File Format Specification

***NOTE**: File Formats are not final and are subject to change. If a change occurs, updated information will be made available in this document via the PJM Home Page.**

Purpose

This document defines the different types of XML files participants may use to electronically exchange data with the eMTR application. It also defines the detailed output files that may be exchanged with the application and provides examples of well-formatted XML for each.

eMTR Meter Values Submission Document Type

The <emtr> document type will be the root for daily meter value submissions to the eMTR application. The goal of XML is to represent data along with its metadata (structure). Therefore the action being requested (i.e. submit or download) will be inherent in the URL being used and not represented in the document type. The following document type line **must** be included in each file uploaded to the eMTR application for the submission of daily meter values. <!DOCTYPE emtr SYSTEM "emtr.dtd">

eMTR Load Values Submission Document Type

The <emtr_load> document type will be the root for load submissions to the eMTR application.

Interval Definition

All interactions (submits and downloads) require a time interval. For eMTR, the following interval definition will apply:

Data Element	Description	Data Meter_type
interval_definition	The top level hierarchy for a time interval	N/A
interval_start	Defines the actual time the interval begins	N/A
interval_end	Defines the actual time the interval ends	N/A
time_zone	Defines the time zone for which the value is being submitted or retrieved	GMT, EST, or EDT
date	Day, month and year in yyyyMMdd format	DATE
hour	Hour using the 24 hour clock	NUMBER

Requirements/Specifications:

- To specify a month, use the first day of the month as the date in the interval_start, and the last day of the month as interval_end.
- time_zone is required.
- The user can submit both an interval_start and an interval_end, or just an interval_end. All hours specified are hour ending values and the effective period is one hour.
- When receiving downloads from the application, both a start and end interval will be specified.

To specify a MWh value for a single hour, hour ending 13, the user may submit either of the following examples.

```
Example A:
<interval_definition>
      <interval_start>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>12</hour>
      </interval_start>
      <interval_end>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>13</hour>
      </interval_end>
</interval_definition>
<mw_values>50</mw_values>

Example B:
<interval_definition>
      <interval_end>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>13</hour>
      </interval_end>
</interval_definition>
<mw_values>50</mw_values>
```

To specify a MWh value for two hours, hour ending 13 and 14, the user may submit either of the following examples:

Example A:

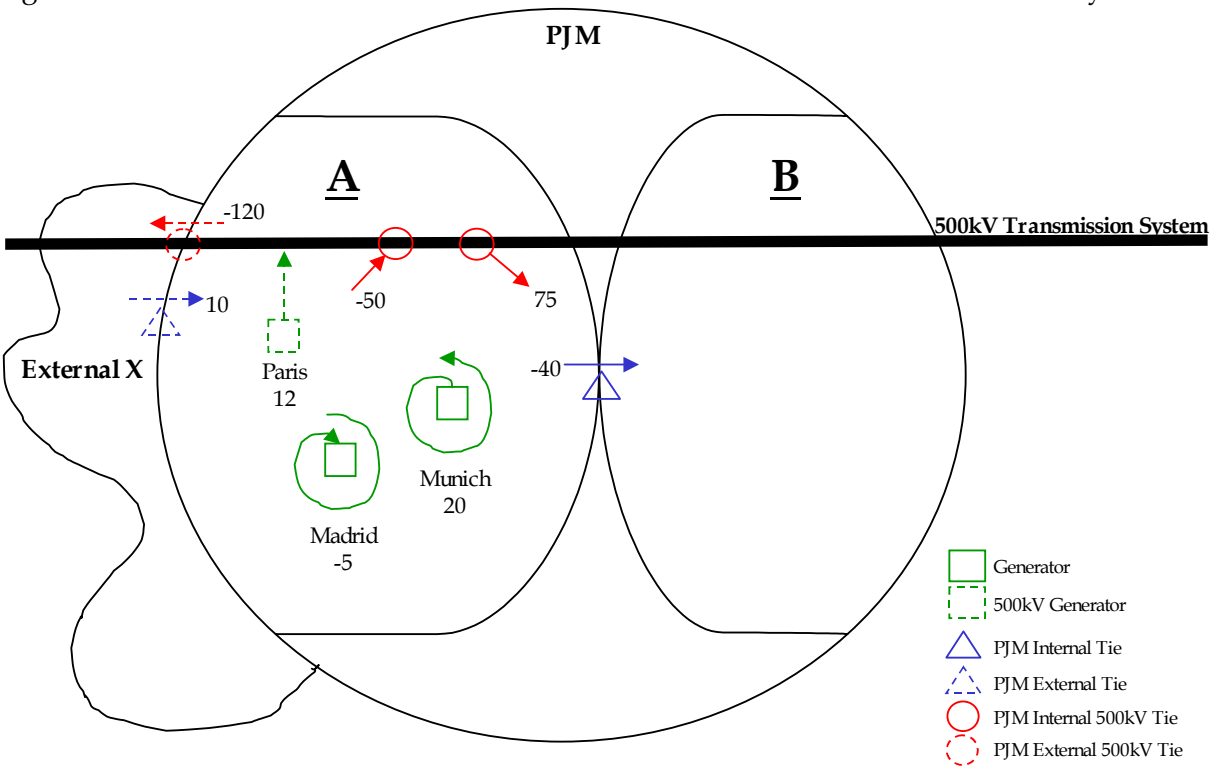
```
<interval_definition>
      <interval_start>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>12</hour>
      </interval_start>
      <interval_end>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>14</hour>
      </interval_end>
</interval_definition>
<mw_values>50</mw_values>

Example B:
<interval_definition>
      <interval_end>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>13</hour>
      </interval_end>
</interval_definition>
<mw_values>50</mw_values>
<interval_definition>
```

```
      <interval_end>
            <time_zone>EDT</time_zone>
            <date>20010617</date>
            <hour>14</hour>
      </interval_end>
</interval_definition>
<mw_values>50</mw_values>
```

Validation/Business Rules:

- Sign conventions for meter values:
  - For accounts of type Tie, if the energy is "going out" from the submitter's perspective, a negative meter value should be submitted. Tie values "going in" to the submitter should be positive.
  - For accounts of type Gen, if the unit is generating, a positive meter value should be submitted. If the unit is consuming energy (i.e., station service), the meter value should be negative.

The following is an example, which shows the different types of accounts, the direction of energy flow, and the resulting meter value that should be submitted. All values are assumed to be submitted by A.



