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## Application Overview

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### Introduction

eMTR is an internet-based system that collects and retrieves revenue meter and load data for PJM transmission and generation interconnection points and calculates market participants' actual interchange energy amounts used for real-time energy market settlements.

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### eMTR Functions

- Collecting hourly revenue meter data
- Accommodating next-hour verification among counter-parties
- Providing downloadable reports of raw and calculated data
- Accepting data correction
- Facilitating customer retrieval and submission of revenue quality DLC data.

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### Menus

There are three types of eMTR menus: eSuite (including Log In), eMTR Tools, and eMTR Windows.

#### eSuite

eMTR is located within PJM's eSuite application. The eSuite menu contains the following tools on the upper right of every window: Login, File Upload, Help, and Send email. For more information on the above tools, see the eSuite Help guide on the top tool bar. eSuite also places preference buttons on the left of the Main Menu, where you can arrange shortcuts to PJM's applications.

#### *Log In Window*

A Left Navigation Bar also appears on the [Log In](#) (link to log in section) window. This menu includes two options: Registration Form and User Change Form. The registration form allows PJM members to register online for use of eSuite applications, including eMTR. The User Change Form allows registered users to change their User ID and/or password.

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### eMTR Tools and Windows

On every eMTR window, a navigation bar appears on the left side of the window. This navigation bar provides links to eMTR's two functional categories: Meter Values and Meter Accounts.

#### Meter Values

Windows:

Meter Values consists of five windows: Daily Meter Value Submission, Daily Meter Value Allocation, Monthly Meter Correction Submission, Monthly Meter Correction Allocation, and Load Submission. These windows have common tools.

Tools:

The Daily Meter Value Submission, Load Submission and the Monthly Meter Correction Submission windows have the following tools: Refresh, Download, Print, and Submit. The Daily Meter Value Allocation and the Monthly Meter Correction Allocation window have the following tools: Refresh, Download, and Print.

Navigation:

Users may navigate between Meter Value windows using the five buttons on the top of each Meter Values UI. The 5 buttons are named for Meter Value windows: Daily Meter Value Submission, Daily Meter Value Allocation, Monthly Meter Correction Submission, Monthly Meter Correction Allocation, and Load Submission. Users may navigate to Meter Account information using the left tool bar: Meter Accounts.

### **Meter Accounts**

Windows:

Meter Accounts consists of two windows: Participant Profile and Account Profile.

Tools:

Both of these windows contain the following tools: Refresh, Download, and Print.

Navigation:

Users may navigate to Account Profile screen from the Participant Profile screen by double clicking on a particular account. This action pulls up that particular account's profile. Users may navigate to Meter Value information using the left tool bar: Meter Values.

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### **Navigation Tips**

Date Selection:

Daily Meter Value UI's default to previous business day. To change the date, enter the date in the date field and click 'Refresh.' The information for the selected date is not pulled until 'Refresh' is clicked. Once a date is selected, the date is remembered when navigating between Meter Value windows. When navigating from either of the Monthly UI's to one of the Daily Screens, the default date is the first of the month.

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### **Browser Tips**

#### **Reload/Refresh**

The Refresh (Explorer) button reopens the screen currently in use.

#### **Back/Forward Buttons**

In general, it is not recommended to use the Back/Forward buttons to navigate in eMTR.

#### **Downloading Reports**

When downloading report data, a browser window is displayed allowing the user to specify the file name and location for saving the file. In Explorer, the window name is 'Save File'.

#### **Window Size**

For optimal visual display, users should set their desktop display area to 800 by 600 pixels, and keep the browser window maximized when using eMTR. Resizing the browser window will distort some windows, especially windows that display data in columns.

#### **Toolbars**

To increase the viewing height in both browsers, users can close or minimize the personal tool bar that appears by default in some browsers. This eliminates the need to scroll in some windows.

**Browser Settings**

The following settings must be selected in order to view the application properly.

