



DR Hub Update

Demand Response Subcommittee
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September 25, 2018

- October 2018 Release
 - Train – Thursday, September 13th - **Completed**
 - Prod – Tuesday, October 16th
- Known bugs in Train, fix scheduled for week of Sept. 24, 2018
 - WPL can be calculated when Completed is checked and Product = CP DR
 - WPL Calculation Report timestamp is in GMT instead of EPT
 - Meter Data tab: Upload Meter Data “Calculate Winter Peak Load “ checkbox does not calculate the WPL for any locations in the meter data file

- New Location fields:
 - Business Segment: “Multiple Dwelling Unit” added to dropdown
 - Registration Input section new field: Max Load (kW) – Optional Field
 - CSP’s best estimate of annual peak load
 - Examples:
 - » Summer billed demand from EDC bill
 - » Engineering estimate when coming up with curtailment strategy
 - Please don’t use estimate from PLC because sometimes the PLCs are low for customers that typically peak shave

– Generator Attributes Section

- Support for multiple generators (10 max), if more than 10, list largest first and on last one combine the rest.
- New fields – Required
 - Non-Retail BTMG – Required, dropdown (Yes/No), Generator typically located in municipal electric system or electric cooperative that is used to serve municipal or cooperative load. Generator is used to serve multiple retail electricity customers with use of distribution system.
 - Backup Generator Only – Required, dropdown (Yes/No), Generator is only for emergency backup to maintain electricity when disconnected from the grid or for PJM Demand Response.
- New fields - Optional
 - Nameplate (kW) – Generator’s full capability
 - Note (500 character limit)

– Battery Attributes - New Section

- Required
 - Max Output (kW) – max amount to be used for Demand Response
- Optional
 - Battery Capacity (kW 1C) – discharge current will discharge the entire battery in 1 hour
 - Vintage – the year the battery was manufactured
 - Chemistry
 - » Lithium-Ion, Lithium-Air, Lithium-Metal, Lithium-Sulfur, Lead Acid, Zinc-Ion, Sodium-Ion, Sodium-Metal Halide, Magnesium-Ion, Magnesium-Lithium Hybrid, Zinc-Manganese Oxide, Vanadium-Redox Flow, Zinc-Polyiodide Flow, Organic Aqueous Flow
 - Type
 - » Electric Vehicle, PV system, Stand alone
 - Note (500 character limit)

- Automated Winter Peak Load (WPL) Calculation
 - Winter Peak Load Calculation
 - PJM is automating the Winter Peak Load calculation for Capacity Performance and Base registrations based on meter data uploaded by CSP
 - The CSP will no longer enter the WPL value on the registration
 - CSP uploads the meter data for the 5 Winter Peak Load days for DY-2
 - When all meter data is available for a Load Management registration's location, WPL calculation field is automatically updated at any of the following times:
 - Meter data is uploaded from the Registration (CBL Test Section)
 - Calculate Winter Peak Load button is clicked at top of registration detail page
 - Meter data is uploaded from the Meter Data tab and "Calculate Winter Peak Load" is checked
 - A new job runs at 1 pm and 8 pm each day to evaluate if enough data is available to calculate WPL

- If meter data does not exist for DY-2, contact PJM.
- New “DY” field on Location section of registration shows which meter data was used to calculate WPL (DY-2, DY-1, Manual)
- WPL Calculation Report will show meter data used and WPL calculation, visible to CSP and EDC
- For Web Services, new endpoint to calculate the WPL
- WPL field on the Location is still editable by CSP, but does not copy to registrations
 - Will be used for economic registrations if eligible for bonus payment

- Timeframes when WPL will be automatically calculated
 - Load Management registrations with Product = Capacity Performance
 - » “Completed” checkbox has not been checked and status is New, Denied, Withdrawn, Pending or Confirmed
 - » “DY” is “2” (DY-2 data used) or blank (WPL has never been calculated)
 - Load Management registrations with Product = Base
 - » Delivery Year has not started
 - » Status is New, Denied, Withdrawn, Pending or Confirmed
 - » “DY” is “2” (DY-2 data used) or blank (WPL has never been calculated)
 - » After Delivery Year has started
 - » WPL will only be calculated if “DY” is blank (WPL has never been calculated)

