Bifurcation: A Foundational Demand Response Issue

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Changes in the New England Energy Landscape

California's

- ✓ Retirements of large generation units
  - Retirement of coastal once through cooling power plants
  - Loss of San Onofre Nuclear Generating Station
- ✓ Natural gas delivery constraints
  - Experienced gas delivery constraint in So. Cal on Feb 6th
- ✓ Grid modernization
  - Rapid acceptance and deployment of distributed energy resources
  - The "Integrated Distributed Electricity Grid"
- + Increasing reliance on preferred resources and renewables
  - Fulfill California's "Loading Order"
  - Moving from "capacity" to "capabilities"
  - Satisfy peak demand AND system ramping and load following needs
  - Introducing a "flexible capacity" requirement in 2015

What is Bifurcation?

CPUC decision establishes two distinct types of DR:

Supply Resource

DR resources integrated into the CAISO market

- Capacity Resource
- CAISO Dispatched
  - When needed
  - Where needed
  - Amount needed

Load Modifying Resource

DR that reshapes or reduces the net load curve

- Avoids capacity
- Not optimized
- Voluntary
- Reduces Needs

Why does California's bifurcation policy matter?

- Makes clear how DR load impacts are treated when determining the state's load forecasts
  - Load modifying DR impacts remain embedded in the natural load
  - Supply resource DR impacts are "added back" into the historic load to determine what the load would have been but for DR
- Load forecast treatment affects all forward planning and procurement activities
  - Load modifying DR alters forward capacity needs
  - Supply DR is configured to meet forward capacity requirements
  - System and local grid planning (part of load shape or a resource?)
- Ensures DR supply resources are treated comparably
  - Resource characteristics can be modeled and optimized
  - Resource availability and must offer obligations applied
  - Greater transparency around resource value and performance