<p><b>Internet Explorer 4.0</b></p> <ul style="list-style-type: none"> <li>- From "View" drop down list, select "Internet Options"</li> <li>- Click on "Security" Tab</li> <li>- Select "Trusted Sites Zone" from the "Zone" drop down list</li> <li>- Click on "Add Sites"</li> <li>- "*.pjm.com" should be listed, if not; ADD IT. (Make sure that box "Require server verification (https:) for all sites in this zone" is unchecked).</li> <li>- Make sure that the "Custom" radio button is selected under Trusted Sites Zone</li> <li>- Click on "Settings"</li> <li>- Scroll down half way to "Microsoft VM" and select "Custom" under the "Java Permissions" radio buttons If "Microsoft VM" is not listed, see instructions for installing a JVM patch on the login page.</li> <li>- Click on "Java Custom Settings" button</li> <li>- Click on "Edit Permissions" tab</li> <li>- Click on "Enable" radio button under "Run Unsigned Content" and "Run Signed Content"</li> <li>- Click "OK" until back to IE and out of Internet Options</li> <li>- Close IE and reopen to verify that changes have "stuck"</li> </ul>	<p><b>Internet Explorer 5.0&amp;5.5</b></p> <ul style="list-style-type: none"> <li>- From the "Tools" drop down list, select "Internet Options"</li> <li>- Click on "Security" Tab</li> <li>- Select "Trusted Sites Zone"</li> <li>- Click on "Sites"</li> <li>- "*.pjm.com" should be listed, if not; ADD IT. (Make sure that box "Require server verification (https:) for all sites in this zone" is unchecked).</li> <li>- Click on the "Custom Level" button</li> <li>- Scroll down half way to "Microsoft VM" and select "Custom" under the 'Java Permissions' radio buttons If "Microsoft VM" is not listed, see instructions for installing a JVM patch on the login page.</li> <li>- Click on "Java Custom Settings" button</li> <li>- Click on "Edit Permissions" tab</li> <li>- Click on "Enable" radio button under "Run Unsigned Content" and "Run Signed Content"</li> <li>- Click "OK" until back to IE and out of Internet Options</li> <li>- Close IE and reopen to verify that changes have "stuck"</li> </ul>
<p><i>Note: If you are receiving an error saying that "the page you are running contains ActiveX and your security settings prohibit running this page" follow these instructions:</i></p>	
<p><b>ActiveX Errors for IE 4.0</b></p> <ol style="list-style-type: none"> <li>1. From the "Views" drop down list – <i>select "Internet Options"</i></li> <li>2. Click on "Security" Tab</li> <li>3. Select the "Trusted Sites Zone"</li> <li>4. Click on "Custom" radio button</li> <li>5. Click on the "Settings" button</li> <li>6. Make sure that the first five items (all related to ActiveX) Are set to Enable</li> </ol> <p><i>Note: Carry out Steps 7-8 if you are having difficulties when trying to download from the Microsoft and/or Macromedia site(s). Please switch back to default settings once download(s) are complete.</i></p> <ol style="list-style-type: none"> <li>7. Select the "Internet" Zone</li> <li>8. Repeat Steps 4-6</li> </ol>	<p><b>ActiveX Errors for IE 5.0&amp;5.5</b></p> <ol style="list-style-type: none"> <li>1. From the "Tools" drop down list – <i>select "Internet Options"</i></li> <li>2. Click on "Security" Tab</li> <li>3. Select the "Trusted Sites Zone"</li> <li>4. Click on "Custom Level" button</li> <li>5. Make sure that the first five items (all related to ActiveX) are set to Enable</li> </ol> <p><i>Note: Carry out Steps 6-7 if you are having difficulties when trying to download from the Microsoft and/or Macromedia site(s). Please switch back to default settings once download(s) are complete.</i></p> <ol style="list-style-type: none"> <li>6. Select the "Internet" Zone</li> <li>7. Repeat Steps 4-5</li> </ol>

## Contacting PJM

PJM provides assistance to eMTR users in the following ways:

- Online Help
  - Located at <http://www.pjm.com> under PJM Markets/eMTR information/eMTR Online Help.
- eMTR FAQ's
  - Located at <http://www.pjm.com> under PJM Markets/eMTR information / eMTR FAQ's.
- eMTR Training Presentation
  - Located at <http://www.pjm.com> under PJM Markets/eMTR Information / eMTR Training Presentation.

