract originates in more than one State/county/mine and the mines are known as well as the amount received from each mine, split the amount received accordingly between the number of different mines and report identical quality and prices (unless the actual quality and prices are known).

Petroleum Receipts: Report data by fuel type, supplier or broker, or refinery and, if applicable, port of entry. Oil received from spot-market purchases and from contract purchases must be reported separately. Report individual shipments as separate line items.

Gas Receipts (monthly and annual respondents): Report data by fuel type and supplier. Aggregation of gas deliveries from various suppliers is allowed only if 1) the deliveries are spot purchases, 2) the type of gas is the same (either NG, OG, or PG), and 3) the transportation contracts are identical (either firm or interruptible). For aggregated deliveries, report the pipeline or distributor in the supplier column and the weighted average cost and quality of the fuel. Contract purchases must be reported as separate line items and should never be aggregated. For gas produced by the plant (e.g., BFG), list the supplier as "self-produced". Do not report land fill gas (LFG) in the category of other gases (OG) because LFG is not a fossil fuel. Do not report gas injected into storage. Report it when it is delivered to the plant. Do not report any costs associated with storage.

For fuel purchased via a hedging contract, report the actual fuel supplier, not the hedge contract. Report the cost net of gains/losses as a result of the contract.

2. Contract Type: Use the following codes for coal, petroleum and natural gas purchases:

C – Contract Purchase – Fuel received under a purchase order or contract with a term of one year or longer. Contracts with a shorter term are considered spot purchases. (See below.)

NC – New Contract or Renegotiated Contract Purchase – Fuel received under a purchase order or contract with duration of one year or longer, under which deliveries were first made during the reporting month.

S – Spot-Market Purchase – Fuel received under a purchase order or contract with duration of less than one year.

3. Contract Expiration Date: Use the date picker to select a year, month and day for the contract expiration date. If Contract Type contains an "S" for spot-market purchase, please include the current data month for Contract Expiration Date.

6.4.3.1.1 Receipts

4. Energy Source: Identify purchased fossil fuels (including start-up and flame stabilization fuel) using the energy source codes posted at http://www.monitoringanalytics.com/tools/tools.shtml for coal, petroleum products, and natural gas and other gases.

5. Fuel Index: Select from a provided drop down list of available fuel indices, based on the Energy Source selected in (6).

See the list of Fuel Indices posted at http://www.monitoringanalytics.com/tools/tools.shtml. Reporting in MIRA requires additional detail on the source, quality, and transportation of the fuel, in the form of common fuel indices.[2] In the event that none of the indices applies, please contact Monitoring Analytics to discuss the addition of new indices.

6. Quantity Received: Enter quantities in tons for coal and other solid fuels, barrels for oil and other liquid fuels, and thousands of cubic feet for gas. The receipts reported should pertain to the fuel that will ultimately be used only in the electric power plant for the generation of electricity and at combined heat and power plants for useful thermal output (process steam, district heating/cooling, space heating, or steam delivered to other end users). As far as possible, do not include fuel that will be used in boilers with no connection to an electric power generator and are not part of the electric power station.

If these fuels cannot be separated, please provide a comment in the "Stocks" screen. Start-up and flame-stabilization fuels should be reported. When fuel is purchased by and received at the plant and is resold, report the total receipts minus the amount sold. See the below instruction regarding how to report the costs.

[2] The choices available to populate the drop-down menu for Fuel Index are defined in: http://platts.com/MethodologyAndSpecifications.aspx.

7. Type of physical units

Solids (Tons)

Liquids (Barrels)

Gases (Mcf – thousands of cubic feet)

Pumped Storage (MWh)

Compressed Air (MWh)

6.4.3.1.2 Cost of Fuel

1. Total Delivered Cost (all fuels): Enter the delivered cost of the fuel in cents per million Btu to the nearest 0.1 cent. This cost should include all costs incurred in the purchase and delivery of the fuel to the plant. It should not include unloading costs. Do not include adjustments associated with prior months' fuel costs. The delivered price for fuel shipped under contract should include any penalties/premiums paid or expected to be paid on the fuel delivered during the month. These adjustments should be made only by revising the appropriate prior months' submissions. The current month fuel costs should reflect only costs associated with the current month fuel deliveries. If fuel received at the plant is resold, report the commodity cost and the total delivered cost as the cents per MMBtu paid for the original receipt. Do not discount the costs by the revenue received for the sale of the fuel.

For natural gas, include the following pipeline charges: fuel losses, transportation reservation charges, balancing costs, and distribution system costs outside of the plant. Because these types of fees can skew the cost of the fuel per MMBtu, please provide an explanation in a Schedule 9 comment, e.g. "This price includes a reservation fee of X dollars."

2. Commodity Cost (Coal and Natural Gas Only): The commodity cost is the price of that fuel (in cents per million Btu) at the point of first loading (free on board mine/transportation pipeline (FOB)) including taxes and any quality-related charges or credits. The commodity cost does not include: loading and unloading charges, dust proofing, freeze conditioning, switching charges, diesel fuel surcharges, pipeline charges, or any other charges relating to the movement of the fuel to the point of use. In the case of natural gas this is typically the price of the gas FOB the transmission pipeline.

6.4.4 Data Detail: Quality of Fuel and Transportation Information

6.4.4.1 Quality of Fuel

1. Heat Content: Enter the actual (not contractual) average Btu content for each fuel purchase in terms of million (MMBtu) per ton for solid fuel, MMBtu per barrel for liquid fuel, and MMBtu per thousand cubic feet for gas. Show to the nearest 0.001 MMBtu.

2. Sulfur Content: For all fuels except gas, enter the sulfur content of the fuel in terms of percent sulfur by weight. Show to the nearest 0.01 percent. Refer to Table 1 for approximate ranges.

3. Ash Content: For coal only, enter the ash content of the fuel in terms of percent ash by weight. Show to the nearest 0.1 percent. Comment if the reported ash content for coal is an estimate. Refer to Table 1 for approximate ranges.

4. Mercury Content: For coal only, enter the mercury content in parts per million (ppm). Show to the nearest 0.001 parts per million (ppm). If lab tests of the coal receipts do not include the mercury content, enter the amount specified in the contract with the supplier. Refer to Table 1 for approximate ranges. If mercury content is unknown, enter 9.

Table 1 Fuel quality metric ranges

Fuel Type	% Sulfur	% Ash	PPM Mercury
BIT	0.4 - 6.0	4.0 – 30.0	2.000 – 0.001
LIG	0.4 - 3.0	5.0 – 35.0	2.000 – 0.001
SUB	0.2 - 1.5	3.0 – 15.0	2.000 – 0.001
WC	0.3 - 6.0	5.0 – 50.0	2.000 – 0.001
DFO	0.0 - 1.0		
JF	0.0 - 1.0		
KER	0.0 - 1.0		
PC	1.0 - 7.0		
RFO	0.2 – 4.5		
WO	0.0 – 4.5		

6.4.4.2 Fuel Transportation

1. Natural Gas: Use the following codes for natural gas transportation service:

F – Firm – Gas transportation service provided on a firm basis using facilities that were designed, installed, and dedicated to a certified quantity of service. The contract with the gas transportation company anticipates no interruption of gas transportation service. Firm transportation service takes priority over interruptible service.

I – Interruptible – Gas transportation service (usually low-priority service) provided under schedules or contracts which anticipate and permit interruption on short notice, generally in peak-load seasons, by reason of the claim of firm service customers and higher priority users.

(Note: Natural Gas received under firm contracts must be aggregated separately from interruptible contracts.)

2. Predominant Mode: The method used to transport the fuel over the longest distance from point of origin to consumer. If the shipment involves only one mode of transportation, that is the Predominant Mode. If the shipment involves more than one mode of transportation, see Secondary Mode below.

3. Secondary Mode: If more than one method of transportation is used in a single shipment, the Secondary Mode of transportation is the second longest method used to transport the fuel to consumer. If more than two methods are used in a single shipment, only the Predominant and Secondary Modes should be reported.

Do not report "truck" as a transportation mode if trucks are used to transport coal exclusively on private roads between the mine and rail load-out or barge terminal.

Do not report the transportation modes used entirely within a mine, terminal, or power plant (e.g., trucks used to move coal from a mine pit to the mine load-out; conveyors at a power plant used to move coal from the plant storage pile to the plant).

For mine mouth coal plants, report "Conveyor" as the Predominant Mode if the conveyor feeding coal to the plant site originates at the mine. Otherwise report the Predominant Mode (typically truck or rail) used to move the coal to the plant site.

Report Transportation Modes using the following codes:

RR – Rail: Shipments of fuel moved to consumers by rail (private or public/commercial). Included is coal hauled to or away from a railroad siding by truck if the truck did not use public roads.

RV – River: Shipments of fuel moved to consumers via river by barge. Not included are shipments to Great Lakes coal loading docks, tidewater piers, or coastal ports.

GL – Great Lakes: Shipments of coal moved to consumers via the Great Lakes. These shipments are moved via the Great Lakes coal loading docks, which are identified by name and location as follows:

Conneaut Coal Storage & Transfer, Conneaut, Ohio

NS Coal Dock (Ashtabula Coal Dock), Ashtabula, Ohio

Sandusky Coal Pier, Sandusky, Ohio

Toledo Docks, Toledo, Ohio

KCBX Terminals Inc., Chicago, Illinois

Superior Midwest Energy Terminal, Superior, Wisconsin

TP – Tidewater Piers and Coastal Ports: Shipments of coal moved to Tidewater Piers and Coastal Ports for further shipments to consumers via coastal water or ocean. The Tidewater Piers and Coastal Ports are identified by name and location as follows:

Dominion Terminal Associates, Newport News, Virginia

McDuffie Coal Terminal, Mobile, Alabama

IC Railmarine Terminal, Convent, Louisiana

International Marine Terminals, Myrtle Grove, Louisiana

Cooper/T. Smith Stevedoring Co. Inc., Darrow, Louisiana

Seward Terminal Inc., Seward, Alaska

Los Angeles Export Terminal, Inc., Los Angeles, California

Levin-Richmond Terminal Corp., Richmond, California

Baltimore Terminal, Baltimore, Maryland

Norfolk Southern Lamberts Point P-6, Norfolk, Virginia

Chesapeake Bay Piers, Baltimore, Maryland

Pier IX Terminal Company, Newport News, Virginia

Electro-Coal Transport Corp., Davant, Louisiana

TR – Truck: Shipments of fuel moved to consumers by truck. Not included is fuel hauled to or away from a railroad siding by truck on non-public roads.

