

Concepts for Improving ERS Access for Weather-Sensitive Loads

ERCOT Staff Proposal

1. Create new category of ERS Resource, limiting participation to residential and weather sensitive non-residential
 - a. Weather-sensitivity test performed by ERCOT for commercial sites
 - b. Residential resources will be presumed weather sensitive
 - c. Aggregations would be residential only or non-residential only
2. Time Periods and Seasons applicable (feedback needed)
 - a. Residential weather sensitive
 - i. Summer (Jun – Sep): 1 – 8, weekdays, weekends, holidays only ...
no BH1 allowed
 - ii. Winter (Nov – Feb): if allowed 6 – 9 weekdays only
 - b. Non-residential weather sensitive
 - i. Summer (Jun – Sep): BH2 & BH3 only
 - c. Resources may participate in regular ERS (following all rules for regular ERS) for any regular ERS contract term but may not double-dip
3. Ramp Period of 10 or 30 minutes... may not want to run both at first ...
 - a. 30 minute ramp may foster excessive pre-cooling and be counter-productive during an EEA
 - b. Could allow 30 minute ramp with a disincentive for pre-cooling/pre-heating.
4. QSE offers capacity based on planned maximum number of sites at the end of the contract term and peak day weather conditions
5. Test and event performance factors based on the maximum offer amount specified on the offer but are capped at one
6. Availability factor based on the time-weighted average of all test and event performance factors across the contract term

7. QSEs required to report planned number of sites on which the maximum offer amount is based, factoring in growth of aggregation
 - a. If actual number of sites or kW reduction per site is significantly less at the end of the contract term, availability and event performance factors will be reduced
 - i. Options: squared or possibly raised on a sliding scale to a power between 1 and 3 to penalize overstating the offer
 - ii. Suspension for excessive overstatement

8. Two options for measurement & verification of event/test performance, determined by ERCOT: regression baseline or control group, based on DR population size
 - a. Regression Baseline
 - i. participation limited to sites with 9 months of interval history prior to the beginning of the contract term
 - ii. offer ≥ 500 kW so that there is sufficient representation for group level testing
 - iii. sites will be randomly assigned one of two group numbers
 - iv. Site additions are allowed and take effect on the first of the following month (e.g., maximum of three updates to aggregation per Contract Term) and will be assigned to groups
 - v. Site additions must meet interval history in i. above

 - b. Control group method
 - i. Aggregation divided into numbered groups assigned randomly by ERCOT; ERCOT will evaluate and minimize control group size while yielding sufficient accuracy for load reduction estimates; ERCOT will re-evaluate group sizes as DR population grows and reassign sites to groups accordingly.
 - ii. Site additions are allowed and take effect on the first of the following month (e.g., maximum of three updates to aggregation per Contract Term)
 - iii. Site additions must have interval metering but do not have to meet interval history threshold and will be assigned to groups

9. Testing

- a. ERCOT will schedule two tests per month for all months of contract term
- b. Two of the tests during the contract term will run for at least 1 hour of sustained response ... QSEs will not be told test duration ahead of time
- c. Remaining tests will be less than ½ hour of sustained response
- d. Tests can occur any time during period of obligation but will generally be targeted to weather more likely to be critical for system reliability
- e. For regression baseline resources, monthly tests will be by group ... no group will be tested more than 4 times in a contract term.
- f. For control group resources, monthly tests will exclude one group to be used as the control group; control group selection will be random and will cycle through groups.

10. Deployments

- a. Resources are subject to a maximum of 8 actual event deployments per contract term
- b. each event deployment may eliminate one future test deployment; event deployments limited to 3 hours or less of sustained response