If this information does not provide answers to your eMTR questions, please contact the PJM Helpdesk at 610-666-8886.

## Log In – How To

The log in function requires users to enter a User ID and Password to enter PJM eSuite. Once logged into eSuite, in order to navigate in eMTR, your user must be eMTR qualified with a status of Active.

[Creating a User Account in PJM eSuite](#)

[eMTR Qualifications](#)

[Account Managers](#)

[Logging into eMTR](#)

[Logging out of eMTR](#)

[Window and Field Help \(link to Log In - Window and Field Help\)](#)

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### Creating a User Account in PJM eSuite

1. Click on the login button on the eSuite Main Menu (first from left).
2. On the left toolbar of the login page, click on the Registration Form button.
3. Enter the appropriate information in the required fields.
4. Choose the appropriate application (eMTR) and qualification (Read Only or Read Write).
5. Click Apply. Notice your qualification status is new.
6. In order to navigate in eMTR, your account manager must change your account status from New to Active.

Note: User ID's must be unique.  
Users will be locked out if they enter their password incorrectly three times in a row.  
Users are forced to change their password the first time they login if a system administrator sets the password.

Note: Passwords must abide by the following rules:

- Comprised of 7-16 alphanumeric characters.
- Contain at least one letter and number.
- May not contain your username.

If the User ID or Password is invalid, you will receive the following message in a pop-up window:

*“You have entered an invalid user ID and/or Password. Re-enter and try again.”*

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### eMTR Qualifications

#### Read Only

Allows users to navigate in eMTR but they can not edit or submit meter values, even if their organization is the submitter for the account.

#### Read/Write

Allows users to navigate in eMTR submit and edit meter values if their company is the submitter for the account. Also allows users to submit and edit load values for their company.

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## Account Managers

In order to navigate in eMTR, your user account status must be set to Active. Account managers are responsible for setting status from New to Active upon submission of a Registration Form. Details of your account manager may be found by clicking on the Account Manager Details button (located on both the Registration Form and the User Change Form).

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## Logging in to eSuite and eMTR

1. Click on the login button on the eSuite Main Menu (first from left).
2. Enter your Username and Password and click Login.
3. If the User ID and Password are valid and the log in is successful, the eSuite Main Menu will appear. If login is unsuccessful, reenter your Username and Password. Remember: Username and Password are case sensitive. In addition, 3 unsuccessful attempts will lock your user account.
4. Navigate to the eMTR orb and click on it.
5. eMTR will open to the Daily Meter Value Submission page.

If you have problems logging in, you may need to verify your user qualifications with PJM. See the [‘Contacting PJM’](#) section for more information.

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## Logging out of eSuite and eMTR

To log out of eSuite and eMTR, you must close the browser. Or you can end your session with a particular user by clicking the login button and logging in as another user. Your previous session will end.

Note: The most recent login using a particular Username and Password will be valid. If you are using the application and someone logs in using your login, your session will automatically end and you will be logged out.

## Log In - Window and Field Help



### eSuite Log In Window

The Log In window allows you to access eSuite and the PJM applications for which you are qualified by entering a User ID and Password. The Log In window contains the following fields and controls:

Field	Description
User ID:	Enter your User ID in this field. User IDs are case-sensitive.
Password:	This field is used to enter the Password that corresponds to the User ID.
Log In:	Click this button to log in once you have entered your User ID and Password.
<a href="#">User Registration Form:</a>	This form allows PJM members to register online for use of eSuite.
<a href="#">User Change Form:</a>	This form allows registered eSuite users to change their User ID and/or password.
<a href="#">CAM Organizer</a>	To enter this application, you must be qualified for CAM (Company Account Maintenance).
<a href="#">Admin Account:</a>	To enter this application, you must be qualified for CAM (Company Account Maintenance).