- mw_values can be specified to three decimal places (kWh). Specifying to more than three decimals will result in an error.
- For updates, enter the new total MW value, not the incremental change.
- When uploading values to eMTR using the Eastern Time Zone, and transitioning to Standard Time from Daylight Savings Time (25-hour day), you can denote the hours of the day in either of the following ways: 01 EDT, 01 EST, 02 EST, 03 EST, …, 24 EST; or 01 EDT, 02 EDT, 02 EST, 03 EST…,24 EST. The hourly meter value, submitted for the 2nd hour of the day, will be interpreted as the same in either scenario. When transitioning to Daylight Savings Time (23-hour day), the hours of the day can be submitted as: 01 EST, 03

EDT, 04 EDT …, 24 EDT; or 01 EST, 02 EST, 04 EDT …, 24 EDT. Again, the hourly meter value, submitted for the 2nd hour of the day, will be interpreted as the same in either scenario.

- When downloading hourly information from eMTR, on a DST day, using the current Java standard, the hours are retrieved as follows: For the 25-hour day, 0 EDT – 1 EDT, 1 EDT – 1 EST, 1 EST - 2 EST, 2 EST - 3 EST, …, 22 EST – 23 EST, 23 EST - 0 EST of next day; and for the 23-hour day, 0 EST – 1 EST, 1 EST - 3 EDT, 3 EDT - 4 EDT, …, 22 EDT – 23 EDT, 23 EDT – 0 EDT of next day.

Input Files

Action Performed: **Submit Hourly Meter Values**

Description: This action is used to upload hourly meter values to the eMTR application.

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

Input Data Values:

Data Element	Description	Data Meter_type
meter_account	The top level hierarchy for an individual meter account	N/A
meter_account_id	- The id of the meter account, as defined by PJM - Only accounts for which you are the submitter are acceptable for upload	NUMBER
meter_values	Grouping of all the meter values for an individual meter account	N/A
interval_definition	Used to define the time interval for which the meter values are submitted.	N/A
mw_values	Hourly MWhs	NUMBER

Example Input:

```
<?xml version="1.0"?>
<!DOCTYPE emtr SYSTEM "emtr.dtd">
<emtr>
      <meter_account>
            <meter_account_id>1308</meter_account_id>
            <meter_values>
                  <interval_definition>
                        <interval_end>
                              <time_zone>EST</time_zone>
                              <date>20010401</date>
                              <hour>01</hour>
                        </interval_end>
                  </interval_definition>
                  <mw_values>10</mw_values>
```

```
            </meter_values>
            <meter_values>
                  <interval_definition>
                        <interval_end>
                              <time_zone>EDT</time_zone>
                              <date>20010401</date>
                              <hour>03</hour>
                        </interval_end>
                  </interval_definition>
                  <mw_values>20</mw_values>
            </meter_values>
            <meter_values>
                  <interval_definition>
                        <interval_end>
                              <time_zone>EDT</time_zone>
                              <date>20010401</date>
                              <hour>04</hour>
                        </interval_end>
                  </interval_definition>
                  <mw_values>17</mw_values>
            </meter_values>
      </meter_account>
      <meter_account>
            <meter_account_id>1307</meter_account_id>
            <meter_values>
                  <interval_definition>
                        <interval_end>
                              <time_zone>EDT</time_zone>
                              <date>20010402</date>
                              <hour>00</hour>
                        </interval_end>
                  </interval_definition>
                  <mw_values>15</mw_values>
            </meter_values>
      </meter_account>
</emtr>
```

Output Data Values:

Data Element	Description	Data Meter_type
result	The top level hierarchy for the success and error messaging	N/A
name	The name of the process	STRING
meter_account_id	The id of the meter account, as defined by PJM	NUMBER
upload_status	Indicates success with "Success" and failure with "Failed"	STRING
description	Describes the success or failure of the named process	STRING

Example Output:

```
<?xml version="1.0"?>
```

```
<!DOCTYPE emtr SYSTEM “emtr.dtd”>
<emtr>
      <result>
            <name>Submit Meter Values</name>
            <meter_account_id>1308</meter_account_id>
            <upload_status>Success</upload_status>
            <description>Successfully Submitted</description>
      </result>
      <result>
            <name>Submit Meter Values</name>
            <meter_account_id>1307</meter_account_id>
            <upload_status>Failed</upload_status>
            <description>Invalid Date for hour 20010401 04:00:00</description>
            <description>Invalid Date for hour 20010402 00:00:00</description>
      </result>
</emtr>
```

Action Performed: **Submit Hourly Load Values**

Description: This action is used to upload hourly load values to the eMTR application.

When Submitted: All load values for the previous month must be submitted before the 11th calendar day of the next month.

Input Data Values:

Data Element	Description	Data Meter_type
load	The top level hierarchy for an individual load value	N/A
zone_id	- The id of the zone being submitted, as defined by PJM - Each PJM EDC may only upload hourly load values for its zone(s).	NUMBER
load_values	Grouping of all the hourly load values for an EDC's load	N/A
interval_definition	Used to define the time interval for which the load values are submitted	N/A
mw_values	Hourly Load MWhs	NUMBER

Example Input:

```
<?xml version="1.0"?>
<!DOCTYPE emtr_load SYSTEM "load.dtd">
<emtr_load>
      <load>
            <zone_id>13</zone_id>
            <load_values>
                  <interval_definition>
                      <interval_start>
                            <time_zone>EDT</time_zone>
                            <date>20010514</date>
```

```
                    <hour>00</hour>
               </interval_start>
               <interval_end>
                    <time_zone>EDT</time_zone>
                    <date>20010514</date>
                    <hour>01</hour>
               </interval_end>
          </interval_definition>
          <mw_values>15</mw_values>
     </load_values>
     <load_values>
          <interval_definition>
               <interval_end>
                    <time_zone>EDT</time_zone>
                    <date>20010516</date>
                    <hour>02</hour>
               </interval_end>
          </interval_definition>
          <mw_values>16</mw_values>
     </load_values>
</load>
</emtr_load>
```

Output Data Values:

Data Element	Description	Data Meter_type
result	The top level hierarchy for the success and error messaging	N/A
name	The name of the process	STRING
zone_id	The id of the meter account, as defined by PJM	NUMBER
upload_status	Indicates success with "Success" and failure with "Failed"	STRING
description	Describes the success or failure of the named process	STRING

Example Output:

```
<?xml version="1.0"?>
<!DOCTYPE emtr_load SYSTEM "loadResult.dtd">
<emtr_load>
     <result>
          <name>Submit Load Values</name>
          <zone_id>13</zone_id>
          <upload_status>Success</upload_status>
          <description>Successfully Submitted</description>
     </result>
     <result>
          <name>Submit Load Values</name>
          <zone_id>07</zone_id>
          <upload_status>Failed</upload_status>
          <description>Invalid Date for hour 20010401 04:00:00</description>
          <description>Invalid Date for hour 20010402 00:00:00</description>
```

```
      </result>
</emtr_load>
```

Report (Output) Files

Functionality has been added to the appropriate output files giving participants the opportunity to specify parameters such as dates and meter account types in downloads. On the Daily Submission, Daily Allocation, and Load Submission screens, the participant has the option to download values for a single day, month, or a date range. On the Daily Submission, Daily Allocation, and Participant Profile screens, the participant also has the option to download by account type (tie or gen).