TC – Tramway/Conveyor: Shipments of fuel moved to consumers by tramway or conveyor.

SP – Slurry Pipeline: Shipments of coal moved to consumers by slurry pipeline.

PL – Pipeline: Shipments of fuel moved to consumers by pipeline.

WT – Water: Shipments of fuel moved to consumers by other waterways.

6.4.4.3 COAL MINE INFORMATION

1. Mine Information: If you enter the MSHA ID Number, the remaining mine information is not necessary.

If you don't have the MSHA ID Number, the following mine information is required:

a. Name of Mine or Tipple
b. Mine Type:

    Surface: Surface Mined;

    Underground: Underground mined;

    Surface/Underground: Surface/Underground mixture;

    Unknown;

c. State or Country of Origin: Choose the two-letter U.S. Postal Service abbreviation or country code from the drop down list of coal producing states (countries).

    For imported coal, insert the two-letter country code shown here.

    AS – Australia; CN – Canada; CL – Colombia; ID – Indonesia; PL – Poland; RS– Russia; VZ – Venezuela; OT – Other.

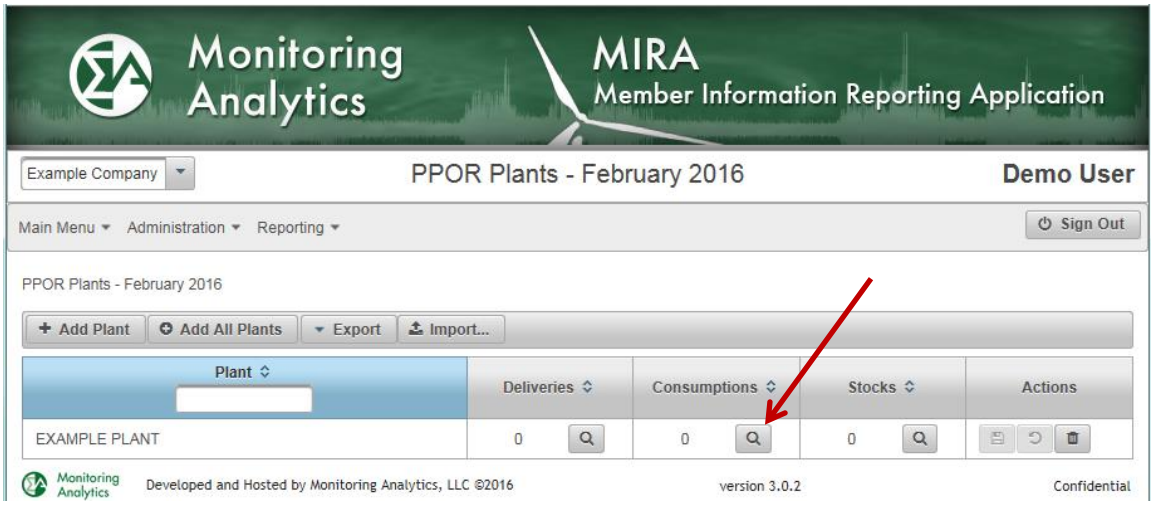
The State of Origin is mandatory. If purchases originate from a broker, barge site or other third party, you must contact the broker, barge site or other party and find out the State(s) where the coal originates.

If coal received under a purchase order or contract originates in more than one State, determine from the supplier the most dominant or probable State(s) of origin for the coal. If the amount of coal from each State/Mine is known, allocate the purchase among multiple States, or report the State where the majority of the coal originates and report identical quality and cost data (unless the actual quality and costs are known).

6.5 PPOR Monthly Fuel Consumption: Details

Market Participants are required to report the data for the fuel consumed at each plant. A consumption record is required for each type of fuel consumed (categorized by Energy Source, as detailed in the Fuel Indices list posted at http://www.monitoringanalytics.com/tools/tools.shtml.)

To report Monthly Fuel Consumptions for the selected plant, click on the magnifying glass as shown below.

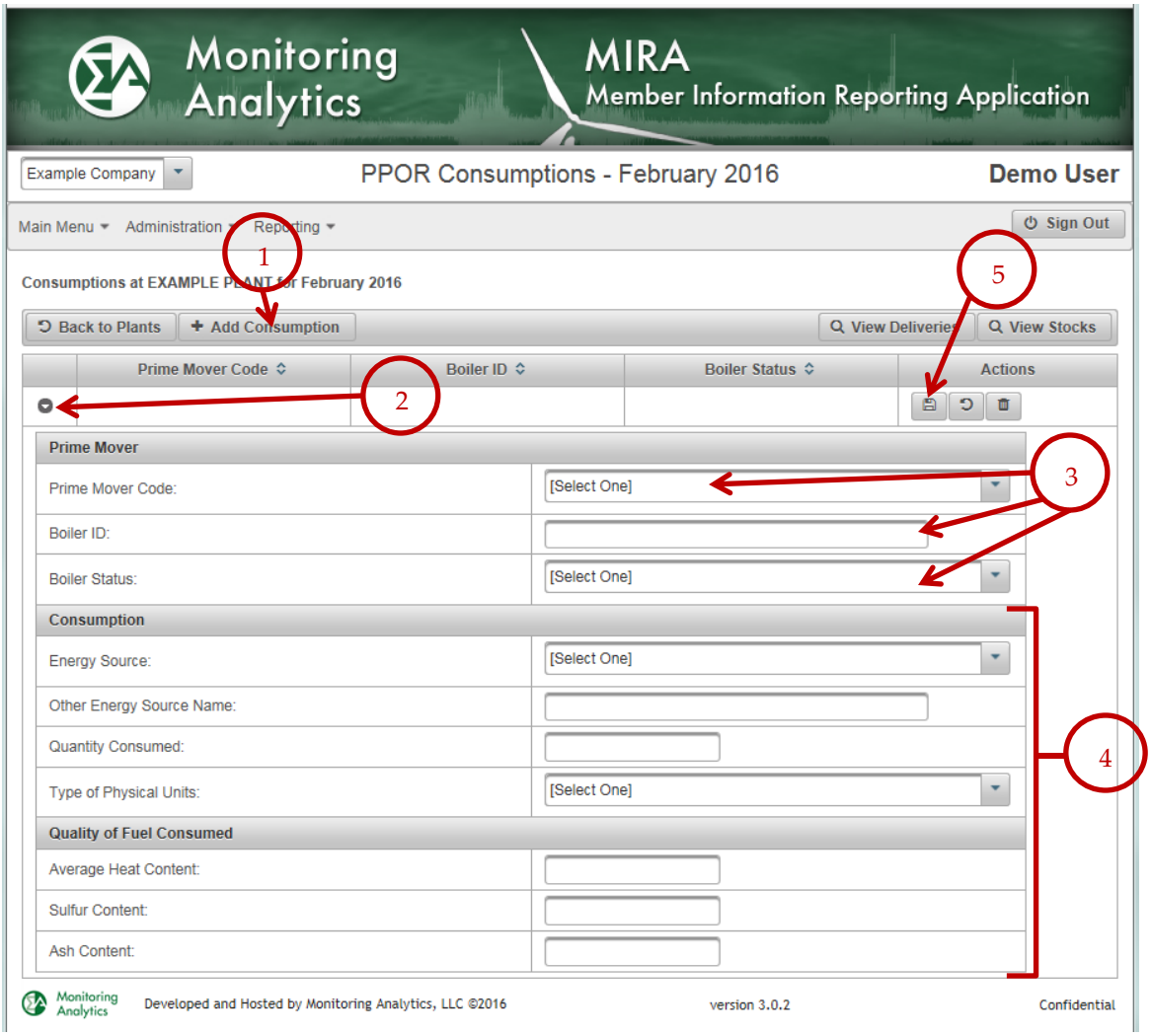


The PPOR Consumptions screen will appear, giving the user the ability to report multiple fuel consumptions (one record for each Energy Source consumed) for the selected plant for the reporting month.

6.5.1 Creating a Consumption Record

To create a fuel consumption record:

Create a Fuel Consumption Record	
Step 1	Select "Add Consumption"
Step 2	Click on the arrow beside the consumption row to expand the row and report the details for that consumption record.
Step 3	Select the Prime Mover Code from the drop down list. Prime Mover Codes are detailed in Table 2 Prime Mover Codes below. Enter a Boiler ID and Boiler Status
Step 4	Enter data in the Consumption and Quality of Fuel Consumed fields.
Step 5	Save the new fuel consumption record.



6.5.2 Data Detail: Fuel Consumption – Prime Mover Level

Do not report for each individual unit. For example, report natural gas consumed in all combustion turbines at the plant as one value and report distillate fuel oil consumed by all IC engines as one value. Combined-cycle plants should report the fuel consumed by the combustion turbines on this schedule.

1. **Prime Mover Code:** Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines. For a complete list of prime mover codes, please refer to Table 2 Prime Mover Codes.

Table 2 Prime Mover Codes

Code	Prime Mover
BT	Turbines Used in a Binary Cycle (such as used for geothermal applications)
CA	Combined Cycle – Steam Part
CE	Compressed Air Energy Storage
CP	Energy Storage, Concentrated Solar Power
CS	Combined-Cycle Single-Shaft Combustion turbine and steam turbine share a single generator
CT	Combined-Cycle Combustion Turbine Part
FC	Fuel Cell
GT	Combustion (Gas) Turbine (including jet engine design)
HA	Hydrokinetic, Axial Flow Turbine
HB	Hydrokinetic, Wave Buoy
HK	Hydrokinetic, Other
HY	Hydraulic turbine (including turbines associated with delivery of water by pipeline)
IC	Internal Combustion (diesel, piston) Engine
OT	Other
PS	Hydraulic Turbine – Reversible (pumped storage)
PV	Photovoltaic
ST	Steam Turbine (including nuclear, geothermal and solar steam, excluding combined-cycle)
WT	Wind Turbine, Onshore
WS	Wind Turbine, Offshore

2. **Boiler ID:** Use your company's EIA Boiler ID number.
3. **Boiler Status:** Enter one of the codes listed below in Table 3:

Table 3 Boiler Status Codes

Code	Boiler Status
OP	Operating (in commercial service or out of service less than 365 days)
OS	Out of service (365 days or longer)
RE	Retired (no longer in service and not expected to be returned to service)
SB	Standby (or inactive reserve); i.e., not normally used, but available for service

SC	Cold Standby (Reserve); deactivated (usually requires 3 to 6 months to reactivate)