- Web Services
 - XSD [Release Notes](#)
 - New [XSD](#)
 - New [Command Line Interface](#)
 - Summary of Changes:
 - Using the new XSD is required. Previous XSD is unsupported and may no longer work.
 - Added new endpoint to calculate Winter Peak Load after meter data has been uploaded (by registration id)
 - Added support for new fields on the Location (see Location field details above)

- Fixed Bugs
 - EDC Registration Review: 2 Day warning email to small EDCs incorrectly stated the registration would auto-confirm in 2 days instead of auto-deny
 - Base registration incorrectly requiring a Winter Peak Load when updating the Summer Managed Load

- DR Hub Screenshots and Examples

Tasks	Locations	Registrations	Events	Meter Data	Energy Settlements	Compliance	Dispatch Groups	Account and
Cancel	Save	Register	Copy					
Location *	<input type="text" value="aly gen and battery examples"/>	CSP	<input type="text" value="BC"/>					
EDC Account Number *	<input type="text" value="4475653543"/>	EDC *	<input type="text" value="PE"/>					
Location ID	<input type="text" value="64372"/>	Business Segment	Multiple Dwelling Unit					
Address Line 1	<input type="text" value="10 Yeaton Drive"/>	Address Line 2	<input type="text"/>					
City	<input type="text" value="Andrea"/>	State *	<input type="text" value="PA"/>					
<input type="checkbox"/>	Utility Residential Participation?							

New Field: Max Load (kW)

Registration Input

Peak Load Contribution (kW) Winter Peak Load (kW) Capacity Loss Factor Energy Loss Factor Max Load (kW) Maximum Load Reduction Capability (kW)

Load Reduction Method

Manufacturing (kW) HVAC (kW) Generator (kW) Number of Generators Batteries (kW) Lighting (kW) Water Heaters (kW) Refrigeration (kW) Plug Load (kW)



Load Reduction Method

Manufacturing (kW) HVAC (kW) Generator (kW) Number of Generators Batteries (kW) Lighting (kW) Water Heaters (kW) Refrigeration (kW) Plug Load (kW)

Click icon to open Generator Section

Generator Attributes

Add Generator Hide Generator Details

Actions	ID	Name	Non-Retail BTMG	Max Output (kW)	Nameplate (kW)	Backup Generator Only	Generator Type	Fuel Type	Vintage	Retrofit Year	Permit Status	Permit Type	EIA 860 Plant Code	EIA 860 Generator ID	Note
---------	----	------	-----------------	-----------------	----------------	-----------------------	----------------	-----------	---------	---------------	---------------	-------------	--------------------	----------------------	------

No records found.

Background interface showing registration details for a DC Meter (Pending) with a peak load contribution of 200,000 kW and winter peak load of 100,000 kW. The background also shows load reduction methods (Manufacturing, Lighting, HVAC, Water Heaters) and a table of generator registrations.

Permit Type	EIA 860 Plant Code	EIA 860 Generator ID

Reg ID	Registration Name
3272471	Lancair Shark I

Background interface also shows buttons for 'Add Generator' and 'Hide Generator'.

Add Generator

Name *

Non-Retail BTMG * Select One

Max Output (kW) *

Nameplate (kW)

Backup Generator Only * Select One

Generator Type * Select One

Fuel Type * Select One

Vintage * Select Year

Retrofit Year Select Year

Permit Status * Select One

Permit Type * Select One

EIA 860 Plant Code

EIA 860 Generator ID

Note

500 characters remaining

Save Cancel

Battery Attributes

Actions	ID	Max Output (kW)	Battery Capacity (kW 1C)	Vintage	Chemistry	Type	Note
No records found.							

