



PJM Customer Choice Project File Upload File Format Definition

****NOTE**:** Customer Choice 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. All references made to actual company names are for example purposes only.

(Updated 1/10/03)

Purpose

This document identifies the file upload process for the eSchedules and eCapacity applications. It will discuss the functionality that will be provided in connection with file uploads as well as the required file formats.

eSchedules - Internal Schedules {all Users}

Functionality

The internal schedules functionality will allow the user to load new schedules, update existing pending schedules, and confirm pending schedules.

1. Insert New Schedule - If there is not a pending schedule in existence for a given contract and date, then the schedule information is inserted directly into the database and the responsibility for confirmation is set to the party that did not perform the upload.
2. Update Existing Schedule - If there is a pending schedule for a given contract and date, then the schedule information in the database is updated to reflect the newly uploaded information. The responsibility for confirmation is set to the party that did not perform the upload.
3. Confirm Schedule - If there is a pending schedule for a given contract and date and all of the hour - MWh combinations are the same between the pending schedule and the schedule uploaded by the confirming party, then the schedule is confirmed. A check will be made to determine if the responsibility for confirmation is set to the party that is performing the upload. If the responsibility for confirmation is not that of the uploading party then nothing is updated.
4. The above operations can be performed for a range of dates. In the upload file, user can specify a start date and a stop date. The same schedule will be applied to every single day from the start day to the stop day.
5. Contracts can not be created, modified, etc. through file uploads.

File Format

Format Specification	Description	Example
Header	The header that indicates the current section is an energy schedule.	* INTSCH *
Contract Identifier	Number identifier for the contract.	123456789
Start Date	Date on which the schedule starts. The date should be in the mm/dd/yyyy format.	07/09/1997
Stop Date	Date on which the schedule stops. The date should be in the mm/dd/yyyy format.	07/09/1997
Start Hour 1-Stop Hour 1/MW	Hour of the day. A hyphen must be placed between Start Hour	0-1 50



PJM Customer Choice Project File Upload File Format Definition

Value	and Stop Hour. Megawatt-hrs for the hours. Every Start Hour – Stop Hour pair should be followed by a MWh (0.001 MWh increments accepted).	
Start Hour 2-Stop Hour 2/MW Value		1-2 50
.. ..		9-10 50
.. ..		10-11 50
Start Hour n-Stop Hour n/MW Value		20-24 50

Data Field Conversion

Upload Data Field	Data Type
Contract Identifier	NUMBER(9)
Start Date	DATE
Stop Date	DATE
Start Hour	NUMBER(4)
Stop Hour	NUMBER(4)
MWh	NUMBER(12,3)

Notes:

1. The upload file must start with a * INTSCH *.
2. ‘White space’, ‘tab’, ‘new line’ characters are used as the field separators instead of commas.
3. It is not necessary to enter each hour of the day. Those hours that are not entered will be defaulted to zero. This holds true for both new schedules and updates.
4. The Start Hour-Stop Hour combinations can represent a range of hours. That is 0-1 represents one hour which is 12 A.M. to 12:59 A.M., whereas 0-3 represents three hours which are 12 A.M. to 12:59 A.M., 1 A.M. to 1:59 A.M., and 2 A.M. to 2:59 A.M. See the section below for more examples.
5. When transitioning to Standard Time for Daylight Savings Time (i.e, 25 hours in one day), the MWh value for the extra hour should be indicated in a 24-25 Start Hour-Stop Hour combination. When transitioning to Daylight Savings Time, the MWh value in hour 2-3 will be ignored if entered.