4. **Energy Source:** Use the Energy Source codes in the Fuel Indices list posted at http://www.monitoringanalytics.com/tools/tools.shtml. For bituminous and sub-bituminous coal that is blended, where possible report each coal rank consumed separately. If no allocation can be determined, report the fuel that is predominant in quantity. An estimated allocation between coal ranks is acceptable.
5. **Quantity Consumed:** For each month, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output. Combined-cycle units should report only the auxiliary firing fuel associated with the HRSG.
6. **Type of Physical Units:** Fuel consumption must be reported in the following units:

   Solids – Tons

   Liquids – Barrels (one barrel equals 42 U.S. gallons)

   Gases – Thousands of cubic feet (Mcf)

   Pumped Storage and Compressed Storage -- MWh

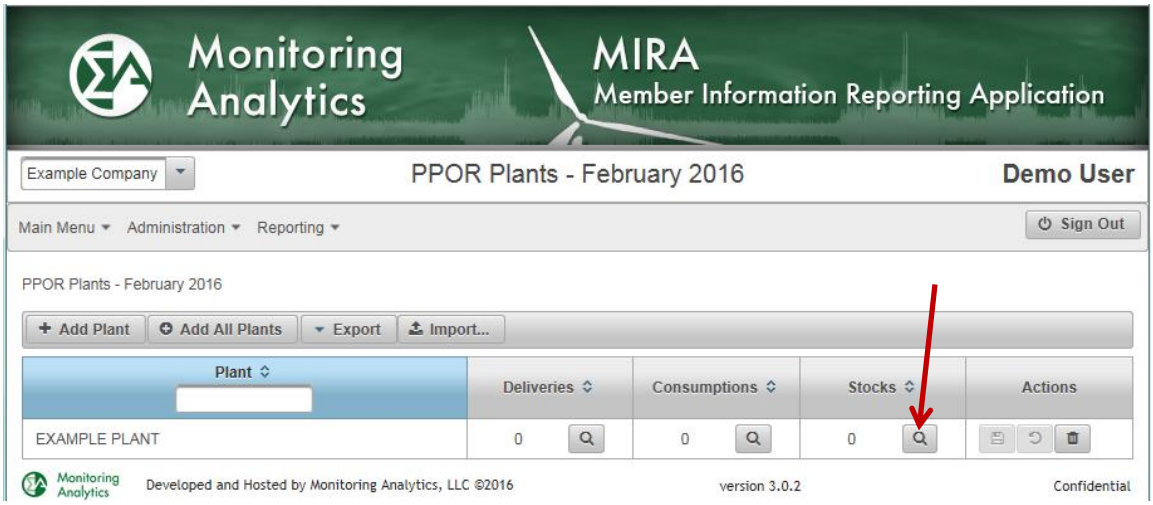
7. **Average Heat Content:** For each month, report the heat content of the fuels burned to the nearest 0.001 million Btu (MMBtu) per physical unit. The heat content of the fuel should be reported as the gross or "higher heating value" (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value. If the fuel heat content cannot be reported "as burned," data may be obtained from the fuel supplier on an "as received" basis. Report the value in the following units: solids in million Btu (MMBtu) per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf).
8. **Sulfur Content (petroleum, petroleum coke, and coal):** For each month, enter sulfur content to nearest 0.01 percent. Sulfur content should be reported for the following Energy Source codes: BIT, LIG, SUB, WC, PC, RFO, and WO. Refer to Table 1 Fuel quality metric ranges for approximate ranges.
9. **Ash Content (coal and petroleum coke only):** For each month, enter ash content to the nearest 0.1 percent. Ash content should be reported for the following Energy Source codes: BIT, LIG, SUB, WC, and PC. Refer to Table 1 for approximate ranges.

Report actual values. ENTER ZERO when an energy source was not consumed for the reporting period. Do not leave blank.

6.6 PPOR Monthly Fuel Stocks: Details

Market Participants are required to report the data for the fuel stocks at the plant at the end of the month. A stock record is required for each type of fuel stored at the plant (categorized by Energy Source, as detailed in the Fuel Indices list posted at http://www.monitoringanalytics.com/tools/tools.shtml.)

To report Monthly Fuel Stocks for the selected plant, click on the magnifying glass as shown below.

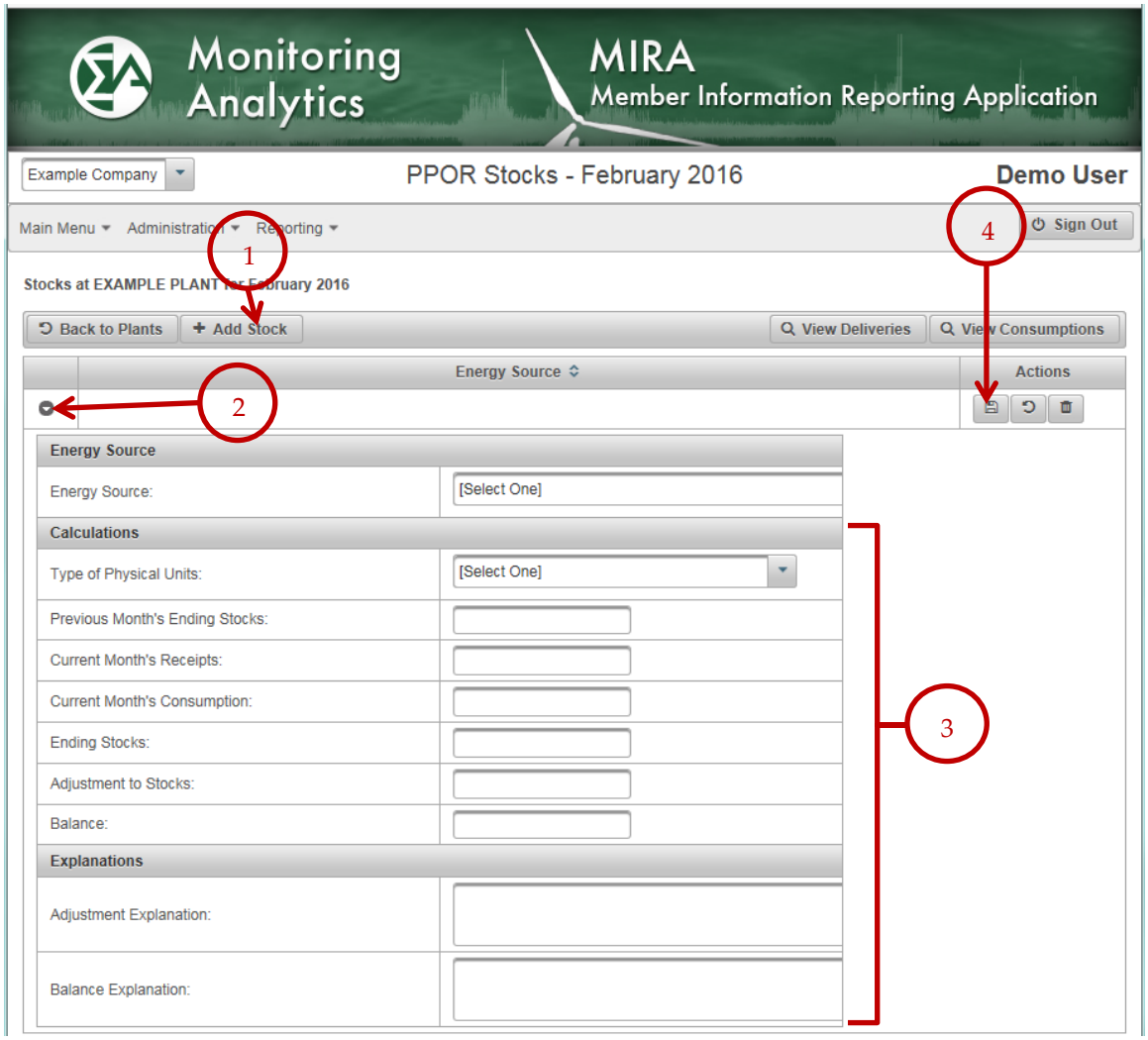


The PPOR Stocks screen will appear, giving the user the ability to report multiple fuel stocks (one record for each Energy Source with stocks) for the selected plant for the reporting month.

6.6.1 Creating a Fuel Stock Record

To create a fuel consumption record:

Create a Fuel Stock Record	
Step 1	Select "Add Stock"
Step 2	Click on the arrow beside the stock row to expand the row and report the details for that fuel inventory stock record.
Step 3	Click on the "Energy Source" drop-down, and select the Energy Source from the list. Report the stocks information as defined in section 6.6.2 below.
Step 4	Save the new fuel consumption record.



6.6.2 Reporting Details for a Fuel Inventory Stock Record

When the Fuel Stock row is expanded, the user sees the above screen. The user should enter the requested data, and be sure to select "Save" as shown above, prior to leaving the screen.

The details for each of the required data fields are documented in Section 6.6.3.

The user can input text under "Explanations" to explain any discrepancy or imbalance.

6.6.3 Data Detail: Fossil Fuel Stocks at the End of the Reporting Period

ENTER ZERO in the Ending Stocks column if a plant has no stocks. Do not leave the field blank.

Energy Source: Add the Energy Source code from the list of Fuel Indices posted at http://www.monitoringanalytics.com/tools/tools.shtml.

Type of Physical Units: Report coal and petroleum coke in tons and distillate and residual oils in barrels.

1. Previous Month's Ending Stocks: Should be consistent with ending stocks reported in previous month.

2. Current Month's Receipts: Should be consistent with the sum by Energy Source reported in the "Deliveries" screen.

3. Current Month's Consumption: Should be consistent with the consumption data reported in the "Consumptions" screen.

4. Ending Stocks: Report this month's ending stocks. Include all on-site stocks held for eventual use in the electric power plant regardless of actual ownership of the fuel.

5. Adjustment to Stocks: Report adjustments to end-of-month stocks. Adjustments may include stocks transferred or sold offsite and revisions to account for adjustments to previous months' stocks.

Adjustments can be positive or negative. Enter the reason for the adjustment in a comment.

Balance: The data balance verifies the quality of the data. The balance is the difference between Reported Ending Stocks (4) and an expected value for ending stocks calculated by the following equation:

Previous Month's Ending Stocks plus Current Month's Receipts minus Current Month's Consumption plus (or minus) Adjustment to Stocks [(4) = (1) + (2) - (3) + (5)]. If the balance is a non-zero value, please review the data entered for stocks, receipts, consumption, and adjustments. Enter a comment to explain any discrepancy. Fuel receipts that are not used for the production of electricity but for other purposes at the plant (e.g. as a feed material to produce chemical byproducts such as fertilizers, etc.) may cause an imbalance in the equation. Likewise, fuel that is sold during the month may cause an imbalance. Enter adjustments to balance the equation and enter comments to explain the adjustments or other situations that result in an imbalance.

