PJM Stop Gap FERC filing to address EPSA order
- PJM update -

March 3, 2015
Who Offers Demand Response into PJM’s Markets Today?

Curtailment Service Providers
- Specialize in DR/EE services and do not supply the energy needs of their customers

Competitive Retail Suppliers
- Some retail suppliers provide DR/EE services to their customers

Utilities
- Retail Choice States
  - Utility DR/EE programs offered to SOS/BGS/POLR customers
  - Utility DR/EE programs offered to any customers
- Vertically Integrated States
  - Utility DR/EE programs offered to the utilities customers
Registered Demand Response by State
Delivery Year 2014/15

- LSE category = DR offered by utilities/Electric Distribution Companies (or their agents) and competitive retail electric suppliers
- CSP category = DR offered by entities specializing in demand response and do not serve energy needs of customers
# Demand Response & Energy Efficiency: PJM's Proposal vs Today

<table>
<thead>
<tr>
<th></th>
<th>Today (DR/EE)</th>
<th>Stop Gap (WLR/WEEL)</th>
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<tbody>
<tr>
<td><strong>Capacity market</strong></td>
<td>Supply resource (Similar to generation)</td>
<td>Demand bid (BRA or bilateral, no IAs)</td>
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<tr>
<td><strong>Capacity obligations</strong></td>
<td>Nominate and reduce load per rules</td>
<td>Same</td>
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<tr>
<td><strong>Compensation/Cost Reduction</strong></td>
<td>Direct compensation from wholesale market</td>
<td>LSE can reduce capacity cost for their PJM load. No compensation via PJM tariff. Compensation is state-jurisdictional</td>
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<tr>
<td><strong>Who manages?</strong></td>
<td>Curtailment service provider/load serving entity (any PJM member)</td>
<td>Load-serving entity or their agent (for their specific load)</td>
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Key Principal – LSE’s (or their agent) can only provide WLR/WEEL from loads that they are responsible for serving. This alignment must be maintained throughout the Delivery Year.
LSE WLR model (with customer switching)

**Prior to Delivery Year**

- **LSE1 submits capacity demand bid**
- **PJM clears demand bid**
- **LSE1 WLR transfer MW to LSE2**
- **LSE2 registers customers**

**Delivery Year**

- **LSE2 DR performance obligation & penalties**
- **LSE2 credits customer**
- **EDC allocates capacity to LSE2**
- **PJM bills LSE2 for capacity (unrestricted MW – WLR MW)**

**RPM auctions**

- **LSE1 submits capacity demand bid**
- **PJM clears demand bid**
- **LSE1 WLR transfer MW to LSE2**

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Based on agreement or RERRA

**EDC allocates capacity on daily basis during DY**
WLR capacity commitment process

• Who may submit WLR commitment for RPM auction?
  – LSE or their agent that commits to provide WLR in the associated RPM Deliver Year.
    • Agent – established either through agreement with wholesale entity or by RERRA regulation
      – WLR commitments must be done through LSE or their agent – an Agent may not commit WLR through their PJM account (even if they have responsibility through RERRA regulation)

• In which auctions can WLR participate?
  – BRA - Establish WLR commitments
  – IA - Replace existing WLR commitments
  – WLR commitment may not be established in IA.
What is required to make WLR commitment in RPM auction?

• WLR plan (similar to DR plan today)
  – Existing WLR – locations (EDC account numbers) registered as DR/WLR and WLR Provider reasonably expects to have under a contract to reduce load based on PJM dispatch instructions by the DY.
    • WLR provider must have registered location previously to be considered existing
    • (Work in Progress) If 2 WLR providers claim location as “existing” (both previously registered location) then it is expected that the customer will make determination on which PJM member may claim as “existing”.
  – Planned WLR - WLR Load that does not currently have the capability to provide a reduction in load or to otherwise control load, but that is scheduled to be capable of providing such reduction or control on or before the start of the Delivery Year.
• Credit for WLR bid is similar to current DR credit provisions
Remedies for WLR provider that cannot meet WLR commitment

- **Cannot deliver WLR**
  - Replace with generation from Incremental Auction
  - Replace with generation from bilateral transaction
  - Transfer WLR to LSE
WLR registration process

- Expected to be similar to current DR registration process, except
  - LSE required on registration and must be accurate throughout the Deliver Year
    - Need to consider additional methods to coordinate with EDC to ensure accuracy
    - Incorrect LSE could lead to penalties or incorrect allocation of WLR value.
  - Registrations may be submitted during the Delivery Year
  - Registration end date should coincide with LSE contract end date (don’t simply put end date as deliver year end date)
  - Registrations to be submitted by entity with WLR commitment
LSE capacity charge will be reduced based on ratio of WLR value and Final zonal capacity price

- Final Zonal clearing price $250 MW/Day
- LSE clears 10 MW of Base WLR and Base Capacity binds and clears at $150 MW-day. Ratio 150/250 or 0.6. LSE obligation is reduced by 6 MW.
- LSE clears 10 MW of CP WLR at $250 MW-day. Ratio 250/250 or 1.0. LSE obligation is reduced by 10 MW.
WLR measurement/verification and penalties

• Measurement and verification will be done similar to DR except:
  – GLD method (minimum of FSL approach or CBL approach) eliminated
  – Non-summer capacity compliance will be measured through CBL method (energy reduction) instead of FSL type method (load must be at some level below PLC).

• Commitment – non-CP version similar to today
• Test – non-CP version similar to today
• Event performance – non-CP version similar to today
• WLR transfer transaction and associated example
What to do if customer switches LSEs?
(original LSE with WLR commitment does not serve the customer in DY)

• WLR Transfer transaction:
  – Transfer WLR commitment (some of part) from LSE1 that has WLR commitment (seller) to LSE2 that has the specific customers that will implement WLR (buyer).
    • WLR performance responsibility and associated penalties are assigned to LSE2
    • LSE2 must provide registrations to support WLR commitment. LSE2 must be same as LSE of record from EDC.
      – Approved registered nominated capacity must be equal or greater than commitment on day that commitment becomes effective for LSE2 to avoid penalty
    • WLR MW commitment may be split up by original LSE to several different LSEs
Example (pre-delivery year)

- LSE1 clears 100 MW of WLR in BRA
- LSE1 and LSE2 agree to WLR transfer transaction for 10 MW
- LSE1 WLR commitment reduced to 90 MW
  - LSE1 must register 90 MW of WLR prior to start of DY and must maintain 90 MW of registrations during the DY or receive penalty
- LSE2 has 10 MW WLR commitment
  - LSE2 must register 10 MW of WLR prior to start of DY and must maintain 10 MW of registrations during the DY or receive penalty
  - LSE2 capacity charge will be reduced by 10 MW.