Start-Stop Examples

Hour-Hour Combination	Hours Represented
0-1	12 A.M. to 12:59 A.M
5-10	5 A.M. to 5:59 A.M 6 A.M. to 6:59 A.M 7 A.M. to 7:59 A.M 8 A.M. to 8:59 A.M 9 A.M. to 9:59 A.M
20-24	8 P.M. to 8:59 P.M 9 P.M. to 9:59 P.M 10 P.M. to 10:59 P.M 11 P.M. to 11:59 P.M

Example with Multiple Schedules

Format Specification	Example
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PJM Customer Choice Project File Upload File Format Definition

Header	* INTSCH *
Contract Identifier	987654321
Start Date	08/08/1997
Stop Date	08/08/1997
StartHour-StopHour MW	8-11 40
StartHour-StopHour MW	11-12 30
StartHour-StopHour MW	12-18 50
StartHour-StopHour MW	18-21 30
Header	* INTSCH *
Contract Identifier	876543219
Start Date	08/11/1997
Stop Date	08/11/1997
StartHour-StopHour MW	15-23 50

Notes:

In the above example, two sets of schedules will be uploaded to the server. The first schedule has Contract ID of “987654321”, Start Date “08/08/1997”, Stop Date “08/08/1997”. For this day, 40 MWh’s are needed from 8 A.M. to 8:59 A.M., 9 A.M. to 9:59 A.M. and 10 A.M. to 10:59 A.M., 30 MWh’s are needed from 11 A.M. to 11:59 A.M., 50 MWh’s are needed from 12 P.M. to 12:59 P.M., 13 P.M. to 13:59 P.M., ...and from 17 P.M. to 17:59 P.M., etc.. The second schedule has Contract ID of “876543219”, Start Date “08/11/1997”, Stop Date “08/11/1997”. For this day, 50 MWh’s are needed from 15 P.M. to 15:59 P.M., 16 P.M. to 16:59 P.M.,and from 22 P.M. to 22:59 P.M..

eSchedules - Schedule Reconciliation {only EDCs}

Functionality

The schedule reconciliation functionality will allow the user to reconcile schedules for a contract. All energy reconciliation file uploads are inserts. If there is any existing reconciliation data for the contract on the date specified in the upload, the new data will overwrite the existing data.

File Format

Format Specification	Description	Example
Header	The header that indicates the current section is an energy schedule reconciliation.	* ENGREC *
Contract Identifier	Number identifier for the contract.	123456789
Start Date	Date on which the schedule starts. The date should be in the mm/dd/yyyy format.	07/09/1997
Start Hour 1-Stop Hour 1/KWh Value	Hour of the day. A hyphen must be placed between Start Hour and Stop Hour. Kilowatt-hrs for the hours. Every Start Hour – Stop Hour pair should be followed by a KWh.	0-1 1233
Start Hour 2-Stop Hour 2/KWh Value		1-2 1234
.. ..		9-10 1500
.. ..		10-11 1543
Start Hour n-Stop Hour n/KWh Value		20-24 1345
End date indicator	Specified indicator that the end of reconciliation has been reached for the date.	-



PJM Customer Choice Project File Upload File Format Definition

Data Field Conversion

Upload Data Field	Data Type
Contract Identifier	NUMBER(9)
Start Date	DATE
Start Hour	NUMBER(4)
Stop Hour	NUMBER(4)
KWh	NUMBER(10)

Notes:

1. The upload file must start with * ENGREC *.
2. 'White space', 'tab', 'new line' characters are used as the field separators instead of commas.
3. It is not necessary to enter each hour of the day. Those hours that are not entered will be defaulted to zero. This holds true for both new energy reconciliation data and updates.
4. The end date indicator must always be a - .
5. Negative KWh values are allowed and represent undersupplied customer load. Positive KWh values represent oversupplied load.

For example:

KWh Value	Negative Reconciliation (KWh)	Positive Reconciliation (KWh)
Scheduled	20,000	10,000
Actual	25,124	8,800
Reconciled	-5,124	1,200

6. The Start Hour-Stop Hour combinations can represent a range of hours. That is 0-1 represents one hour which is 12 A.M. to 12:59 A.M., whereas 0-3 represents three hours which are 12 A.M. to 12:59 A.M., 1 A.M. to 1:59 A.M., and 2 A.M. to 2:59 A.M. See the section below for more examples.
7. When transitioning to Standard Time for Daylight Savings Time (i.e, 25 hours in one day), the KWh value for the extra hour should be indicated in a 24-25 Start Hour-Stop Hour combination. When transitioning to Daylight Savings Time, the KWh value in hour 2-3 will be ignored if entered.
8. Energy reconciliation will occur on a 2-month lag. For example, all reconciliation data for January must be submitted by the last day in March for inclusion in the March bill.