Action Performed: **Retrieve Daily Submitted Meter Values**

Description: Retrieves meter accounts and their hourly meter values for the dates specified, based on the participants qualifications. These values can be obtained from the eMTR application or by utilizing the browserless interface.

Output Data Values:

Data Element	Description	Data Meter_type
meter_account	The top level hierarchy for an individual meter account (multiple accounts may be present in the same file)	N/A
meter_account_id	- The id of the meter account, as defined by PJM - Only meter accounts for which you are the submitter or are a party to may be downloaded	NUMBER
name	The name of the meter account	STRING
counter_party	- The name of the counter party of the meter account - For account of type 500kV tie, counter party is "500kV" - For account of type external tie, internal tie, external 500 kV tie, and Generator, counter party is the opposite participant of the reported or allocated to. ex: If you are the reporting participant, the allocated to participant will be downloaded - If the participant is neither the reporter nor allocated to party, the allocated participant is the counter party. If more than one participant is the allocated to party, counter party is joint-owned (J-O).	STRING
meter_type	The type of the meter account, either Gen or Tie	STRING
ehv	A tag that represents a 500kV (EHV) account	STRING

Data Element	Description	Data Meter_type
meter_values	- Grouping of all the meter values for an individual meter account - Hourly meter values are subject to change by the submitter until the accounting deadline - Meter values are not considered final until the 5th business day of the following month	N/A
interval_definition	Defines the hour that the meter value represents	N/A
mw_values	Hourly MWhs	NUMBER
total_loss	A tag whose presence represents the total for 500kV losses, it can have value PJM-E, PJM-W, CE, PJM, a new tag effective at 11/20/2003	N/A
loss_values	A tag whoe presence represents the total loss hour and amount	N/A
loss_amount	Total 500kV losses for that hour	NUMBER
inadvertent_values	A tag whose presence represents the inadvertent energy hour and amount	N/A
total_inadvertent	A tag whose presence represents the MW value total for Inadvertent, it can have value PJM-E, PJM-W, CE. The new tag effective at 11/20/2003. PJM-E and PJM-W will be replaced by PJM from 2/1/2004	N/A
inadvertent_amount	Total inadvertent energy for that hour	NUMBER
total_losses_east	A tag whose presence represents the total for 500kV losses for the East Control Area, retired after, obsolete at 11/20/2003	N/A
total_losses_west	A tag whose presence represents the total for 500kV losses for the East Control Area, obsolete at 11/20/2003	N/A
total_inadvertent_east	A tag whose presence represents the MW value total for Inadvertent, obsolete at 11/20/2003	N/A
total_inadvertent_west	A tag whose presence represents the MW value total for Inadvertent, obsolete at 11/20/2003	N/A

Example Output:

```
<emtr>
      <meter_account>
            <meter_account_id>29</meter_account_id>
            <name>Generator 1</name>
            <counter_party>Company X</counter_party>
            <meter_type>Gen</meter_type>
            <ehv>No</ehv>
            <meter_values>
                  <interval_definition>
                        <interval_start>
                              <time_zone>EST</time_zone>
```

```
                        <date>20010401</date>
                        <hour>00</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>10</mw_values>
      </meter_values>
      <meter_values>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>03</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>20</mw_values>
      </meter_values>
            .
            .
      <meter_values>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>20</mw_values>
      </meter_values>
</meter_account>
<total_loss control_area_name="PJM-E">
      <loss_values>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>00</hour>
                        </interval_start>
                  <interval_end>
```

```
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
            </interval_definition>
            <loss_amount>
      </loss_values>
      .
      .
      <loss_value>
            <interval_definition>
                  <interval_start>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                        </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
                  </interval_end>
            </interval_definition>
      </loss_value>
</total_loss>
<total_inadvertent control_area_name="PJM">
      <inadvertent_values>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>00</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
            </interval_definition>
            <inadvertent_amount>240</inadvertent_amount>
      </inadvertent_values>
            .
            .
      <inadvertent_values>
            <interval_definition>
                  <interval_start>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
```

```
                    </interval_end>
                </interval_definition>
                <inadvertent_amount>250</inadvertent_amount>
            </inadvertent_values>
        </total_inadvertent>
</emtr>
```

Action Performed: **Retrieve Daily Meter Value Allocation**

Description: Retrieves your share of daily meter values as well as losses and inadvertent. These values can be obtained from the eMTR application or by utilizing the browserless interface.

Output Data Values:

Data Element	Description	Data Meter_type
meter_account	The top level hierarchy for an individual meter account (multiple accounts may be present in the same file)	N/A
meter_account_id	- The id of the meter account, as defined by PJM - Only accounts for which you are a party to may be downloaded	NUMBER
counter_party	- The name of the counter party of the meter account	STRING
name	The name of the meter account	STRING
meter_type	The type of the meter account, either Gen or Tie	STRING
allocated_values	- Grouping of all the allocated values for an individual meter account - Allocated values that are downloaded before the accounting deadline are subject to change - Allocated values are not considered final until the 5th business day of the following month	N/A
interval_definition	Used to define the hour that the allocated value represents	N/A
mw_values	Hourly MWhs	NUMBER
total_allocated_values	Total allocated MWh values for one day	NUMBER
actual_nmi	A tag whose presence represents Actual Net Metered Interchange	N/A
actual_nmi_value	Actual Net Metered Interchange is the sum of allocated internal and external tie meter values to which you are a party	NUMBER
tga	A tag whose presence represents Total Generation Adjustment	N/A
tga_value	Total Generation Adjustment is the sum of the allocated generation meter values to which you are a party	NUMBER

