# State Proposal Walkthrough and Dialogue

Summer Only Demand Resource

Senior Task Force

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# PJM vs. State proposal

Item/Parameter PJM State Trigger THI THI or DA forecast Summer Period **Program Spc.** Program Specific Consec. Min. Hrs. Per Day **Program Spc.** No min [compromise – 4 or more] # Events/Year No min [compromise - 6 or more] Fnc. of THI Market Participation IAs and BRAs BRAs Price Sensitivity Price Taker Price Taker or Min. capacity price Peaking Shaving Provider or state alloc. Compensation LSE

# Mechanism

PJM will initially generate a new lower load forecast based on a modified load history that assumes perfect curtailment compliance back to 1998.

- Program will be assumed to be enacted every time a pre-determined Temperature-Humidity Index (THI) or Day Ahead (DA) forecast threshold is reached or exceeded.
  - Discuss difficulties, if any of maintaining two forecasts unadjusted prior to peaking sharing, and adjusted, with peak shaving included.
  - Discuss/Analyze differences in accuracy of THI vs. DA as triggers
  - Discuss complexities of having more than 1 trigger vs. market benefits of more than 1 trigger.
- Perfect curtailment assumption will be re-visited based on actual performance. [same as PJM proposal]
- Capacity value would be reflected through a lower load forecast and thus a reduced Reliability Requirement. [same as PJM proposal]

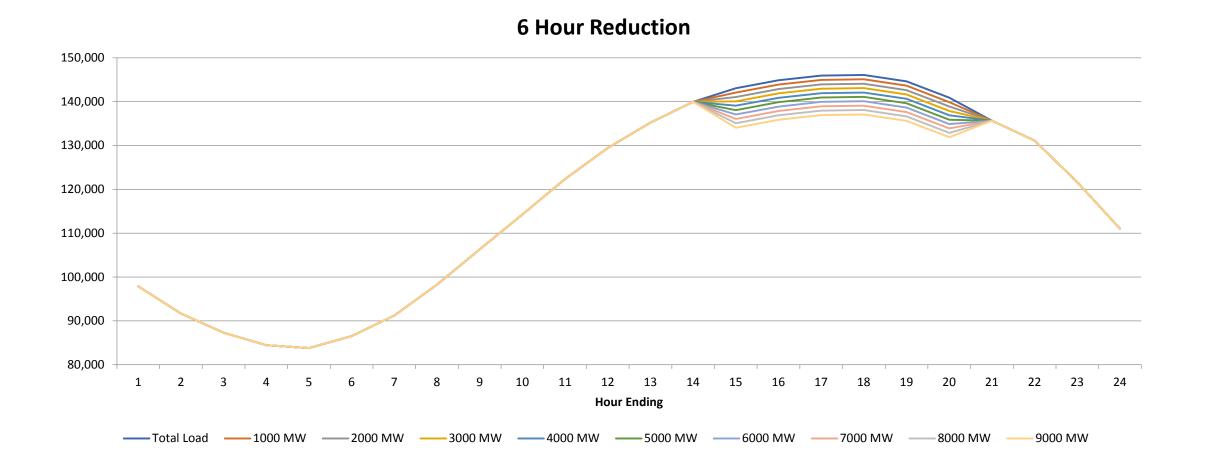
# Details

• Each summer peak shaving event will be 4 hours or more, but the Peak Shaving administrator may use any combination of customers to meet the 4 hour minimum each trigger day.

Discuss/analyze the performance improvement value and modeling complexities of specifying the exact hours. PJM proposes HE 14 - HE 19.

- Each peak shaving event will be triggered on non-holiday weekdays which have a max THI or DA forecast exceeding the threshold.
- Peak shaving events can occur any day between May and October.
  > Discuss/analyze the added value of June-Sep vs. May-Oct.
- Discuss/analyze benefits of peak shaving down to a maximum customer contract quantity [as opposed to a fixed reduction amount every triggered hour].

#### Illustration of 6-hour reduction



# Forecast Model Approaches to Peak Shaving

Proposed: Modify forecast model to include shaving (or load management) as an independent variable. [Same as PJM]
 Not relying on shaving to get reflected in regression model parameters
 Forecast values would be more consistent with expected operation
 Can more easily reflect non-performance (Design Component 2b)

[no change from PJM proposal]

### Walkthrough – Forecast Impact

- Step 1: Zone would identify future shaving amounts
- Step 2: PJM runs the forecast
- Step 3: Capacity Market MW Valuation (Design Component 2e)
- [Not proposing any changes from the PJM proposal]

### Peaking Shaving in Incremental Auctions

Only implemented if zonal obligations [forecast or parameters] cause an increase on zonal capacity obligations, or if a cleared generation unit unexpectedly exits the market due to operational degradation.

- Increases reliability another "tool in the tool box" if zonal load requirements increase unexpectedly.
- Provides a potential market for peaking shaving programs during the transition period.
- Enhances "fuel security and diversity".
- PJM BRA timeline does not align well with State planning timelines.

# Price Sensitivity

Peaking shaving resources should be able to specify a minimum price threshold if the market participant chooses to [voluntary]

- Like any resource, it should be able to respond to market prices. If market prices rise, market response cannot be as effective if a resource can't dynamically respond to that price and shift its load profile.
- PJM currently has no mechanism for peaking shaving response to market prices. Absent such a mechanism, there can be no transition to true market-based programs— only state directed programs, which some stakeholders propose to "mitigate".
- Discuss deeper discussion of implementation complexities, if any.

# Compensation

Example: Peak Shaving program VRR curve shifts clearing price from Volume 1, Price 1 (VIPI) to Volume 2, Price 2 (V2P2) in the BRA

- Zonal LSE's in aggregate pay P2 \* V1
- ➢ Peak Shaving Provider gets a credit of P2 \* (V1-V2)

#### BENEFITS

➢ Peak Shaving Provider can be an EDC, LSE, or CSP

Peak Shaving Provider receives funds for program implementation, and can implement revenue sharing with its customers [flexibility for market unbundling of load shifting services]