Start-Stop Examples

Hour-Hour Combination	Hours Represented
0-1	12 A.M. to 12:59 A.M
5-10	5 A.M. to 5:59 A.M 6 A.M. to 6:59 A.M 7 A.M. to 7:59 A.M 8 A.M. to 8:59 A.M 9 A.M. to 9:59 A.M
20-24	8 P.M. to 8:59 P.M 9 P.M. to 9:59 P.M 10 P.M. to 10:59 P.M 11 P.M. to 11:59 P.M

Example with Multiple Schedules



PJM Customer Choice Project File Upload File Format Definition

Format Specification	Example
Header	* ENGREC *
Contract Identifier	987654321
Start Date	08/08/1997
StartHour-StopHour MWh	8-11 400
StartHour-StopHour MWh	11-12 218
StartHour-StopHour MWh	12-18 927
StartHour-StopHour MWh	18-21 408
End Date Indicator	-
Start Date	08/10/1997
StartHour-StopHour MWh	8-11 500
StartHour-StopHour MWh	11-12 408
End Date Indicator	-
Header	* ENGREC *
Contract Identifier	876543219
Start Date	08/11/1997
StartHour-StopHour MWh	15-23 309
End Date Indicator	-

Notes:

In the above example, two sets of schedule reconciliations will be uploaded to the server. The first reconciliation has Contract ID of “987654321”, Start Date “08/08/1997”. For this day, 400 KWh’s are reconciled from 8 A.M. to 8:59 A.M., 9 A.M. to 9:59 A.M. and 10 A.M. to 10:59 A.M., 218 KWhs are reconciled from 11 A.M. to 11:59 A.M., 927 KWh’s are reconciled from 12 P.M. to 12:59 P.M., 13 P.M. to 13:59 P.M.... and from 17 P.M. to 17:59 P.M., etc.. Under the same contract number, new date. For this day, 500 KWh’s are reconciled from 8 A. M. to 8:59 A. M. , 9 A.M. to 9:59 A. M. and 10 A. M. to 10:59 A. M., 408 KWh’s are reconciled from 11 A. M. to 11:59 A.M. The second reconciliation has Contract ID of “876543219”, Start Date “08/11/1997”. For this day, 309 KWh’s of power are reconciled from 15 P.M. to 15:59 P.M, 16 P.M. to 16:59 P.M. and from 22 P.M. to 22:59 P.M.

eCapacity - Bus Aggregates {only EDCs}

Functionality

The file upload functionality for bus aggregates will allow the user to create new bus aggregates and update existing bus aggregates.

1. Insert New Bus Aggregate – If there is not a bus aggregate in existence with the same name, then the bus aggregate is inserted directly into the database. The bus aggregate will have no peak loads or contracts associated with it.
2. Update Existing Bus Aggregate – If the bus aggregate exists, then the bus aggregate information in the database is updated to reflect the newly uploaded information. Only the originating company can update any bus aggregate. All existing information for a specified date will be overwritten by the newly uploaded data.

File Format

Format Specification	Description	Example
Header	The header that indicates the current section is a bus aggregate.	* BUSAGG *
Bus Aggregate Name	The name of the bus distribution designated by the EDC	ENRON
Bus Aggregate Type	The type of distribution the bus aggregate will be used for. (PEAK LOAD, ENERGY, ALL)	ENERGY



PJM Customer Choice Project File Upload File Format Definition

Start Date	Date on which the bus aggregate ratios starts. The date should be in the mm/dd/yyyy format.	07/09/1998
Bus Distribution Percentage 1/ Bus Name 1	The name of the bus and the bus distribution percentage.	.00025 BALA 13 KV LD1
...00025 ANGORA 13 KV 2BUS
Bus Distribution Percentage N/ Bus Name N99950 BALA 13 KV LD2
End Date Indicator	Indicator that the last distribution % for the specified date has been reached.	-

Notes:

1. The bus aggregate section must start with * BUSAGG *.
2. 'Tab' and 'new line' characters are used as the field separators instead of commas.
3. User will only need to supply the last six characters of the bus aggregate. eCapacity will concatenate the zone name where the buses are located.
4. The end date indicator must always be a - .
5. There can be unlimited amount of start, stop dates and bus/bus percentages within the same bus aggregate.
6. Bus names and percentages will be associated with the preceding date range.
7. Bus distribution percentages must add up to 1 for a given date range.
8. All bus names must exist in the PJM bus list.
9. For PEAK LOAD or ALL bus aggregate types, start date must be greater than current date. For ENERGY bus aggregate type only, start date may be day after current date.
10. All buses submitted in the load aggregate must be load buses.
11. There will be a list of zonal weighted bus aggregates which may be used within user-defined bus aggregates.

Data Field Conversion

Upload Data Field	Data Type
Bus Aggregate Name	VARCHAR(19)
Bus Aggregate Type	VARCHAR (35)
Start Date	DATE
Bus Name	VARCHAR(26)
Bus Percentage	NUMBER(6,5)

Example with Multiple Dates and Buses

Format Specification	Example
Header	* BUSAGG *
Bus Aggregate Name*	ENRON
Bus Aggregate Type	ENERGY
Start Date	07/01/1998
Bus Name 1/Bus Percentage 1	.25000 BALA 13 KV LD2
Bus Name 2/Bus Percentage 2	.25000 BALA 13 KV LD1
Bus Name 3/Bus Percentage 3	.50000 ANGORA 13 KV 2BUS
End Of Date Range Indicator	-
Start Date	08/01/1998
Bus Name 1/Bus Percentage 1	.25000 BALA 13 KV LD1
Bus Name 2/Bus Percentage 2	.25000 BALA 13 KV LD2
Bus Name 3/Bus Percentage 3	.25000 ANGORA 13 KV 1BUS



PJM Customer Choice Project File Upload File Format Definition

Bus Name 4/Bus Percentage 4	.25000 ANGORA 13 KV 2BUS
End Of Date Range Indicator	-
Start Date	09/01/1998
Bus Name 1/Bus Percentage 1	.50000 BALA 13 KV LD1
Bus Name 2/Bus Percentage 2	.50000 BALA 13 KV LD2
End Of Date Range Indicator	-

Notes:

In the above example, a bus aggregate is being designated from July 1, 1998 on. There are three bus distributions for the bus aggregate. The first date range, July 1, 1998 to July 31, 1998, the distribution is across three buses. In the second date range, August 1, 1998 to August 31, 1998 the distribution percentages have changed and a new bus was added. In the third date range, September 1, 1998, and on, the distribution percentages have changed and two buses were removed.

eCapacity - Peak Load

Functionality

The file upload functionality for peak loads will allow the user to create new peak loads and update existing peak loads.

1. Insert New Peak Load – If there is not a peak load associated with the particular LSE in the EDC zone for the start date given, then a peak load record is inserted.
2. Update Existing Bus Aggregate – If there is an existing peak load associated with the particular LSE in the EDC zone for the start date given, then the peak load that exists is truncated to end the day before the new peak load start date, and a new peak load record is inserted. If the new start date is earlier than the first existing start date, the new peak load will replace all existing values.
3. Multiple peak load values can be entered across different bus aggregates for the same EDC-LSE relationship on the same day.

File Format

Format Specification	Description	Example
Header	The header that indicates the current section is a peak load.	* PEAKLD *
Zone Name	The name of the zone where the peak load is being reported	PECO
LSE Name (short name)	The name of the LSE that has the peak load.	ENRON
Bus Aggregate Name	The name of the bus aggregate to associate the peak load with.	ENRON
Start Date	The start date for PJM and Zonal Coincident Peak Load Contribution of the LSE in the EDC territory.	07/09/1997
LSE Contribution to the Obligation Peak Load	The LSE contribution to the EDC's Obligation Peak Load <i>Note:</i> The Obligation Peak Load for the Interim period (1/1/99-5/31/99) is based on the zonal peak load for the 98-99 planning period. The Obligation Peak Load as of 6/1/99 will be based on the PJM Coincident Peak Load.	50.3
LSE Contribution to the Network Service Peak Load	The LSE contribution to the EDC's Network Service Peak Load <i>Note:</i> The Network Service Peak Load for the calendar year is based on the the zonal peak for the fixed November-October period.	48.6