Data Element	Description	Data Meter_type
adjusted_nmi	A tag whose presence represents Adjusted Net Metered Interchange	N/A
adjusted_nmi_value	Adjusted Net Metered Interchange is your Actual Net Metered Interchange (actual_NMI) adjusted for your Generation (TGA)	NUMBER
share_losses	A tag whose presence represents your MW share of the PJM total 500 kV losses	N/A
share_losses_value	Your share of the 500kV losses	NUMBER
share_inadvertent	A tag whose presence represents your share of the PJM total inadvertent, stop use when Marginal Losses started at Jun 1, 2007	N/A
share_inadvertent_value	Your MW share of inadvertent, used before Jun 1, 2007	NUMBER
derated_loss_adjustment	A tag whose presence represents Derated Loss Adjustment, used when Marginal Losses started at Jun 1, 2007	N/A
derated_loss_adjustment_value	Your MW share of derated loss adjustment, start use at Jun 1, 2007	NUMBER

Example Output:

```
<emtr>
      <meter_account>
            <meter_account_id>34</meter_account_id>
            <counter_party>Company Y</counter_party>
            <name>Generator 1</name>
            <meter_type>Gen</meter_type>
            <allocated_values>
                  <interval_definition>
                        <interval_start>
                              <time_zone>EST</time_zone>
                              <date>20010401</date>
                              <hour>00</hour>
                        </interval_start>
                        <interval_end>
                              <time_zone>EST</time_zone>
                              <date>20010401</date>
                              <hour>01</hour>
                        </interval_end>
                  </interval_definition>
                  <mw_values>12</mw_values>
            </allocated_values>
                  .
                  .
            <allocated_values>
                  <interval_definition>
                        <interval_start>
                              <time_zone>EDT</time_zone>
                              <date>20010401</date>
                              <hour>23</hour>
```

```
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>20</mw_values>
      </allocated_values>
</meter_account>
<actual_nmi>
      <actual_nmi_value>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>00</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>12</mw_values>
      </actual_nmi_value>
            .
            .
      <actual_nmi_value>
            <interval_definition>
                  <interval_start>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>20</mw_values>
</actual_nmi_value>
<tga>
      <tga_value>
            <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>00</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
```

```
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>12</mw_values>
      </tga_value>
            .
            .
      <tga_value>
            <interval_definition>
                  <interval_start>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
                  </interval_end>
            </interval_definition>
            <mw_values>20</mw_values>
      </tga_value>
</tga>
<adjusted_nmi>
      <adjusted_nmi_value>
                  <interval_definition>
                  <interval_start>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>00</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EST</time_zone>
                        <date>20010401</date>
                        <hour>01</hour>
                  </interval_end>
                  </interval_definition>
            <mw_values>12</mw_values>
      </adjusted_nmi_value>
            .
            .
      <adjusted_nmi_value>
                  <interval_definition>
                  <interval_start>
                        <time_zone>EDT</time_zone>
                        <date>20010401</date>
                        <hour>23</hour>
                  </interval_start>
                  <interval_end>
                        <time_zone>EDT</time_zone>
                        <date>20010402</date>
                        <hour>00</hour>
```

```
                    </interval_end>
                    </interval_definition>
                <mw_values>20</mw_values>
            </adjusted_nmi_value>
      </adjusted_nmi>
      <share_losses>
            .
            .
      </share_losses>
      <share_inadvertent>
            .
            before Jun 1,2007
            .
      </share_inadvertent>
      or
      <derated_loss_adjustment>
            .
            Start at Jun 1, 2007
            .
      </derated_loss_adjustment>

</emtr>
```

Action Performed: **Retrieve Monthly Meter Correction Submissions**

Description: This action will allow you to retrieve monthly meter correction charges/credits for the accounts on which you a submitter, reporter, or have been allocated to. These values can be obtained from the eMTR application or by utilizing the browserless interface.

Output Data Values:

Data Element	Description	Data Type
meter_account	The top level hierarchy for an individual meter account (multiple accounts may be present in the same file)	N/A
meter_account_id	-The id of the meter account, as defined by PJM - Only meter accounts for which you are the submitter, or party to may be downloaded	NUMBER
meter_account_name	The name of the meter account	STRING
counter_party	Name of the counter party on the meter account	STRING
meter_type	The type of the meter account, either Gen or Tie	STRING
ehv	A tag that represents a 500kV (EHV) account	STRING
original_total	Account's total MW values for the entire month	NUMBER
revised_total	Account's original total mw values plus total correction amount	NUMBER
total_correction	Monthly MW meter correction amount	NUMBER
daily_meter_values	Grouping of all the meter values for an individual meter account	N/A

Data Element	Description	Data Type
interval_definition	Used to define the month that the meter correction values are for	N/A
mw_values	Daily MWhs	NUMBER

Example Output:

```
<emtr>
  <meter_account>
    <meter_account_id>15</meter_account_id>
    <meter_account_name>Joes Account</meter_account_name>
    <counter_party>Company A</counter_party>
    <meter_type>Tie</meter_type>
    <ehv>no</ehv>
    <original_total></original_total>
    <revised_total></revised_total>
    <total_correction></total_correction>
  </meter_account>
  <meter_account>
    <meter_account_id>16</meter_account_id>
    <meter_account_name>Another Account</meter_account_name>
    <counter_party>Company A</counter_party>
    <meter_type>Tie</meter_type>
    <ehv>no</ehv>
    <original_total>-20.0</original_total>
    <revised_total>-20.0</revised_total>
    <total_correction></total_correction>
    <daily_meter_values>
      <interval_definition>
        <interval_end>
          <time_zone>EDT</time_zone>
          <date>20010503</date>
        </interval_end>
      </interval_definition>
      <mw_values>-20.0</mw_values>
    </daily_meter_values>
  </meter_account>
</emtr>
```

Action Performed: **Retrieve Monthly Meter Correction Allocations**

Description: This action will allow you to retrieve monthly meter correction charges/credits for the accounts on which you a submitter, reporter, or have been allocated to. These values can be obtained from the eMTR application or by utilizing the browserless interface.