### Log In Rules

- User ID's and passwords are case-sensitive.
- Once you have logged into eSuite, you will receive a 'session time-out' error if you attempt to perform a task after 30 minutes of inactivity.
- Once you have logged into eSuite, if you return to the web address of the Log In window, the Main Menu will automatically appear instead of the Log In window.
- Once you have logged in, if another user logs in with the same User ID during your session, you will be bumped out of eSuite and eMTR. Priority is given to the most current user of the log-in ID. This design allows you to move from one PC to another and continue working in the application.
- Users who are qualified for other PJM eSuite applications can move from one application to the other without having to log in more than once.
- To log out, you must close the browser.

## eMTR Meter Values

The Meter Value functional area of eMTR allows you to submit hourly revenue meter data (ties and generation) via direct metering, XML file upload, or manual entry. eMTR also accommodates next-hour verification among counter-parties. In addition, eMTR accepts end-of-month meter error corrections and calculates the associated billing amounts. eMTR also calculates Net Metered Interchange, meter correction charges/credits, calculated Load and allocates Inadvertent and 500kV Losses. The Load Submission window, also accessed from the Meter Value functional area, allows you to submit hourly load values via file upload or manual entry.

Meter Value functionality is divided into five windows.

[Daily Meter Value Submission](#)

[Daily Meter Value Allocation](#)

[Monthly Meter Correction Submission](#)

[Monthly Meter Correction Allocation](#)

[Load Submission](#)

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**eMTR Meter and Load Value Business Rules****Daily – Meter Values**

- For Meter Value submission, the PJM accounting deadline is Noon next business day (4pm on Mondays and after holidays, all times Eastern Prevailing Time. All submitted data is considered final at this time (end-of-month corrections are allowed).
- Required Data
  - Tie Line Flows: All internal, external, and 500kV ties for each PJM-metered EDC
  - Joint-Owned & Dynamic-Scheduled Generation
- Optional Data
  - Generation located inside an EDC's metered territory that is owned by that EDC
  - Generation located inside an EDC's metered territory that is not owned by that EDC
- One submitter per tie or generator account
- Sign Conventions:
  - Ties: from the submitter's perspective
    - Positive: energy flowing in
    - Negative: energy flowing out
  - Generators:
    - Positive: energy produced
    - Negative: energy consumed (i.e. station service, condensing power)
- Data Granularity:
  - Meter data accepted in 0.001 MWh increments
- Individual tie readings preferred (net tie flows accepted if parties agree)
- Generation revenue meter data must be consistent with day-ahead offers and real-time telemetry for use by PJM settlements

**Daily – Load Values**

- Load data for each day should be submitted by the 10th calendar day of the following month, except during peak periods, when the data should be entered daily. PJM will contact participants when daily reporting is needed.
- Edits for load data should be made by the 10th calendar day of the following month.
- Only PJM metered EDCs are permitted to submit hourly load values.
- Load data is accepted in 0.001 MWh increments.
- Values must be positive (+).

**Monthly**

End-of-Month Meter Corrections may be submitted for each:

- Internal PJM tie meter account
- Generation meter account for a generator located inside an EDC's territory that is not wholly-owned by that EDC

**Note:** External tie corrections must be called into PJM Settlements

Monthly Correction Deadlines:

- Corrections are submitted/verified from Noon 1st business day through Noon 3rd business day of the following month (4pm on Mondays and after holidays). All times Eastern Prevailing Time.
- Tie meter corrections charged at monthly load-weighted-average LMP.
- Generation meter corrections charged at generator's monthly weighted-average LMP.
- 500kV Losses and Inadvertent correction amounts also calculated at load-weighted LMP.
- Corrections may only be submitted manually through the UI.

**Daily Meter Value Submission**

The Daily Meter Value Submission screen accommodates hourly meter value submission.

**Daily Meter Value Submission Business Rules**

All meter values for a day must be submitted by 1200 (Noon) the day after. For a day following a non-business day (weekends or holidays), the deadline is 1600hrs. Please note that these times are in Eastern Prevailing Time.