Table 4 Generator Status Codes

Status Code	Status Code Description
OP	Operating - in service (commercial operation) and producing some electricity. Includes peaking units that are run on an as needed (intermittent or seasonal) basis.
OA	Out of service – was not used for some or all of the reporting period but was either returned to service on December 31 or will be returned to service in the next calendar year.
OS	Out of service – was not used for some or all of the reporting period and is NOT expected to be returned to service in the next calendar year.
RE	Retired - no longer in service and not expected to be returned to service.

7 Power Plant Operations Report (PPOR) Continuous Unit-Level Data

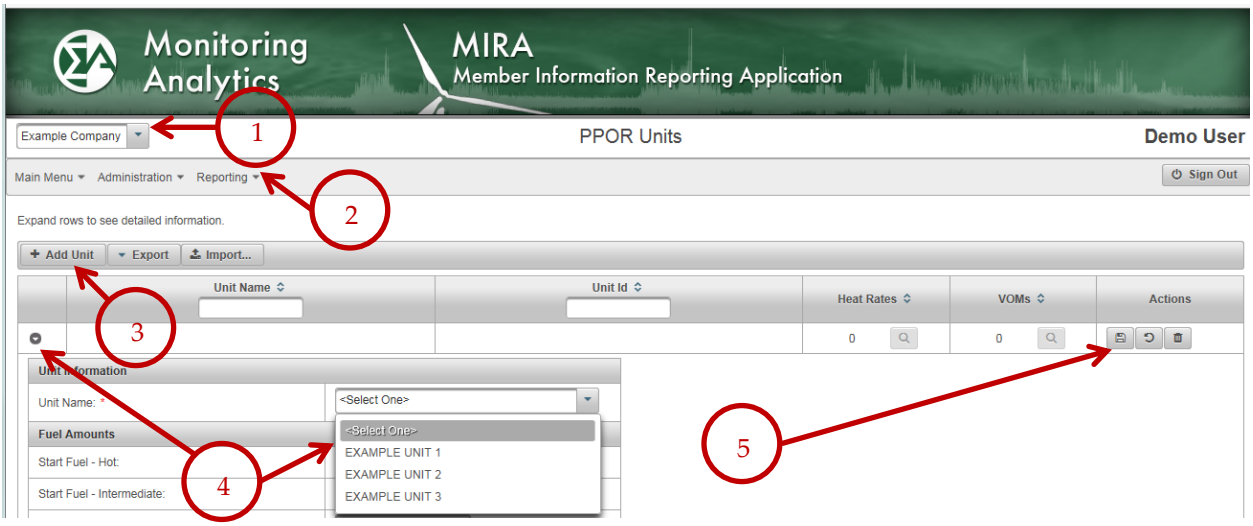
PPOR Continuous data is captured in three screens, which capture a snapshot of a unit's operating cost drivers, such as:

- Start and shutdown fuel quantities
- Station service energy and cost rates
- Variable Operations and Maintenance (VOM) and labor costs
- No load costs
- Heat rates

7.1 Creating a PPOR Unit Record

To report unit-level Power Plant Operations Report data, do the following:

Create a PPOR Unit Record	
Step 1	Make sure the correct company you want to report PPOR unit data for is selected in the company drop down.
Step 2	Under the "Reporting" group in the menu bar, select "PPOR Continuous".
Step 3	To create a PPOR record for a generating unit, click on the "Add Unit" button. A new row will appear on the PPOR Units screen. Once all of the units associated with an Asset Owner have been added and displayed in the PPOR Units screen, they do not need to be added again, they will remain available to update the data records going into the future.
Step 4	Click on the arrow to the left of the newly created row to expand the row. The first item in the expanded data fields prompts you to select the unit name from a drop-down list. The Unit ID will automatically be populated.
Step 5	Save the unit record. Now you are ready to enter PPOR Unit data for this unit.

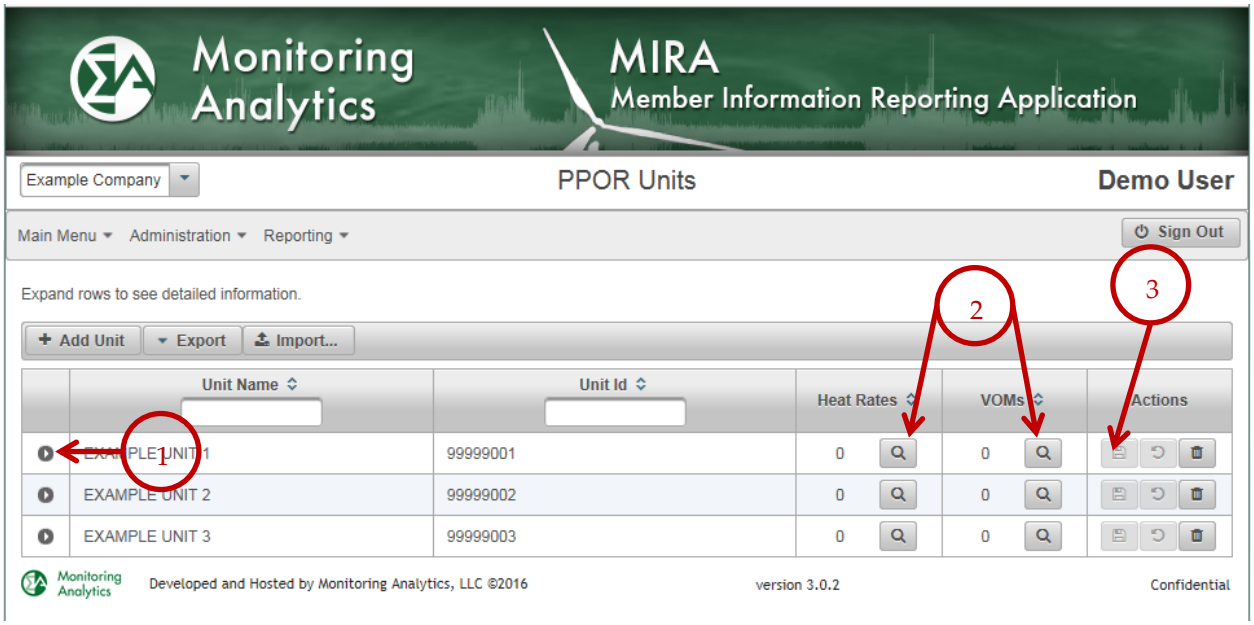


7.2 Entering Data for a PPOR Unit Record

There are three data entry screens for reporting PPOR Unit data: Cost Data, Heat Rates, and VOM. For each unit's record, these data entry screens can be accessed by:

Entering Data for a PPOR Unit Record	
Step 1	Use the arrow to the left of the unit row to expand the row to report Cost Data.
Step 2	Select the magnifying glass under the Heat Rate or VOM columns to report those data elements.
Step 3	After entering data in any of the reporting screens, remember to save your data by clicking on the "Save" icon.

If the record for the expected unit is not visible, use the "Add Unit" button to create a new record for that unit.

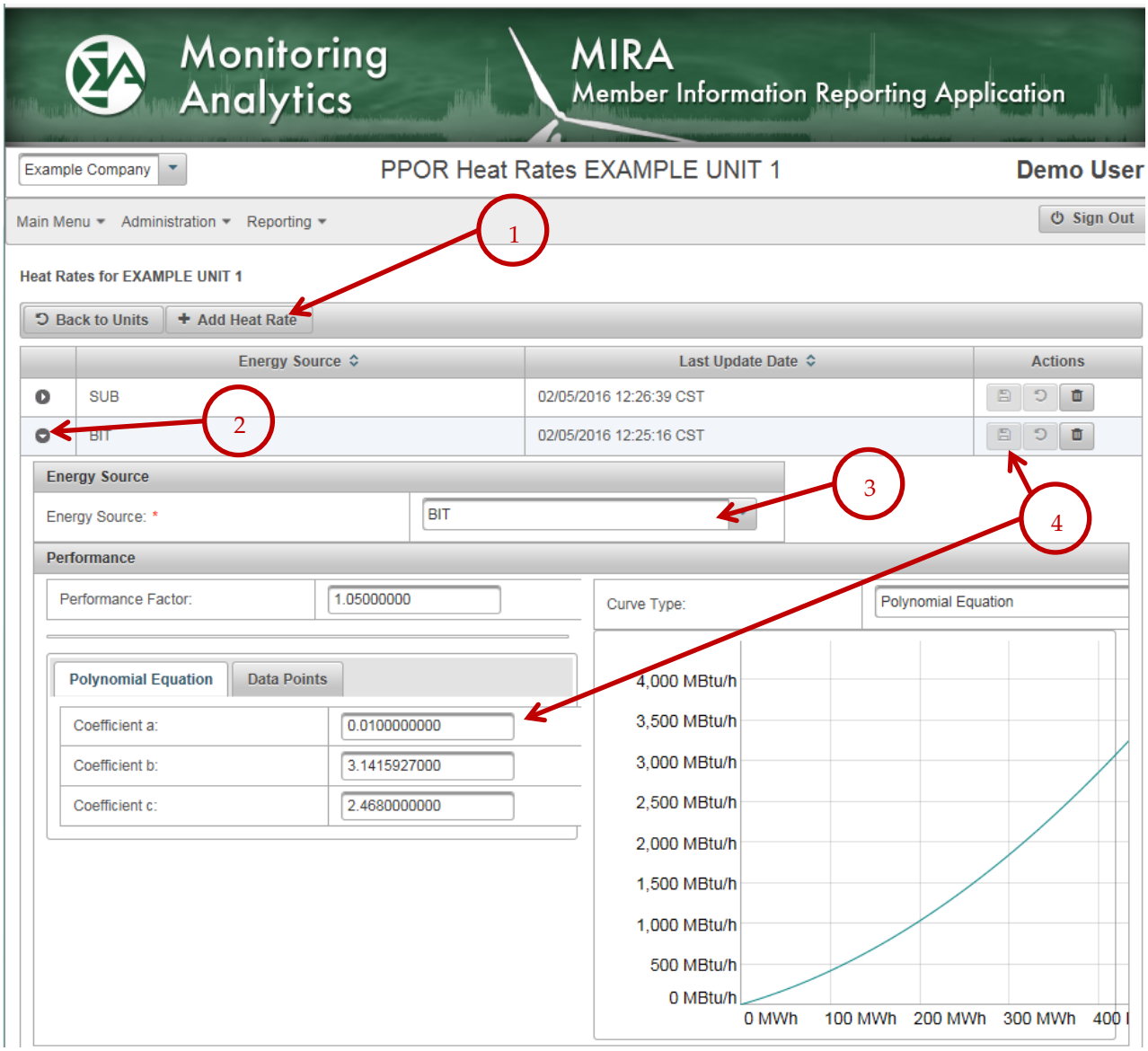

Monitoring Analytics
MIRA
Member Information Reporting Application
Example Company
PPOR Units
Demo User
Main Menu
Administration
Reporting
Sign Out
Expand rows to see detailed information.
Add Unit
Export
Import...
Unit Name
Unit Id
Heat Rates
VOMs
Actions
EXAMPLE UNIT 1
99999001
0
0
EXAMPLE UNIT 2
99999002
0
0
EXAMPLE UNIT 3
99999003
0
0
1
2
3
Monitoring Analytics
Developed and Hosted by Monitoring Analytics, LLC ©2016
version 3.0.2
Confidential

