

Outline on ALR Whitepaper - Update for DSWG 110212

1 Background and Introduction

- Utilize new Technology to facilitate aggregation of small load to provide Non-Spin Ancillary Service
- Lower hurdle includes
 - No need for Under Frequency Relays
 - 30 min Ramp / Notice period before performance
 - Non-spin is not locational in nature

Outline on ALR Whitepaper - Update for DSWG 110212 (cont.)

2 Telemetry Validation

- Proposes sampling concept to reduce entry costs but still maintain acceptable standard for representing the response of the group
- QSE must follow Protocols in Sections 6.5.5.2 specifically and Section 7
- Allows for using
 - IDR
 - AMS
 - other 15 minute capable measurement devices
 - o PE must attest to following PUC rule 25.142 on Sub-metering accuracy standard
 - o Submitted to ERCOT in to be prescribed timeframes

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3 Uniformity

- QSE completes Resource Asset Registration Form (RARF)
- nominates the ALR group as static or not
- Static group will have prescribed performance methodology
- Non-static group to be analyzed for load shape uniformity
 - Loads in Non-Static groups must be of similar size and shape - i.e. Residential, Small Commercial, Small Industrial

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4 Management of Changes to ALR Populations

- Expected to be dynamic and scalable
- Managed by Resource Entity, QSE, TDSP or Meter Reading Entity
- ALR parameters established in the Network Model in RARF by Resource Entity
- New interface to be built by ERCOT accessible to managing entities
 - Competitive Choice areas - QSE manage at the ESIID level
 - NOIE territories QSE to provide unique meter identifier for each member of the ALR group
 - NOIE QSE and TDSP must affirm membership of the ALR group
- Parameters related to real-time performance and Ancillary Services monitor submitted via telemetry
- ERCOT periodic review of the statistical sample accuracy

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5 Network Modeling: Texas Load Aggregation Points (TLAPs)

- Leverage the Load Resource concept of assigning the "resource" to a point in the Network Model
- ALR group would be assigned a place (element) in the Network Model
 - ALR group can't exceed load capacity of the element it is assigned
 - DR capacity can't should not pose operational concerns
 - Each ALR group assigned a different element
 - ERCOT manage whether ALRs as a whole to ensure TLAP integrity
 - Long term allowance to assign loads more diversely in the Model

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6 Measurement & Verification

➤ ERCOT to assign an M&V methodology

- Measurement Before / Measurement After - calculated with 5 minute telemetry before and after an event
- Baseline - calculation of what should have occurred based on ERCOT developed methods applied to Emergency Response Service
- Control Group may be designated by ERCOT for comparison to group actually responding to an event instruction