Output Data Values:

Data Element	Description	Data Type
interval_definition	Used to define the month that the meter correction values are for	N/A
net_ties	Grouping of all the ties correction information. Ties are netted by a counter party	N/A

Data Element	Description	Data Type
counter_party_net_tie	A tag whose presence represents the net tie counter parties.	N/A
counter_party	Name of the counter party on the meter account	STRING
original_total	Account's total MW values for the entire month	NUMBER
revised_total	Account's original total mw values plus total correction amount	NUMBER
total_correction	Monthly MW meter correction amount	NUMBER
participant_net_share	Participants MW share of meter corrections	NUMBER
rate	Rate used to calculate monthly charges/credits	NUMBER
correction_charge	Participant net share times the rate	NUMBER
charge_or_credit	Designates the meter correction amount as a charge (CH) or a credit (CR)	STRING
generation	Grouping of the generator's correction information	N/A
counter_party_gen	A tag whose presence represents a counter party for the generation section	N/A
total_meter_correction	A tag whose presence represents total meter correction	N/A

Example Output:

```
<emtr>
      <interval_definition>
            <interval_start>
                  <time_zone>EST</time_zone>
                  <date>20010401</date>
            </interval_start>
            <interval_end>
                  <time_zone>EDT</time_zone>
                  <date>20010430</date>
            </interval_end>
      </interval_definition>
      <net_ties>
            <counter_party_net_tie>
                  <counter_party>Company X</counter_party>
                  <original_total> 100</original_total>
                  <revised_total>115</revised_total>
                  <total_correction>15</total_correction>
                  <participant_net_share>15</participant_net_share>
                  <rate>5.00<rate>
                  <correction_charge>75.00</correction_charge>
                  <charge_or_credit>CR</charge_or_credit>
            </counter_party_net_tie>
      </net_ties>
      <generation>
            <counter_party_gen>
                  <counter_party>Company C</counter_party>
                  <meter_account_name>Generator 2</meter_account_name>
```

```
                <original_total>100</original_total>
                <revised_total>110</revised_total>
                <total_correction>10</total_correction>
                <participant_net_share>10</participant_net_share>
                <rate>5.00</rate>
                <correction_charge>50.00</correction_charge>
                <charge_or_credit>CR</charge_or_credit>
          </counter_party_gen>
     </generation>
     <total_meter_correction>
          <participant_net_share>10</participant_net_share>
          <correction_charge>50.00</correction_charge>
          <charge_or_credit>CR</charge_or_credit>
     </total_meter_correction>
</emtr>
```

Action Performed: **Retrieve Meter Account Details**

Description: Retrieves details on all accounts for which you are a submitter or a party to. These values can be obtained from the eMTR application or by utilizing the browserless interface.

Output Data Values:

Data Element	Description	Data Meter_type
meter_account	The top level hierarchy for an individual meter account (multiple accounts may be present in the same file)	N/A
meter_account_id	- The id of the meter account, as defined by PJM - Only account details for which you are the submitter or to which you are a party to may be downloaded	NUMBER
meter_account_name	A tag whose presence represents the name of the meter account	STRING
effective_date	The original effective date of the account.	DATE
terminate_date	The date of account termination (may be null)	DATE
meter_type	The type of the meter account, either Gen or Tie	STRING
ehv	A tag that represents a 500kV (EHV) account	STRING
bus_name	The name of the bus to which the meter account is tied (may be null).	STRING
submitter	The party who is responsible for submitting the meter values for the account.	STRING
reported	A tag whose presence represents reported accounts	N/A
reported_to	Party receiving an adjustment to Net Metered Interchange for the account	STRING
reported_factor	The Reported To party's adjustment amount, expressed as a percentage	NUMBER

Data Element	Description	Data Meter_type
reported_control_area	Control area the account belongs to	STRING
allocated_control_area	Control area the account belongs to	STRING
allocated	A tag whose presence represents allocated accounts	N/A
allocated_to	Party receiving the opposite adjustment to Net Metered Interchange for the account	STRING
allocated_percentage	The Allocated To party's opposite adjustment amount, expressed as a percentage	NUMBER

Example Output:

```
<emtr>
      <meter_account>
            <meter_account_id>17<meter_account_id>
            <meter_account_name>Generator 1 </meter_account_name>
            <effective_date>20010401</effective_date>
            <terminate_date> 20021101</terminate_date>
            <meter_type>Gen</meter_type>
            <ehv>N</ehv>
            <bus_name>B1</bus_name>
            <submitter>myCompany</submitter>
            <reported>
                  <reported_to>Company A</reported_to>
                  <reported_factor>100</reported_factor>
                  <reported_control_area>C</reported_control_area>
            </reported>
            <allocated>
                  <allocated_to>Company A</allocated_to>
                  <allocated_percentage>100</allocated_percentage>
                  <allocated_control_area>C</allocated_control_area>
            </allocated>
      </meter_account>
</emtr>
```

Requested Action: Retrieve Daily Load Submission Values

Description: Retrieves daily load submission values. These values can be obtained from the eMTR application or by utilizing the browserless interface. *(See eMTR Browserless File Transfer document under PJM Markets/ eMTR information under PJM's web site.)*

Important Notes: If an EDC is not submitting all internal generation, PJM will not calculate load for that EDC. For those EDCs, Actual Net Metered Interchange, Total Internal Generation, 500kV Loss Allocation, and Calculated Load will not appear on the UI, nor in the Download. If an EDC is in more than one zone, Zone Submitted Load will appear for each zone. If the EDC is in one zone, then only Company Submitted Load will appear. Company Submitted Load will be the subtotal of all the zonal submitted values.

Output Data Values:

Data Element	Description	Data Meter_type

Data Element	Description	Data Meter_type
actual_nmi	A tag whose presence represents Actual Net Metered Interchange	N/A
actual_nmi_value	A tag containing the interval (hour) and the MW value for Actual Net Metered Interchange, which is the sum of allocated internal and external tie meter values to which you are a party.	N/A
total_internal_gen	A tag whose presence represents Total Internal Generation	N/A
total_internal_gen_value	A tag containing the interval (hour) and the MW value for Total Internal Generation, which is the sum of all the hourly generation values where the EDC, or corresponding EDC, if you are the default LSE, is the party receiving 100 percent of the adjustment to Net Metered Interchange.	N/A
share_losses	A tag whose presence represents the EDC's MW share of the PJM Total 500kV losses	N/A
share_losses_value	A tag containing the interval (hour) and the MW value for the EDC's share of 500kV losses	N/A
calculated_load	A tag whose presence represents Calculated Load	N/A
load_value	A tag containing the hour and the MW value for calculated load, which is the sum of Actual Net Metered Interchange, Total Internal Generation, and 500kV Allocations.	N/A
zone_submitted_load	A tag whose presence represents the load submitted for a zone	N/A
zone_id	The id of the zone, as defined by PJM	NUMBER
zone_name	The name of the zone	STRING
submitted_value	A tag containing the interval (hour) and the MW value of the load value submitted by the EDC.	N/A
derated_loss_adjustment	A tag whose presence represents Derated Loss Adjustment, used when Marginal Losses Started at Jun 1, 2007	N/A
load_without_losses	A tag whose presence represents Load without Losses, used when Marginal Losses Started at Jun 1, 2007	N/A
load_with_losses	A tag replace calculated_load when Marginal Losses started at Jun 1, 2007	N/A
deration_factor	A tag whose presence represents Deration Factor, used when Marginal Losses Started at Jun 1, 2007	N/A
company_submitted_load	A tag whose presence represents the load submitted by the EDC	N/A