7.3 PPOR Unit Cost/Fuel Data

Fuel Amounts	
Start Fuel - Hot:	
Start Fuel - Intermediate:	
Start Fuel - Cold:	
Shutdown Fuel - Hot:	
Station Service During Start - Hot:	
Station Service During Start - Intermediate:	
Station Service During Start - Cold:	
Station Service Rate:	
Costs	
Start VOM - Hot:	
Start VOM - Intermediate:	
Start VOM - Cold:	
Start Additional Labor Costs - Hot On Peak:	
Start Additional Labor Costs - Hot Off Peak:	
Start Additional Labor Costs - Intermediate On Peak:	
Start Additional Labor Costs - Intermediate Off Peak:	
Start Additional Labor Costs - Cold On Peak:	
Start Additional Labor Costs - Cold Off Peak:	
Supplemental Additional Labor Cost:	
Condensing Operation Start Cost (CTs):	
Condensing Operation VOM:	
Condensing Load:	
No Load Costs	
Minimum Economic Capacity Limit Heat Input:	
No Load VOM:	
No Load VOM Units:	[Select One]

7.4 PPOR Unit Heat Input Data

Adding a Heat Input Curve for a PPOR Unit Record	
Step 1	Click on "Add Heat Rate" button.
Step 2	In newly created row, click the arrow to the left of the row to expand the row.
Step 3	Use the drop down to select an Energy Source.
Step 4	Enter Heat Input data for data point or polynomial methods as described in sections 7.4.1 or 7.4.2 below. Then save the record.

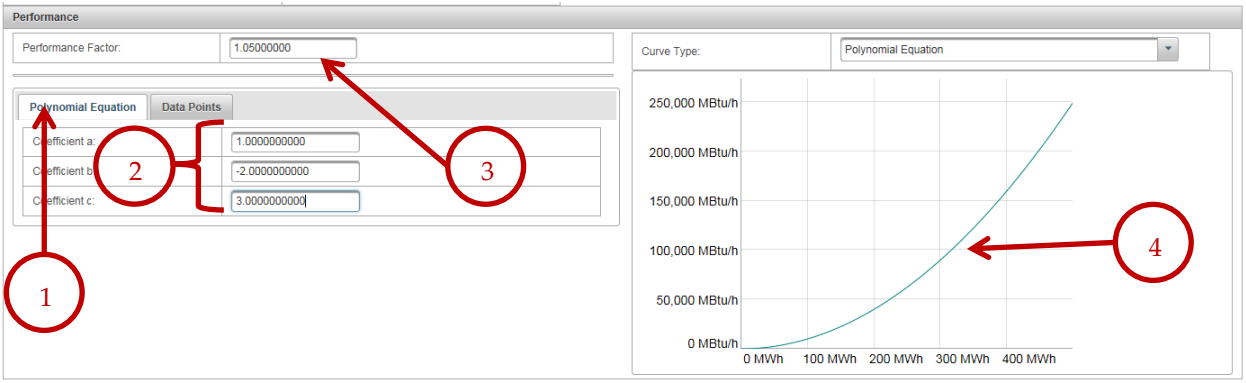


When the Heat Input record is expanded in Step 2 above, the user can enter a heat input curve by supplying a set of input and output data points, or the user can supply the coefficients to a polynomial that defines the heat rate curve.

7.4.1 Polynomial Heat Input Data

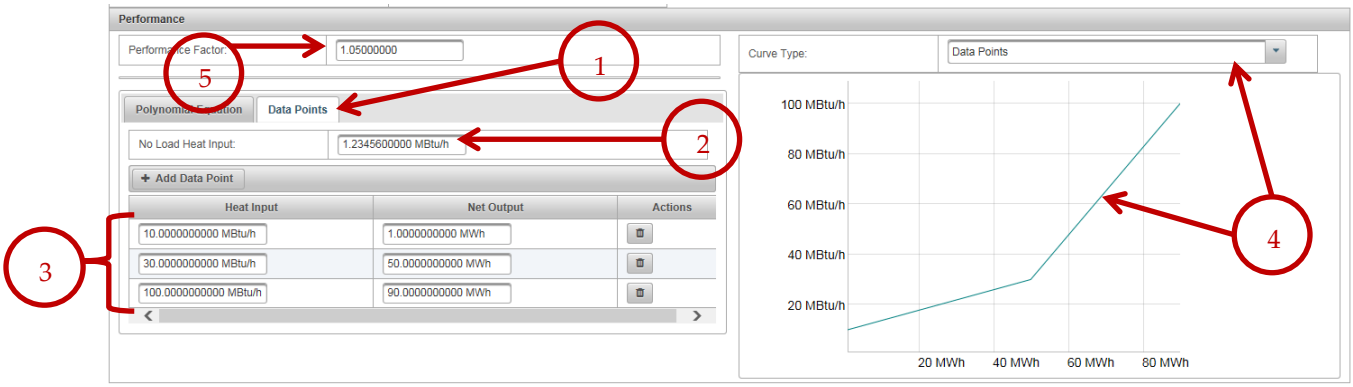
The user enters heat rate curve data as follows:

Entering Polynomial Heat Rate Data for a PPOR Unit Record	
Step 1	Decide if you are going to enter the Heat Rate curve as a series of input (MMBtu/h) and output (MWh) pairs, or as a polynomial curve. Select the Polynomial Equation tab (vs. the Data Points tab) to determine which curve type you will use.
Step 2	If you select the "Polynomial Equation" Heat Rate curve tab, you will be presented with the fields to submit coefficients a, b, and c, which define the heat rate curve in the polynomial form, where x = the output in MWh, and y = the heat input in MMBtu/h. $$y = ax^2 + bx + c$$
Step 3	There is also a field for "Performance Factor" which gives the Market Participant the ability to account for performance fluctuations that result from variations in seasonal ambient conditions. This is usually a scalar multiplier near 1.0.
Step 4	When values are entered in fields for polynomial coefficients a, b, and c, observe the shape of the heat input curve prior to saving, to make sure that it accurately reflects the performance of your generating unit.
Step 5	Remember to save by clicking on  .



7.4.2 Heat Rate Data Points

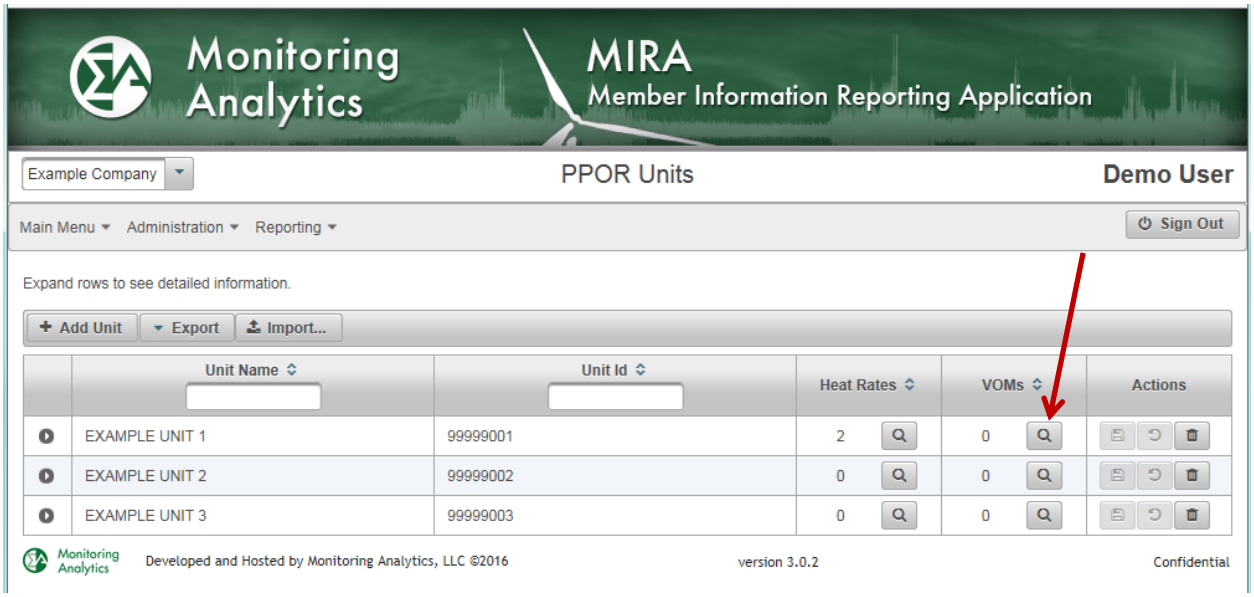
Entering Data Point Heat Rate Data for a PPOR Unit Record	
Step 1	Decide if you are going to enter the Heat Rate curve as a series of input (MMBtu/h) and output (MWh) pairs, or as a polynomial curve. Select the Data Points tab (vs. the Polynomial Equation tab) to determine which curve type you will use.
Step 2	Enter a "No Load Heat Input" rate in MMBtu/Hour.
Step 3	Enter the Heat Input curve as a series of input (MMBtu) and output (MWh) pairs. The default functionality displays only three points, but if you have a Heat Rate curve comprising more than three points, click on the "Add Data Point" button (as shown in item #3 below) to add more than three pairs of data.
Step 4	When values are entered in fields for the curve points, select the type of curve to display in the drop down, and observe the shape of the heat input curve prior to saving to make sure that it accurately reflects the performance of your generating unit.
Step 5	There is also a field for "Performance Factor" which gives the Market Participant the ability to account for performance fluctuations that result from variations in seasonal ambient conditions. This is usually a scalar multiplier near 1.0.
Step 6	Remember to save by clicking on  .



