

DR Hub Update

DRS

Andrea Yeaton and Glenn Long

August 30, 2018

- October Release
 - Train – Thursday, September 13th
 - Prod – Tuesday, October 16th
 - Includes new Location fields, automated WPL calculation, bug fixes
 - **New XSD for Web Services**
- November Release
 - Includes Seasonal Aggregation updates and duplicate registration changes
- Production Database Switchover – first week of September, 30 minute outage

- New Location fields:
 - Business Segment: Multiple Dwelling Unit added to dropdown
 - Registration Input section new field: Max Load (kW)
 - CSP’s best estimate of location’s highest annual monthly billed demand
 - Generators
 - Supports multiple generators (10 max)
 - New fields
 - Non-Retail BTMG – Required, dropdown (Yes/No)
 - Nameplate (kW) – Generator’s full capability
 - Backup Generator Only – Required, dropdown (Yes/No)
 - EIA 860 Plant Code - Generated and provided by EIA upon the initial submission of the Form EIA-860.
 - EIA 860 Generator ID - Unique generator identification should be the same as reported on the EIA 860 form to uniquely define the generator within the plant
 - Note (500 character limit)

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)



Click icon to open Generator Section

Load Reduction Method

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

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
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No records found.

No records found.

Records Per Page: 10 (1 of 1)

Add Generator

Name *

Non-Retail BTMG

Max Output (kW) *

Nameplate (kW)

Backup Generator Only

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

Registration Input

Peak Load Contribution (kW) Winter Peak Load (kW)

Load Reduction Method

Manufacturing (kW) HVAC (kW)

Lighting (kW) Water Heaters (kW)

Generator Attributes

Actions	ID	Name	Non-Retail BTMG
No records found.			

Registrations

Reg ID	Registration Name
No records found.	

RERRA

RERRA ID	State	Evidence
2192	PA	Albemarle Electric Membership Corporation- TEST
2193	PA	Resolution of Albemarle Electric Membership Corp-TEST

Maximum Load Reduction Capability (kW)

Batteries (kW)

Permit Type	EIA 860 Plant Code	EIA 860 Generator ID	Note
No records found.			

Date	Termination Date	LSE
No records found.		

– Batteries - New section

- Max Output (kW)
- Battery Capacity (kW 1C)
- Vintage
- 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)

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>

```

Resulting XML download of the new Location. Note the ID, fields, Count and Reduction Values.

```

<reductionInfo>
  <reductionType>BATTERIES</reductionType>
  <reductionValue>100</reductionValue>
</reductionInfo>
<reductionInfo>
  <reductionType>GENERATOR</reductionType>
  <reductionValue>500</reductionValue>
</reductionInfo>
<reductionInfo>
</reductionInfo>
<generatorCount>1</generatorCount>
<generatorInfo>
  <id>41630</id>
  <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>
<generatorInfo>
  <id>544</id>
  <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>

```

- Winter Peak Load Calculation
 - PJM is automating the Winter Peak Load (WPL) calculation for Capacity Performance and Base registrations based on meter data uploaded by CSP
 - Ensures calculation is done correctly
 - Transparency of calculation and meter data used
 - CSP uploads the meter data for the 5 Winter Peak Load days for DY-2
 - When all meter data is available, WPL calculation field is automatically updated at any of the following times:
 - Registration is saved
 - Meter Data upload is flagged for WPL calculation

- If meter data is not available for DY-2, contact PJM for approval to use DY-1 meter data.
 - PJM enters approved registration ID in DR Hub which then performs WPL calculation using DY-1 dates
- New “DY” field 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 retrieve report
- 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

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

Calculated Winter Peak Load for Location

23	Example for DY-1																											
24																												
25																												
26																												
27	WPL Calculation Report																											
28	Location	Test location 1																										
29	Location ID	1234567																										
30	Registration ID	1625444																										
31	Delivery Year of Registration	2019/2020																										
32	Winter Peak Dates Used	Delivery Year minus 1																										
33	Updated	8/7/2018 10:39																										
34																												
35	W/WAF DY-1	1.009																										
36	W/WAF DY-2	1.045																										
37	WPL Adjustment	0.96																										
38	WPL	119.76																										
39																												
40																												
41	Winter Peak Dates	Status	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	Avg7_21	Peak7_21
42	12/15/2016	Included	45	47	43	45	48	75	125	129	120	125	129	120	125	136	120	125	129	120	125	130	120	85	50	48	125	136
43	12/21/2016	Included	45	47	43	45	48	75	95	100	104	95	100	110	95	100	104	95	100	104	95	100	104	81	49	48	100	110
44	1/5/2017	Excluded	35	33	34	35	33	34	35	33	34	35	33	34	35	33	34	35	33	34	35	33	34	35	33	34	35	34
45	1/19/2017	Included	47	45	45	43	49	95	145	149	140	145	149	140	145	149	140	145	155	140	145	149	140	81	49	48	145	155
46	1/31/2017	Included	37	35	36	37	34	35	96	95	96	98	94	95	96	95	96	96	94	95	96	95	96	37	34	35	96	98
47	Average																											
48	Low Usage Threshold																											

5 Dates used and Included/Excluded

Averages

- 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