Notes:



PJM Customer Choice Project File Upload File Format Definition

1. The peak load section must start with * PEAKLD *.
2. White space, 'tab', 'new line' characters are used as the field separators instead of commas.
3. User will only need to supply the last six characters of the bus aggregate. eCapacity will concatenate the zone name where the buses are located.
4. Bus aggregates must exist and be valid for the date range of the peak load.
5. Resolution for load values is .1 MW. Load values of 0 are accepted.
6. Load values must be less than their respective zones total value.
7. Start date must be greater than the next market date (i.e., the date on which the next Capacity Credit Market will clear).
8. Bus aggregates must be of the PEAK LOAD type.

Data Field Conversion

Upload Data Field	Data Type
Zone Name	VARCHAR(12)
LSE Name (short name)	VARCHAR(12)
Bus Aggregate Name	VARCHAR(24)
Start Date	DATE
LSE Contribution to the Obligation Peak Load	NUMBER(9,1)
LSE Contribution to the Network Service Peak Load	NUMBER(9,1)

Example Peak Load

Format Specification	Example
Header	* PEAKLD *
Zone Name	PECO
LSE Name	ENRON
Bus Aggregate Name	ENRON
Start Date	07/09/1997
LSE Contribution to the Obligation Peak Load	50.3
LSE Contribution to the Network Service Peak Load	48.6
End of Date Range Indicator	-
Start Date	07/10/1997
LSE Contribution to the Obligation Peak Load	70.5
LSE Contribution to the Network Service Peak Load	57.6
End of Date Range Indicator	-

Notes:

In the above example, a peak load is being designated for ENRON for July 9, 1997 to May 31, 1998 (Peak Load is effective from start date to the end of the relative planning period). The peak load is 50.3 MW and is assigned to the ENRON bus aggregate. ENRON also has a contribution to the Network Service Peak Load of 48.6 MW. Multiple dates may be entered for the same LSE and bus aggregate separated by an end of date range indicator.

File Usage



PJM Customer Choice Project File Upload File Format Definition

eSchedules and eCapacity data can exist in the same file. They can be in any order. If part of the file is invalid, the entire file will be rejected. If there are multiple errors in a section (header), only the first error that is identified by the upload program will be displayed and the entire file will be rejected. Errors are encountered in order by row from the beginning to the end of the file.

- Example 1 shows a bus aggregate and a peak load in the same file.
- Example 2 shows a bus aggregate that does not add up to 1. The result will be an error message and the entire file will be rejected.
- Example 3 shows two bus aggregates that do not add up to 1. The result will be two error messages and the entire file will be rejected.
- Example 4 shows a bus aggregate that does not add up to 1 and has an invalid bus name. Only the error that is identified first by the upload will be displayed and the entire file will be rejected.

File Contents – Example 1	File Contents – Example 2	File Contents – Example 3	File Contents – Example 4
* BUSAGG * ENRON ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .75000 BALA 13 KV LD1 -	* BUSAGG * ENRON ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .25000 BALA 13 KV LD1 -	* BUSAGG * ENRON ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .25000 BALA 13 KV LD1 -	* BUSAGG * ENRON ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .25000 XXXX XXXX -
* PEAKLD * PECO ENRON ENRON 07/01/1998 48.6 45.4	* PEAKLD * PECO ENRON ENRON 08/01/1998 48.6 45.4	* BUSAGG * ENRON2 ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .25000 BALA 13 KV LD1 -	* BUSAGG * ENRON2 ENERGY 07/01/1998 .25000 BALA 13 KV LD2 .75000 BALA 13 KV LD1 -
		* PEAKLD * PECO ENRON ENRON 09/01/1998 48.6 42.6	* PEAKLD * PECO ENRON ENRON 09/01/1998 48.6 42.6

Note: The valid codes for company short names, zone IDs and bus IDs will be made available on the PJM customer choice home page.