7.5 PPOR Unit Variable Operations and Maintenance (VOM) Data

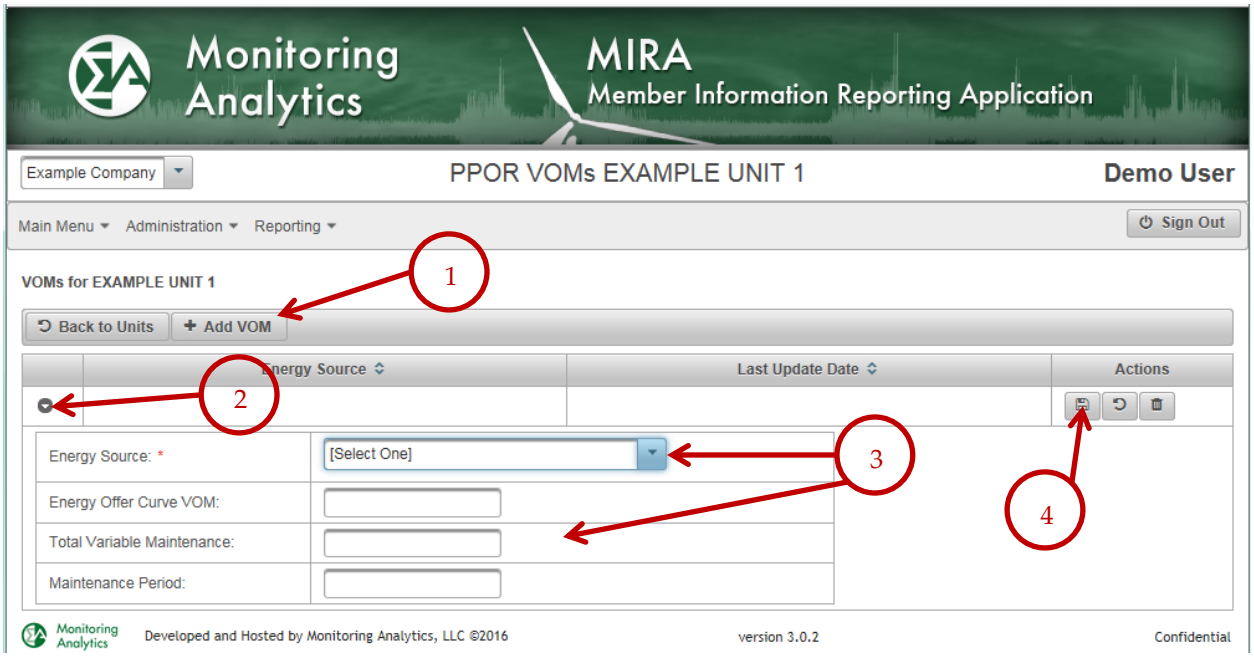
For each unit, the user can submit one VOM record for each Energy Source consumed by the unit.

To add a VOM record for each energy source, from the PPOR Continuous "Units" screen, in the row for the relevant generating unit, click on the magnifying glass icon in the VOM column:



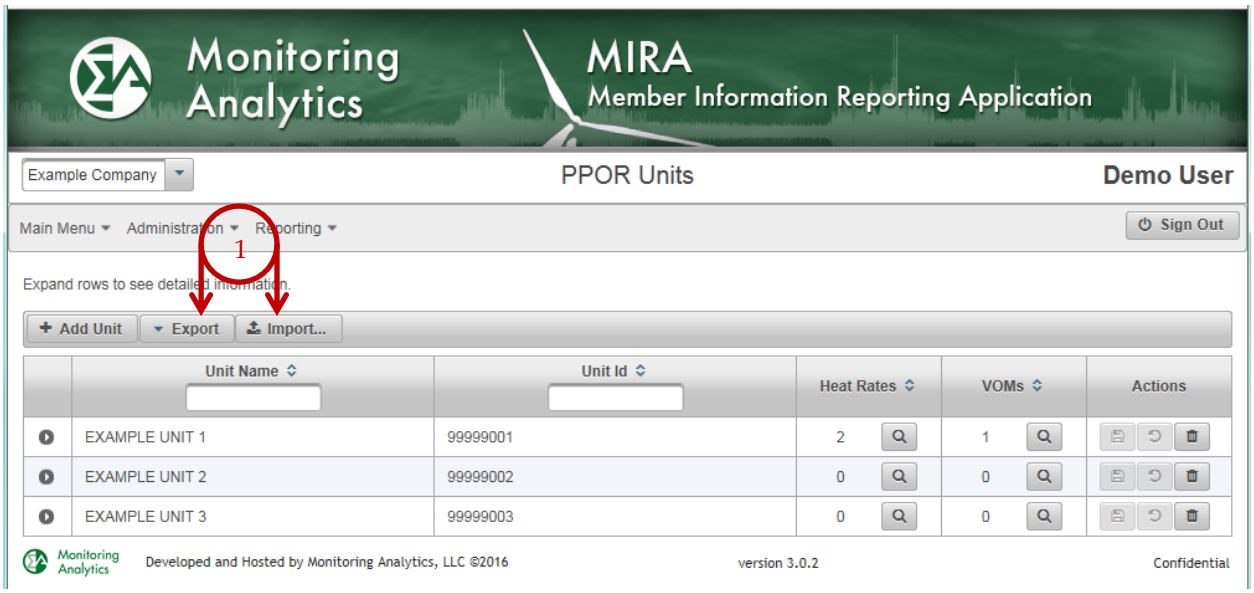
When in the VOM screen, use the following steps to report VOM values:

Entering VOM Data for a PPOR Unit Record	
Step 1	To add a new VOM record for an Energy Source that you don't yet have a VOM record for the specified generating unit, click on the "Add VOM" button. Once VOM record(s) are set up for a generating unit, the user will usually not have to continue to add new VOM records, just update the existing ones.
Step 2	In the new row that is created, click on the arrow to the left of the row to expand the VOM record.
Step 3	To enter new data for a new or existing VOM record, select an Energy Source and enter the VOM data entry elements.
Step 4	Remember to save the newly created record.



7.6 PPOR Unit Data Import and Export

Users can import or export a PPOR Continuous (Unit) record into XML, XLS, or XLSX format. This process can be started by clicking on the Import or Export buttons in the PPOR Units screen:



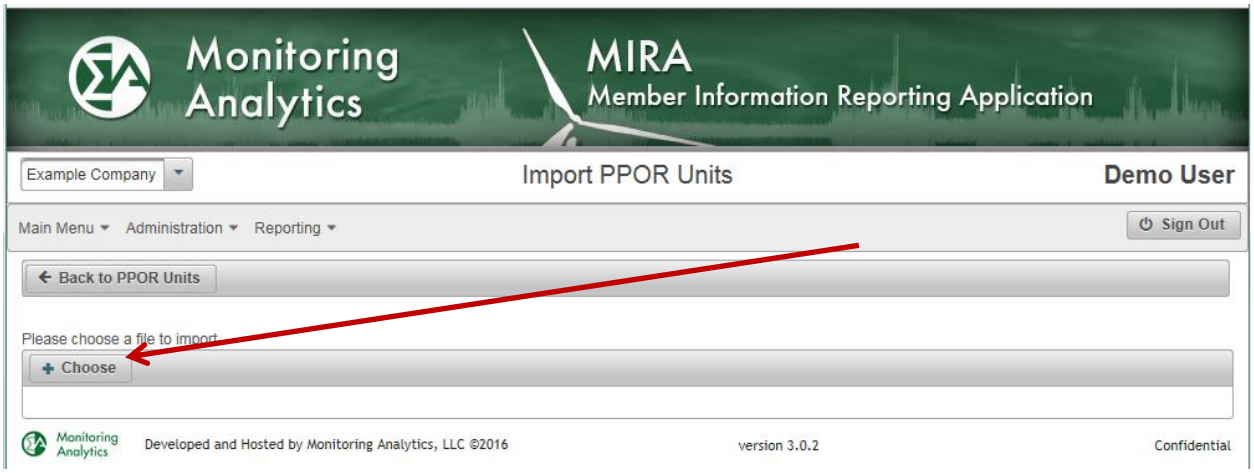
7.6.1 Exporting a PPOR Monthly Record

To Export a PPOR Continuous (Unit) record, the user clicks on "Export" as shown above and must select the desired export file type (XML, XLS, XLSX). The record is then immediately generated.

Excel spreadsheet output files provide an output with three tabs: Costs, Heat Rates, and VOMs. For XML output, a single output file is created with nested data tags to capture the entire PPOR Continuous report, containing all of the units associated with the reporting Asset Owner company.

7.6.2 Importing a PPOR Continuous (Unit) Record

To Import a PPOR Continuous (Unit) record, the user clicks on "Import" as shown above, then uses the "Choose" button to navigate to and select the desired input file.



8 Fuel Policy Module

The information captured in the Fuel Policy module includes a table of fuel-related metrics as well as document management functionality that supports the following workflow:

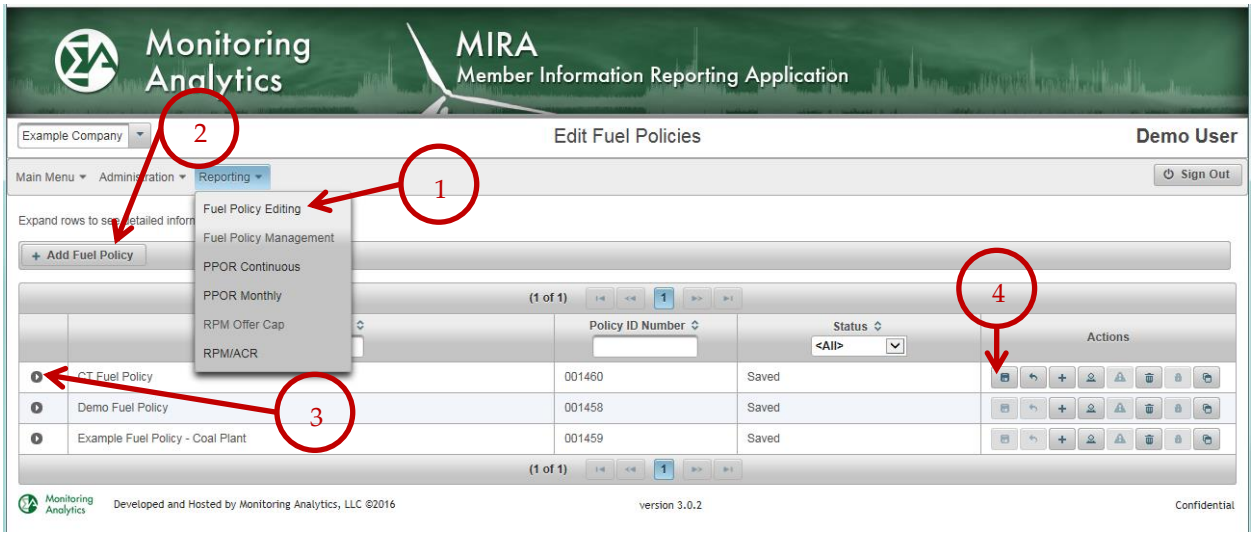
- Market Participant creates, edits, saves, and submits fuel policy documents.
- Monitoring Analytics reviews submitted fuel policy documents and approves or rejects.
- Market Participant associates approved fuel policy with generating units for which the fuel cost policy will apply.
- Once associated with the unit, the fuel policy cannot change for a fixed period of time without intervention from Monitoring Analytics.