**Daily Meter Value Submission Window**

Window Tools

- Refresh
- Download (in XML file format)
- Print
- Submit

<b>Data Elements</b>	<b>Description</b>
ID	ID of the meter account, as defined by PJM
Name	Name of the meter account
Counter Party	Name of the counter party of the meter account For account of meter type 500kV tie, counter party is "500kV" If more than one participant is the allocated party, counter party is Joint-Owned (J-O)
Type	Either Gen or Tie (Displays with * if tied to the 500kV System)
Hours 1-24 (hour ending)	Hourly MW values Hourly meter values are subject to changes by the submitter until the accounting deadline Meter values are not considered final until the 5 <sup>th</sup> business day of the following month
Total 500kV Transmission Losses	Represents the total 500kV Losses for that hour
Total Inadvertent Energy	Represents the total Inadvertent Energy for that hour

<b>Editable Elements</b>	<b>Description</b>
Hours 1-24 (hour ending)	Hourly MW values Hourly meter values are subject to changes by the submitter until the accounting deadline Meter values are not considered final until the 5 <sup>th</sup> business day of the following month

## Data Entry

There are three ways to enter hourly meter data.

1. Manual data entry through the UI
2. XML Data Transfer
3. Direct metering system via Distributed Network Protocol

### Manual Data Entry

1. Select the account and hour that you wish to submit a meter value.
2. Enter the number (note sign conventions).
3. Click the Submit button on the lower right.
4. You should receive a success message in a pop-up window: "Your meter values have been submitted successfully."
5. Click "OK" to the window pop-up.

### XML Data Transfer

1. Click on the File Upload button (second button from left on the eSuite application, top right).
2. Select eMTR – Meter Values as the file type you wish to upload.
3. Browse to the location of the file you wish to upload.
4. Click Upload.
5. Select "Save this file to disk" from the pop up window and Click Save.
6. A pop up window asks whether to save the result file. You may save this file by clicking OK or may click Cancel if you do not wish to save this file.
7. The pop up window closes and the files are uploaded.

Once you complete this process, navigate to the proper date and account to view the data uploaded.

### Direct metering system via Distributed Network Protocol

The Direct Metering System sends primary and secondary meter data to SCADA. eMTR then collects SCADA hourly data .

Please note the following business rules:

- eMTR collects SCADA hourly data for previous 3 hours
- eMTR will only retrieve revenue meter data
- If no revenue meter data exists, value will be set to zero
- Helpful hints
  - ◆ Make data changes after three hours have passed
  - ◆ Verify direct metered data via the eMTR application

Please contact PJM's eMTR Helpline 610-666-8886 for further information.

**Daily Meter Value Allocation**

This screen allows you to view your share of daily meter values as well as allocated losses and inadvertent. These values are viewable and downloadable from the eMTR application or by utilizing the browserless interface.

**Allocation Business Rule**

Allocated 500kV Losses and Allocated Inadvertent become available 2-3 business days after the day of submission.

Allocated values are not considered final until the 5<sup>th</sup> business day of the following month.

**Daily Meter Value Allocation Window**

<b>Data Elements</b>	<b>Description</b>
Counter Party	The name of the counter party of the meter account
Name	The name of the meter account
MW values	Allocation of hourly MW values
Actual Net Metered Interchange	The sum of allocated internal and external tie meter values to which you are a party
Total Generation Adjustment	Sum of the allocated generation meter values to which you are a party
Adjusted Net Metered Interchange	Your Actual Net Metered Interchange adjusted for your generation (TGA)
Allocated 500kV Losses	Your share of 500kV Losses
Allocated Inadvertent	Your share of Inadvertent

<b>Editable Elements</b>	<b>Description</b>
NONE	

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## Monthly Meter Correction Submission

This screen allows you to submit monthly meter correction for the accounts for which you are a submitter. You may also view the monthly totals for those meter accounts to which you are a party. These MW amounts may be downloaded via the eMTR UI or the browserless interface.

### Business Rules

This screen is editable between noon\* (Accounting Deadline) first business day through noon 3<sup>rd</sup> business day of the following month. All times Eastern Prevailing Time.

Corrections may be submitted manually through the UI only.