Example Output Before Marginal Losses Started for the Download Date (Before Jun 1, 2007):

```
<emtr_load>
  <actual_nmi>
    <actual_nmi_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>13.0</mw_values>
    </actual_nmi_value>
  </actual_nmi>
  <total_internal_gen>
    <total_internal_gen_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>2.0</mw_values>
    </total_internal_gen_value>
  </total_internal_gen>
  <share_losses>
    <share_losses_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>0.0</mw_values>
    </share_losses_value>
</share_losses>
  <calculated_load>
    <load_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>15.0</mw_values>
    </load_value>
</calculated_load>
  <zone_submitted_load>
    <zone_id>7</zone_id>
    <zone_name>Zone A</zone_name>
    <submitted_value>
```

```
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>15.0</mw_values>
    </submitted_value>
  </zone_submitted_load>
  <zone_submitted_load>
    <zone_id>8</zone_id>
    <zone_name>Zone B</zone_name>
    <submitted_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>5.0</mw_values>
    </submitted_value>
</zone_submitted_load>
<company_submitted_load>
    <submitted_value>
      <interval_definition>
        <interval_end>
          <hour>22</hour>
          <time_zone>EDT</time_zone>
          <date>20010521</date>
        </interval_end>
      </interval_definition>
      <mw_values>20.0</mw_values>
    </submitted_value>
  </company_submitted_load>
</emtr_load>
```

Example Output if Marginal Losses Started for the Download Date (Since Jun 1 , 2007):

```
<?xml version="1.0" standalone="no"?>
<!DOCTYPE emtr_load SYSTEM "dailyLoadSubmission.dtd">
<!--In order to retrieve the dtd, please take the following URL and download the
dtd.  -->
<!--The dtd must be stored in the same directory as the xml file in order to
parse correctly.   -->
<!--"https://testwebemtr.pjm.com/emeter/dailyLoadSubmission.dtd"-->

<emtr_load>
  <actual_nmi>
    <actual_nmi_value>
      <interval_definition>
        <interval_end>
```

```
          <hour>3</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
      <mw_values>11.000</mw_values>
    </actual_nmi_value>
  </actual_nmi>
  <total_internal_gen>
      <total_internal_gen_value>
        <interval_definition>
          <interval_end>
            <hour>22</hour>
            <time_zone>EDT</time_zone>
            <date>20010521</date>
          </interval_end>
        </interval_definition>
        <mw_values>2.0</mw_values>
      </total_internal_gen_value>
  </total_internal_gen>
  <share_losses>
    <share_losses_value>
      <interval_definition>
        <interval_end>
          <hour>1</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
      <mw_values>-39.000</mw_values>
    </share_losses_value>
  </share_losses>
  <load_with_losses>
    <load_value>
      <interval_definition>
        <interval_end>
          <hour>1</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
      <mw_values>0.000</mw_values>
    </load_value>
  </load_with_losses>
  <derated_loss_adjustment>
    <load_value>
      <interval_definition>
        <interval_end>
          <hour>1</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
```

```
      <mw_values>-39.0</mw_values>
    </load_value>
  </derated_loss_adjustment>
  <load_without_losses>
    <load_value>
      <interval_definition>
        <interval_end>
          <hour>1</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
      <mw_values>39.0</mw_values>
    </load_value>
  </load_without_losses>
  <deration_factor>
    <load_value>
      <interval_definition>
        <interval_end>
          <hour>1</hour>
          <time_zone>EDT</time_zone>
          <date>20070601</date>
        </interval_end>
      </interval_definition>
      <mw_values>0.5</mw_values>
    </load_value>
  </deration_factor>
  <company_submitted_load/>
</emtr_load>
```

Validation

All files are subjected to three validation routines:

- XML Format: The first check validates that the syntax of the file is correct. It checks that the XML tags are valid and that the data elements are of the correct type.
- Data Format: Second, the format of data within the tags is evaluated. These include date and month formats as well as number formats such as the three decimal place limit on meter values. If any part of the file fails the data format check, the file is aborted and the user receives a message describing the nature of the error.
- eMTR Business Validation: The final check applies all business rules. This includes ownership of the meter account, submission deadlines. Parts of the file failing business validation will be noted in a response file, with a descriptive error message. Those parts that pass this level of validation will be successfully processed.

Possible Errors

Submit Hourly Meter Values

XML Format Errors:

- If any part of the file fails the syntax check, the file is aborted and the user receives an 'XML Parse Error' message detailing the line number where the error occurred.

Example Data Format Errors:

- "Invalid Date Format. You Submitted: 'entered value' for this date 'date'."
- "The date field must contain a value."
- "Invalid Hour Format. You Submitted: 'entered value' for this date 'date'."
- "The hour field must contain a value for this date 'date'."
- "The meter account id field must contain a value for this date 'date'."
- "Invalid meter account id. You submitted: 'entered value' for this date 'date'."
- "MW value must be a number. You Submitted: 'entered value' for this date 'date'."
- "MW value field must contain a value for this date 'date'."

eMTR Business Validation:

- "Invalid Account Id for date 'date'."
- "You are not the submitter for this account for 'date'."
- "Invalid Ending Hour for date 'date'."
- "Invalid Amount for date 'date'."
- "MwValues can not have more than three decimal places. You Submitted: 'entered value' for this date 'date'."
- "MwValues must be less than 10,000. You Submitted: 'entered value' for this date 'date'."
- "You can not submit Meter Accounts for a day after today."

Application Error:

- "Error has occurred in the component. Please try again."

Incorrect DOCTYPE line:

- "Invalid DOCTYPE line specified. It should be: <!DOCTYPE emtr SYSTEM "emtr.dtd">"

Input File too large:

- "Error Reading Input File. File can not exceed 1048576 bytes."