The Fuel Policy module consists of two user screens, "Fuel Policy Editing" and "Fuel Policy Management"

8.1 Fuel Policy Editing

8.1.1 Create a new Fuel Policy

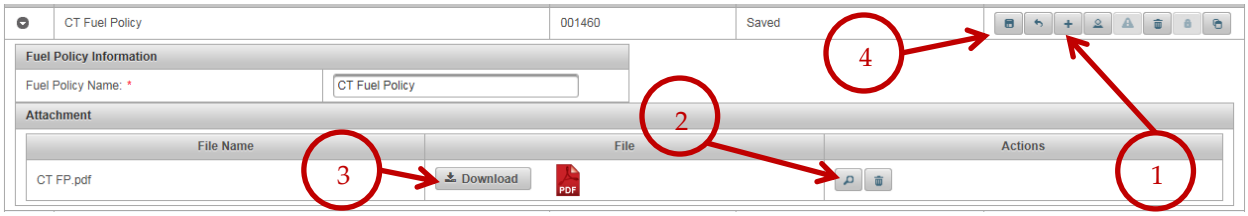
Create a new Fuel Policy	
Step 1	Click on "Fuel Policy Editing" to open the Fuel Policy Editing screen.
Step 2	Click on "Add Fuel Policy" to open a new row
Step 3	Click on the  to the left of the row to expand the Fuel Policy row to add a Fuel Policy document. For details see sections 8.1.2 or 8.1.2.1
Step 4	Click on the "Save" icon  to save the new policy.



8.1.2 View or edit an existing Fuel Policy

To view, add or update content for a Fuel Policy, Click on the ▶ to the left of the row to expand the Fuel Policy row to add a Fuel Policy document.

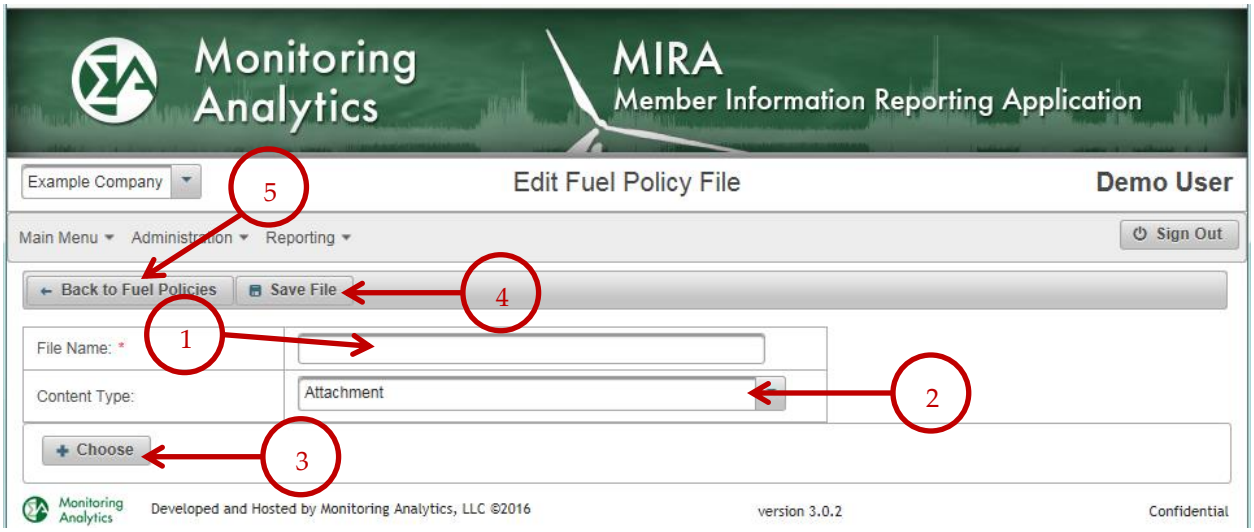
View or edit a Fuel Policy	
Step 1	Click on the "plus sign" + to upload a new document to the Fuel Policy
Step 2	Click on the magnifying lens 🔍 to change the File Name or to browse to a replacement document.
Step 3	Click on the Download button to open the attached document for viewing. To edit an attached Fuel Policy document, you must save it locally outside of MIRA, and delete the original and upload the newly edited and saved version of a document.
Step 4	Click on the "Save" icon 💾 to save any changes made to the policy.



8.1.2.1 Adding a new document to the policy

After clicking the + symbol to upload a new Fuel Policy document, the next screen lets you identify the file to attach and save.

Add a new Fuel Policy document	
Step 1	Type in the name you want the file to be saved as in the "File Name" field.
Step 2	Select whether you want to edit a text field or browse for an attachment in the Content Type drop down box. If you select "Text" a text box will be presented to enable free-form text entry. If you select "Attachment", browse for the file to attach.
Step 3	Use the "Choose" button to browse to the Fuel Policy file you wish to attach. Fuel Policy documents may be saved with the following file extensions: (.txt, .doc, .docx, .xls, .xlsx, .pdf).
Step 4	When you have completed Steps 1 through 3, remember to Save.
Step 5	Once the file has been saved, click on "Back to Fuel Policies" to return to the list of fuel policies.

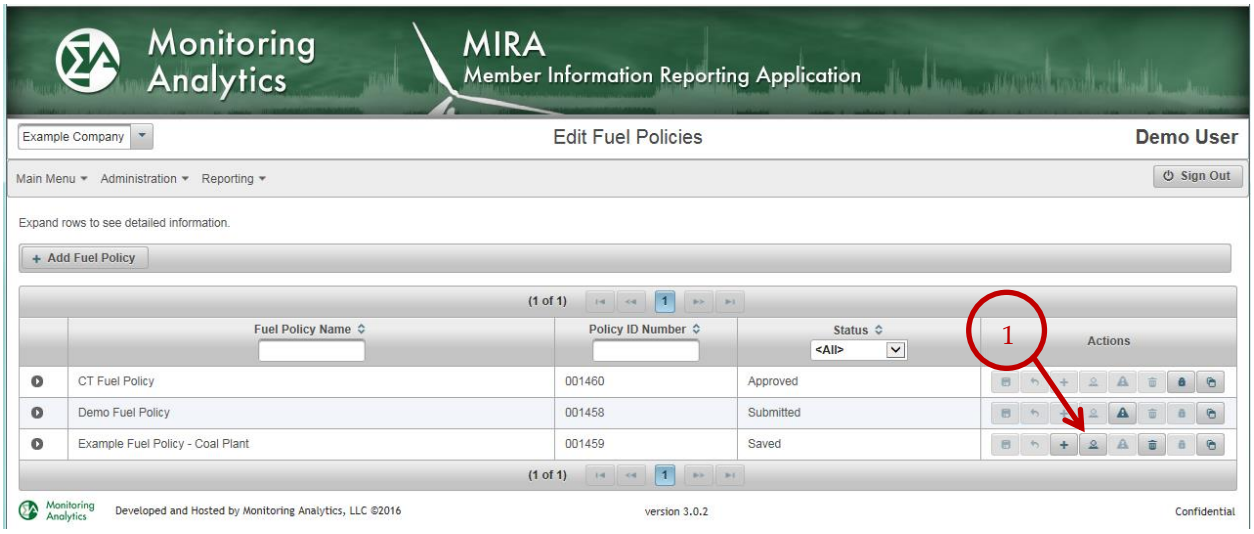


8.1.3 Submit a Fuel Policy

When you are satisfied with the edits made to your Fuel Policy, click on the "Submit"  button to submit it for Monitoring Analytics review. Only Fuel Policies with status of "Saved" can be submitted for Monitoring Analytics review. The "Status" column for the Fuel Policy will change from "Saved" to "Submitted".

A Fuel Policy with status "Submitted" is in the queue for Monitoring Analytics to review. When Monitoring Analytics has reviewed the Fuel Policy Document, they will change the status to "Approved" or "Rejected". If Monitoring Analytics rejects the submitted Fuel Policy, Monitoring Analytics will communicate with the market participant the reason for the rejection.

Rejected Fuel Policies can be edited, and upon making any change and saving, the status of the Fuel Policy will change from "Rejected" to "Saved."



8.1.4 Withdraw a submitted Fuel Policy

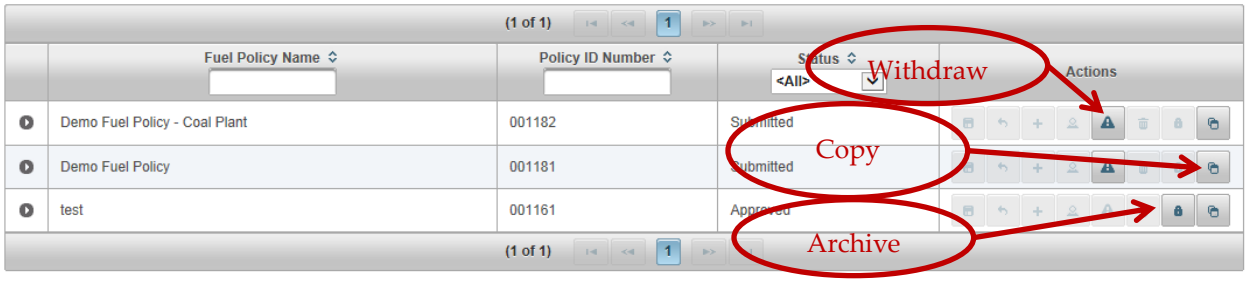
Once you have submitted a Fuel Policy for Monitoring Analytics review, the Fuel Policy is locked from editing, as it is then in the Monitoring Analytics review/approval queue. If you wish to remove the submitted Fuel Policy from the the Monitoring Analytics review/approval queue before it has been approved or rejected, you can do so by clicking on the "withdraw" button: , returning the status from "Submitted" back to "Saved".