Data Elements	Description
ID	The ID of the meter account, as defined by PJM
Name	The name of the meter account
Counter Party	The name of the counter party of the meter account For account of meter type 500kV tie, counter party is "500kV" If more than one participant is the allocated party, counter party is Joint-Owned (J-O)
Type	Either Gen or Tie (Displays with * if tied to the 500kV System)
Original Total	Account's total MW values for the entire month
Revised Total	Account's original total MW values plus total correction amount
Total Correction	Monthly meter correction amount

Editable Elements	Description
Total Correction	Monthly meter correction amount

### End-of-Month Meter Corrections may be submitted for each:

- Internal PJM tie meter account
- Generation meter account for a generator located inside an EDC's territory that is not wholly-owned by that EDC

**Note:** External tie corrections must be called into PJM Settlements

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\* Accounting Deadline is 4pm on Mondays and after holidays.

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## Monthly Meter Correction Allocation

This screen allows you to view your Meter Error Correction Charge/Credit for the month.

### Business Rules

Participant Net Share, Rate, and Correction become viewable between the 3<sup>rd</sup> and 5<sup>th</sup> business day of the following month.

If an account was not corrected for a month, it will not display on this allocation page.

### Window

Data Elements	Description
Net Ties	- Grouping of all ties correction information. - Ties are netted by a counter party
Generation	A generator's correction information
Original Total	Account's total MW values for the entire month
Revised Total	Account's original total MW values plus total correction amount
Total Correction	Monthly MW meter correction amount
Participant Net Share	Participants MW share of meter corrections
Rate	Rate used to calculate monthly charges/credits
Meter Correction	Participant net share times the rate [Charge (CH) or Credit (CR)]
Editable Elements	Description
NONE	

---

## Load Submission

This screen allows you to view and submit hourly load values. These values are viewable and downloadable from the eMTR application or by utilizing the browserless interface.

### Business Rules

Load data for each day should initially be entered within the following ten calendar days, except during peak periods, when the data should be entered daily. PJM will contact participants when daily reporting is needed

Only PJM metered EDC's are permitted to submit hourly load values

Calculated Load values are subject to change if user clicks Accept button when the current day is less than or equal to the fifth business day of the following month

Load data accepted in 0.001 MWh increments

Values must be positive (+)

Load values are not displayed/cannot be submitted for days in the future

The option to click the Accept button to submit Calculated Load as Company Submitted Load exists only for EDCs in one zone for which Calculated Load is calculated.

Calculated Load and Allocated 500kV Losses fields appear blank when the allocation calculation has not yet run. The calculation is run after the daily deadline for submitting meter values.

If a load is calculated for an EDC by PJM, it is still required that the EDC accept these values.

An hourly load value based on revenue quality tie and gen submitted meter values may be calculated for an EDC once all of that EDC's internal generation is submitted to PJM.

### Load Submission Window

Window Tools

- Refresh
- Download (in XML file format)
- Print
- Submit
- Accept

### XML Data Transfer

1. Click on the File Upload button (second button from left on the eSuite application, top right).
2. Select eMTR – Load Values as the file type you wish to upload.
3. Browse to the location of the file you wish to upload.
4. Click Upload.
5. Select "Save this file to disk" from the pop up window and Click Save.
6. A pop up window asks whether to save the result file. You may save this file by clicking OK or may click Cancel if you do not wish to save this file.
7. The pop up window closes and the files are uploaded.

Once you complete this process, navigate to the proper date on the Load Submission screen to view the data uploaded.

**Window**

<b>Data Elements</b>	<b>Description</b>
Actual Net Metered Interchange	The sum of allocated tie meter values to which you are a party
Total Internal Generation	Sum of all meter values for non-500kV generators electrically located in EDC's territory
Allocated 500kV Losses	Your share of PJM Total 500kV Losses
Calculated Load	Sum of Actual Net Metered Interchange, Total Internal Generation, and Allocated 500kV Losses.
Company Submitted Load	Company Submitted Load values

<b>Editable Elements</b>	<b>Description</b>
Company Submitted Load	Company Submitted Load values