

**Statement of Option E for the Reference
Sheet: Generation Expansion Options**

Questions 26 & 27

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Proposed Method:

Add Demand Response Resources (DRRs) as and where needed to avoid unrealistic load payment projections caused by high amounts of Expected Un-served Energy (EUE) after all generators with ISAs and FSAs expected to come online had been added and existing generating units had been properly scaled up to meet the PJM target reserve margin. To minimize interference with the market, picking generators from the PJM Queue should be performed randomly and limited to the average percentage of the total megawatts that have historically come online. The supply price curve of the DRRs should be based on the results of the most recent auction escalated at the Producers' Price Index or alternatively 2.5% per year. The addition of the DRRs beyond what cleared in the marketplace should be resorted to only to the extent needed to avoid (i) adding generating units without ISAs or FSAs and (ii) incorporating transmission upgrades not in the latest RTEP. The DRRs option should be subject to an optimization criterion in the form of minimizing the EUE from a PJM system-wide perspective.

Rationale:

1. The purpose is to establish an unbiased Base Case that developers of new generation and transmission projects can rely on for assessing the economic viability of their investments.
2. This requires:
 - A. Refraining from changing the transmission topology beyond what has been adopted in the latest RTEP;
 - B. Limiting generation expansion to:
 1. What is needed to meet the PJM target reserve margin (RM);
 2. Random selection of projects from the generation queue, picking those with ISAs and then if needed the ones with FSAs up to the total MWs that have historically come on line; and
 3. As a last resort, scaling up, on a pro rata basis, existing generating units to meet the remaining capacity deficit (to meet the target RM); and

- C. Allow local transmission upgrade accompanying the generation projects randomly picked from the queue.
- 3. Meeting load growth in the long run without upgrading the transmission system beyond what is in the RTEP and without adding in new units more than can be picked from the queue will ultimately increase the EUE because scaling up existing generation will increase the impacts of plant outages.
- 4. Adopting the DRRs solution offers the following advantage (over resorting to new generation or transmission expansions):
 - A. DRRs market clearing prices provide a reasonable signal of the market cost of voluntary load reduction to avoid EUE increases beyond a historically acceptable level;
 - B. A reasonable compromise in that DRRs are neither generation expansion nor transmission upgrading; and
 - C. Generation and transmission developers as well as PJM will have an unbiased Base Case to evaluate the economic viability of potential investments