Submit Load Values

XML Format Errors:

- If any part of the file fails the syntax check, the file is aborted and the user receives an 'XML Parse Error' message detailing the line number where the error occurred.

Example Data Format Errors:

- "Invalid Date Format. You Submitted: 'entered value' for this date 'date'."
- "The date field must contain a value."
- "Invalid Hour Format. You Submitted: 'entered value' for this date 'date'."
- "The hour field must contain a value for this date 'date'."
- "The zone id field must contain a value for this date 'date'."
- "Invalid zone id. You submitted: 'entered value' for this date 'date'."
- "MW value must be a number. You Submitted: 'entered value' for this date 'date'."
- "MW value field must contain a value for this date 'date'."

eMTR Business Validation:

- "Invalid zone Id for date 'date'."
- "You are not the submitter for this zone for 'date'."
- "Invalid Ending Hour for date 'date'."
- "Invalid Amount for date 'date'."
- "MwValues can not have more than three decimal places. You Submitted: 'entered value' for this date 'date'."

- "MwValues must be less than 20,000. You Submitted: 'entered value' for this date 'date'."
- "MwValues must be greater than zero. You Submitted: 'entered value' for this date 'date'."
- "You can not submit load values the deadline has already passed."

Application Error:

- "Error has occurred in the component. Please try again."

Input File too large:

- "Error Reading Input File. File can not exceed 1048576 bytes."

Document Type Defininitions (DTDs)

File Upload Meter Values:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr (meter_account+)>
<!ELEMENT meter_account (
           meter_account_id,
           meter_values+
)>
<!ELEMENT meter_account_id (#PCDATA)>
<!ELEMENT meter_values (
           interval_definition,
           mw_values
)>
<!ELEMENT interval_definition (interval_start?, interval_end)>
<!ELEMENT interval_end (
           time_zone,
           date,
           hour
)>
<!ELEMENT interval_start (
           time_zone,
           date,
           hour
)>
<!ELEMENT mw_values (#PCDATA)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT hour (#PCDATA)>
```

File Upload Load Values:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr_load (load_values+)>
<!ELEMENT load(
           zone_id,
           load_values+
)>
<!ELEMENT zone_id (#PCDATA)>
<!ELEMENT load_values (
```

```
            interval_definition,
            mw_values
)>
<!ELEMENT interval_definition (interval_start?, interval_end)>
<!ELEMENT interval_end (
            time_zone,
            date,
            hour
)>
<!ELEMENT interval_start (
            time_zone,
            date,
            hour
)>
<!ELEMENT mw_values (#PCDATA)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT hour (#PCDATA)>
```

Meter Accounts:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr (meter_account+)>
<!ELEMENT meter_account (
            meter_account_id,
            meter_account_name,
            effective_date,
            terminate_date?,
            meter_type,
            ehv,
            bus_name?,
            submitter,
            reported*,
            allocated*
)>
<!ELEMENT meter_account_id (#PCDATA)>
<!ELEMENT meter_account_name (#PCDATA)>
<!ELEMENT effective_date (#PCDATA)>
<!ELEMENT terminate_date (#PCDATA)>
<!ELEMENT meter_type (#PCDATA)>
<!ELEMENT ehv (#PCDATA)>
<!ELEMENT bus_name (#PCDATA)>
<!ELEMENT submitter (#PCDATA)>
<!ELEMENT reported (
            reported_to,
            reported_factor,
            reported_control_area
)>
<!ELEMENT reported_to (#PCDATA)>
<!ELEMENT reported_factor (#PCDATA)>
<!ELEMENT reported_control_area (#PCDATA)>
<!ELEMENT allocated (
            allocated_by,
```

```
           allocated_percentage,
           allocated_control_area
)>
<!ELEMENT allocated_by (#PCDATA)>
<!ELEMENT allocated_percentage (#PCDATA)>
<!ELEMENT allocated_control_area (#PCDATA)>
```

Daily Meter Values Submission:

```
<?xml version="1.0" encoding="UTF-8"?>
<!--DTD generated by XMLSPY v2004 rel. 3 U (http://www.xmlspy.com)-->
<!ELEMENT emtr
           (meter_account+,
           total_loss*,
           total_inadvertent*,
           total_losses_east?,
           total_losses_west?,
           total_inadvertent_east?,
           total_inadvertent_west?
)>
<!ELEMENT meter_account
           (meter_account_id,
           name,
           counter_party,
           meter_type, ehv,
           meter_values*
)>
<!ELEMENT total_inadvertent (inadvertent_values*)>
<!ATTLIST total_inadvertent
           control_area_name (CE | PJM-E | PJM-W | PJM) #REQUIRED
>
<!ELEMENT total_loss (loss_values*)>
<!ATTLIST total_loss
     control_area_name (CE | PJM-E | PJM-W | PJM) #REQUIRED
>
<!ELEMENT total_losses_east (loss_values*)>
<!ELEMENT total_losses_west (loss_values*)>
<!ELEMENT total_inadvertent_east (inadvertent_values*)>
<!ELEMENT total_inadvertent_west (inadvertent_values*)>
<!ELEMENT loss_values (interval_definition?, loss_amount?)>
<!ELEMENT inadvertent_values (interval_definition?, inadvertent_amount?)>
<!ELEMENT interval_definition (interval_start, interval_end)>
<!ELEMENT interval_end (hour, time_zone, date)>
<!ELEMENT interval_start (hour, time_zone, date)>
<!ELEMENT loss_amount (#PCDATA)>
<!ELEMENT counter_party (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT ehv (#PCDATA)>
<!ELEMENT hour (#PCDATA)>
<!ELEMENT inadvertent_amount (#PCDATA)>
<!ELEMENT meter_account_id (#PCDATA)>
<!ELEMENT meter_type (#PCDATA)>
<!ELEMENT meter_values (interval_definition, mw_values)>
```