Add Battery **Hide Battery Details**



Add Battery

Max Output (kW) *

Battery Capacity (kW 1C)

Vintage

Chemistry

Type

Note





500 characters remaining

Save **Cancel**

Add Battery Details


Generator Attributes

[Add Generator](#)
[Hide Generator Details](#)

Actions	ID	Name	Non-Retail BTMG	Max Output (kW)	Nameplate (kW)	Backup Generator Only	Generator Type	Fuel Type	Vintage	Retrofit Year	Permit Status	Permit Type	EIA 860 Plant Code	EIA 860 Generator ID	Note
 	41628	Gen 1	false	750	900	false	Internal Combustion Engine	Diesel	2011		Available	Non Emergency			No
 	41629	Gen 2	false	250	1000	false	Internal Combustion Engine	Diesel	1999	2017	Available	Non Emergency			No

Battery Attributes

[Hide Battery Details](#)

Actions	ID	Max Output (kW)	Battery Capacity (kW 1C)	Vintage	Chemistry	Type	Note
 	543	500	20	2015	Lithium-Ion	Stand Alone	No

XML Snippet used to Create a New Location with a single Generator and Battery.

```

<!-- Battery and Generator Reduction Info Fields/Values are not required when adding a battery or generator(s) -->
<!-- <reductionInfo>
  <reductionType>BATTERIES</reductionType>
  <reductionValue>0</reductionValue>
</reductionInfo>
<reductionInfo>
  <reductionType>GENERATOR</reductionType>
  <reductionValue>0</reductionValue>
</reductionInfo> -->
<!-- <generatorCount>0</generatorCount> --> <!-- Count not required when adding generator(s) -->
<generatorInfo>
  <name>Big Gen 4</name>
  <nonRetailBtmg>true</nonRetailBtmg>
  <maxOutput>500</maxOutput>
  <nameplate>550</nameplate>
  <backupGeneratorOnly>true</backupGeneratorOnly>
  <generatorType>Internal Combustion Engine</generatorType>
  <fuelType>Diesel</fuelType>
  <vintage>2012</vintage>
  <retrofitYear>2018</retrofitYear>
  <permitStatus>AVAILABLE</permitStatus>
  <permitType>EMERGENCY_ONLY</permitType>
  <eia860PlantCode>3456789</eia860PlantCode>
  <eia860GeneratorId>33449</eia860GeneratorId>
  <note>Test Generator with a note.</note>
</generatorInfo>
<!-- Sample Battery -->
<batteryInfo>
  <maxOutput>100</maxOutput>
  <capacity>125</capacity>
  <vintage>2017</vintage>
  <chemistry>LITHIUM_AIR</chemistry>
  <type>STAND_ALONE</type>
  <note>Test Battery with a note.</note>
</batteryInfo>

```


Locations

Capacity Loss Factor: 1.66666 Energy Loss Factor: 1.66666 Peak Load Contribution (kW): 2500 Winter Peak Load (kW): 170 Maximum Load Reduction Capability: 1000

Actions	Location ID	Location	Zone	EDC Account Number	Pricing Point	Address	Capacity Loss Factor	Energy Loss Factor	Peak Load Contribution (kW)	Winter Peak Load (kW)	DY
	163	Lancair Mako Place	BGE	9988223341	BGE_RESID_AGG	1086 West King Road @@@, 2850 Wings Drive, Malvern, PA 19355	1.66666	1.66666	2500	170	2

Records Per Page: 10 (1 of 1) 1 record(s)

"2" = DY – 2 meter data used
 "1" = DY – 1 meter data used
 "M" = value was calculated outside of DY-2 or DY-1 data

Locations

Capacity Loss Factor: Energy Loss Factor: Peak Load Contribution (kW): Winter Peak Load (kW): Maximum Load Reduction Capability (kW):

Location ID	Location	Zone	EDC Account Number	Pricing Point	Address	Capacity Loss Factor	Energy Loss Factor	Peak Load Contribution (kW)	Winter Peak Load (kW)	DY	Winter Peak Load Report
64371	JL 2598 test 820b	JCPL	77464563532	JCPL_RESID_AGG	22 street, my, DC 44444	1	1	100	600	M	

Records Per Page: (1 of 1) 1 record(s)

Click icon to get Winter Peak Load Calculation report