8.1.5 Copy a Fuel Policy

To create a new Fuel Policy based on an existing Fuel Policy, use the "Copy" button . This will create a duplicate version of the selected policy, and append a "(2)" to the name of the policy, which can then be edited and saved.

8.1.6 Archive a Fuel Policy

To make a Fuel Policy inactive, use the "Archive" button . This will lock the Fuel Policy from any editing or assignment to units, but will allow it to remain saved in the system, and available to copy into a new Fuel Policy.

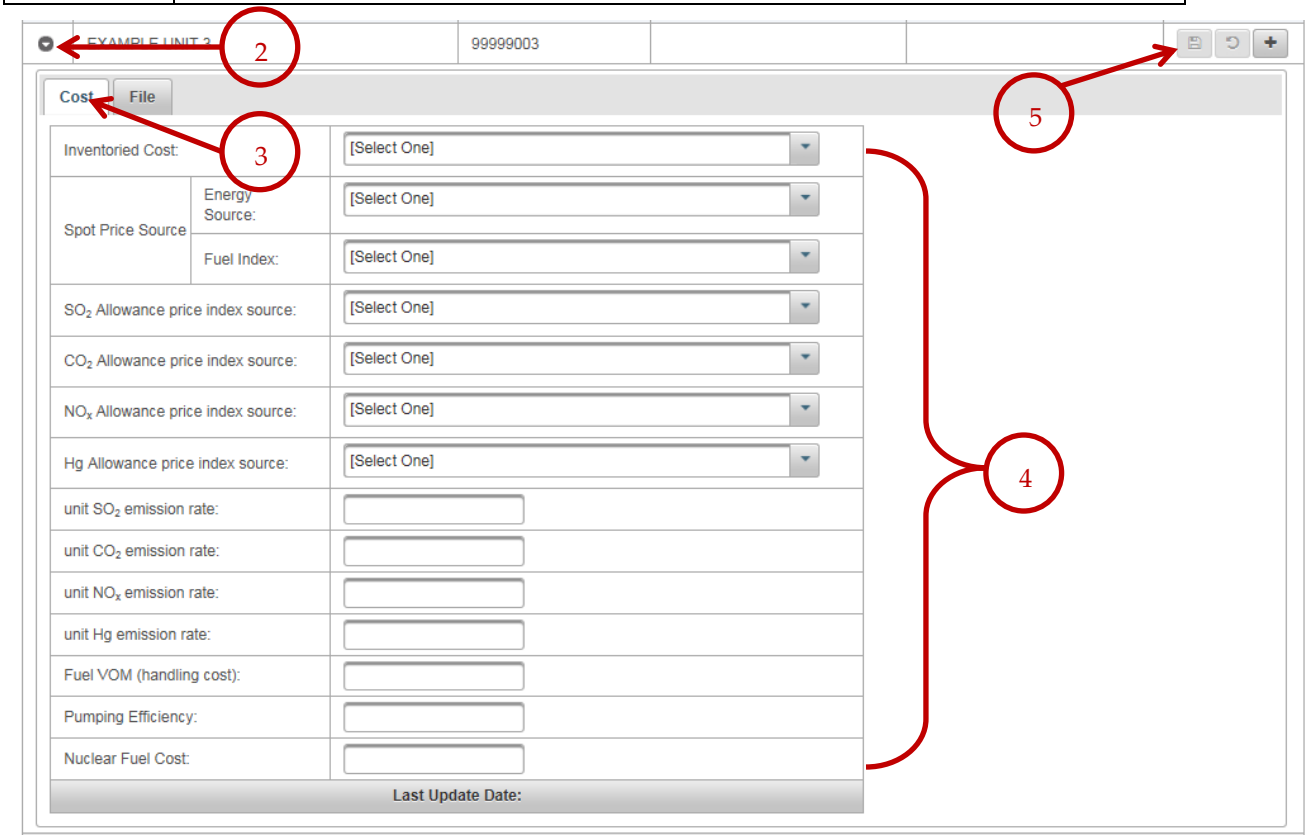


8.2 Fuel Policy Management

The Fuel Policy Management screen has two tabs for each generating unit: one for reporting fuel related data, and one for associating approved Fuel Policy documents with the unit.

8.2.1 Cost Data

Edit Cost Data in Fuel Policy Management	
Step 1	Click on "Fuel Policy Management" in the menu bar to get to that screen.
Step 2	Select a unit, and click on the ▶ to the left of the unit row to open the Fuel Policy Management screen for that unit.
Step 3	Select the "Cost" tab (Not the "File" tab) in the Fuel Policy Management screen.
Step 4	Enter data in the required fields
Step 5	Click on "Save".



8.2.2 Associate Fuel Policy document with the unit

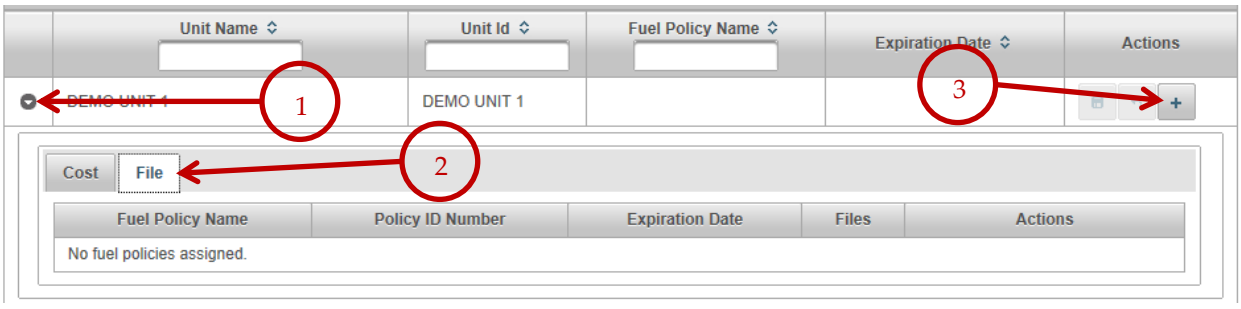
Market participants must have a Fuel Policy associated with each of their generating units in MIRA.

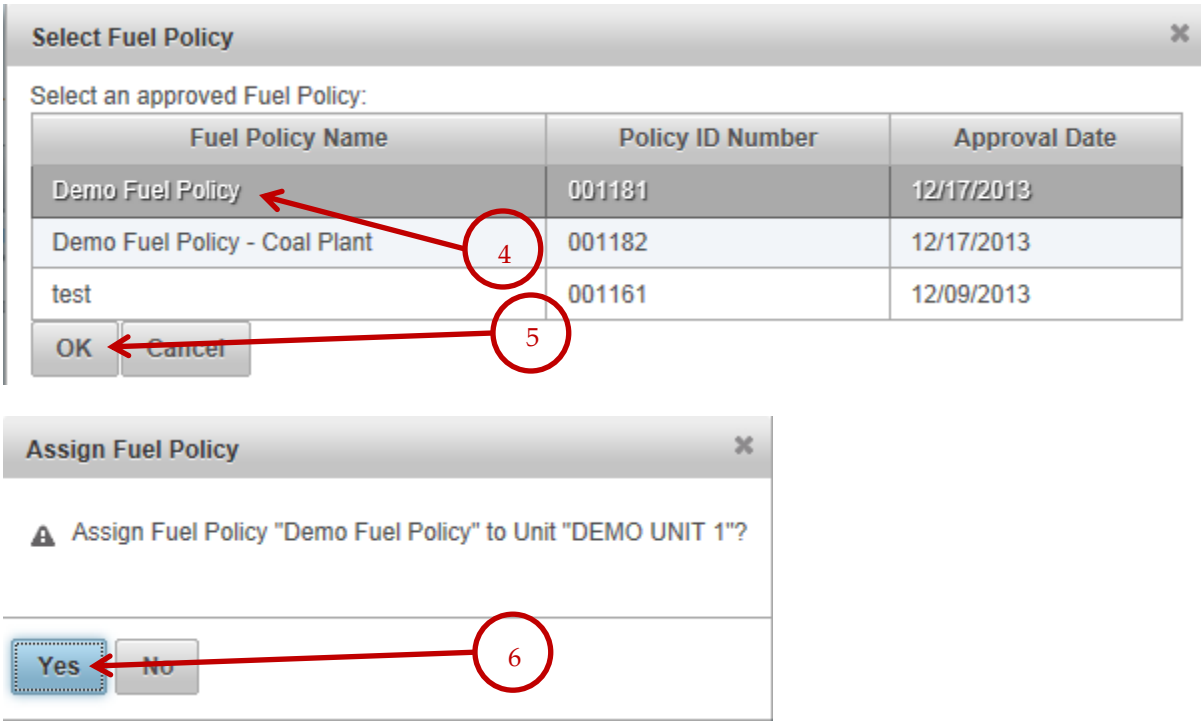
Associate Fuel Policy with unit	
Step 1	Select a unit, and click on the ▶ to the left of the unit row to open the Fuel Policy Management screen for that unit.
Step 2	Select the "File" tab (Not the "Cost" tab) in the Fuel Policy Management screen.
Step 3	If the unit is eligible to have a Fuel Policy assigned to it, click on the + button to add a Fuel Policy association to the unit.
Step 4	A pop-up screen will appear with a list of all approved Fuel Policies for the reporting company. Click on the Fuel Policy that you wish to select to highlight it.
Step 5	Click "OK" to select that Fuel Policy and to assign it to the unit.
Step 6	Click "Yes" to confirm the assignment of the Fuel Policy to the unit. **Note: this step locks the assignment of the Fuel Policy to that unit.**

When there is no Fuel Policy document associated with the selected unit, the Fuel Policy Name and Expiration Date fields for that unit will be blank.

The + button will be available to the user to add a new Fuel Policy association if there is no current fuel policy association, or if the existing Fuel Policy association with the unit is expired.

Once an approved Fuel Policy is associated with the unit, it the policy can't be changed for a fixed period, typically set for one year. The date on which the Fuel Policy association with the unit can be changed is displayed in the Expiration Date column.





If circumstances change for the generating unit, and the market participant believes it is appropriate to change the Fuel Policy assignment for a unit, the market participant may contact Monitoring Analytics to remove the assignment of the Fuel Policy with the unit. Monitoring Analytics has the ability to revoke the assignment and allow a new policy document to be associated with the unit.