```
<!ELEMENT mw_values (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT time_zone (#PCDATA)>
```

Daily Meter Values Allocation:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr(
           meter_account+,
           actual_nmi,
           tga,
           adjusted_nmi,
           share_losses?,
           share_inadvertent?,
           derated_loss_adjustment?
)>
<!ELEMENT meter_account (
           meter_account_id,
           counter_party?,
           name,
           meter_type,
           allocated_values+
)>
<!ELEMENT allocated_values (
           interval_definition,
           mw_values
)>
<!ELEMENT actual_nmi (actual_nmi_value+)>
<!ELEMENT actual_nmi_value (
           interval_definition,
           mw_values
)>
<!ELEMENT tga (tga_value+)>
<!ELEMENT tga_value (
           interval_definition,
           mw_values
)>
<!ELEMENT adjusted_nmi (adjusted_nmi_value+)>
<!ELEMENT adjusted_nmi_value (
           interval_definition,
           mw_values
)>
<!ELEMENT share_losses (text | share_losses_value*)>
<!ELEMENT share_losses_value (
           interval_definition?,
           mw_values?
)>
<!ELEMENT share_inadvertent (text | share_inadvertent_value*)>
<!ELEMENT share_inadvertent_value (
           interval_definition?,
           mw_values?
)>
<!ELEMENT derated_loss_adjustment (text | derated_loss_adjustment_value*)>
```

```
<!ELEMENT derated_loss_adjustment_value (
           interval_definition?,
           mw_values?
)>
<!ELEMENT interval_definition (
           interval_start,
           interval_end
)>
<!ELEMENT interval_end (hour,
           time_zone,
           date
)>
<!ELEMENT interval_start (hour,
           time_zone,
           date
)>
<!ELEMENT mw_values (#PCDATA)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT hour (#PCDATA)>
<!ELEMENT meter_account_id (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT meter_type (#PCDATA)>
<!ELEMENT counter_party (#PCDATA)>
<!ELEMENT text (#PCDATA)>
```

Monthly Meter Values Allocation:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr (
           interval_definition,
           net_ties,
           generation,
           total_meter_correction
)>
<!ELEMENT net_ties (
           counter_party_net_tie+
)>
<!ELEMENT generation (
           counter_party_gen+
)>
<!ELEMENT counter_party_net_tie (
           counter_party,
           original_total?,
           revised_total?,
           total_correction,
           participant_net_share,
           rate,
           correction_charge,
           charge_or_credit
)>
<!ELEMENT counter_party_gen (
           counter_party,
```

```
            meter_account_name,
            original_total?,
            revised_total?,
            total_correction,
            participant_net_share,
            rate,
            correction_charge,
            charge_or_credit
)>
<!ELEMENT total_meter_correction (
            participant_net_share,
            correction_charge,
            charge_or_credit
)>
<!ELEMENT interval_definition (
            interval_start,
            interval_end
)>
<!ELEMENT interval_end (
            time_zone,
            date
)>
<!ELEMENT interval_start (
            time_zone,
            date
)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT meter_account_name (#PCDATA)>
<!ELEMENT counter_party (#PCDATA)>
<!ELEMENT original_total (#PCDATA)>
<!ELEMENT revised_total (#PCDATA)>
<!ELEMENT total_correction (#PCDATA)>
<!ELEMENT participant_net_share (#PCDATA)>
<!ELEMENT rate (#PCDATA)>
<!ELEMENT correction_charge (#PCDATA)>
<!ELEMENT charge_or_credit (#PCDATA)>
```

Monthly Meter Correction Submissons:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr (meter_account*)>
<!ELEMENT meter_account (
            meter_account_id,
            meter_account_name,
            counter_party,
            meter_type,
            ehv,
            original_total,
            revised_total,
            total_correction,
            daily_meter_values*
)>
```

```
<!ELEMENT daily_meter_values (
           interval_definition,
           mw_values
)>
<!ELEMENT interval_definition (interval_end)>
<!ELEMENT interval_end (
           time_zone,
           date
)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT meter_account_name (#PCDATA)>
<!ELEMENT meter_account_id (#PCDATA)>
<!ELEMENT counter_party (#PCDATA)>
<!ELEMENT original_total (#PCDATA)>
<!ELEMENT revised_total (#PCDATA)>
<!ELEMENT total_correction (#PCDATA)>
<!ELEMENT ehv (#PCDATA)>
<!ELEMENT meter_type (#PCDATA)>
<!ELEMENT mw_values (#PCDATA)>
```

Daily Load Submission:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT emtr_load (
          actual_nmi?,
          total_internal_gen?,
          share_losses?,
          calculated_load?,
          load_with_losses?,
          derated_loss_adjustment?,
          load_without_losses?,
          deration_factor?,
          zone_submitted_load*,
          company_submitted_load?
)>
<!ELEMENT actual_nmi (actual_nmi_value+)>
<!ELEMENT actual_nmi_value (
          interval_definition,
          mw_values
)>
<!ELEMENT total_internal_gen (total_internal_gen_value+)>
<!ELEMENT total_internal_gen_value (
          interval_definition,
          mw_values
)>
<!ELEMENT share_losses (share_losses_value+)>
<!ELEMENT share_losses_value (
          interval_definition,
          mw_values
)>
<!ELEMENT calculated_load (load_value+)>
<!ELEMENT load_with_losses (load_value+)>
<!ELEMENT derated_loss_adjustment (load_value+)>
```

```
<!ELEMENT load_without_losses (load_value+)>
<!ELEMENT deration_factor (load_value+)>
<!ELEMENT load_value (
          interval_definition,
          mw_values
)>
<!ELEMENT zone_submitted_load (zone_id,
          zone_name,
          submitted_value+)>
<!ELEMENT submitted_value (
          interval_definition,
          mw_values
)>
<!ELEMENT zone_id (#PCDATA)>
<!ELEMENT zone_name (#PCDATA)>
<!ELEMENT company_submitted_load (submitted_value+)>
<!ELEMENT interval_definition (interval_end)>
<!ELEMENT interval_end (hour, time_zone, date)>
<!ELEMENT mw_values (#PCDATA)>
<!ELEMENT time_zone (#PCDATA)>
<!ELEMENT date (#PCDATA)>
<!ELEMENT hour (#PCDATA)>
```

Technical Notes

The file upload will utilize XML (extensible mark-up language). XML is becoming the industry standard for sharing data between applications and organizations. XML allows for structuring data in such a way that it is platform and hardware independent.

Some of the recommended vendors for XML products are:

- www.wdvl.com/Software/XML- Various XML software
- www.icon-is.com/prod- XML Spy v2.5.
- www.cusoft.com- EXml v1.
- www..microsoft.com/xml- MS XML Notepad
- www.vervet.com - XML Pro v2.0
- www.microstar.com- Near and Far
- www.extensibility.com- XML Authority
- www.bluestone.com Visual XML
- www.oasis-open.org/cover/publicSW.html