

Northwest Resource Adequacy Implementation Options



Northwest Resource Adequacy Forum
Steering Committee
February 24, 2006

Overview

- Small group tried to stay within Steering Committee principles
- Key assumptions
- Three basic implementation approaches (with variants)
 - Public information and market discipline
 - Entity or entities provide reserve
 - Various mechanisms
 - Rely on control areas for reserves
- Goal for today: Narrow the range as much as possible and provide preliminary guidance to Technical Committee
 - Technical Committee can flesh out further

Key Assumptions

- Agreement on energy and capacity metrics and targets that provide acceptable LOLP for region
- Successful translation of regional to individual metrics and targets
- Definition of appropriate planning horizon and test year for assessment of adequacy
- Goal is to ensure adequacy while avoiding overbuilding

Approach 1: Public Information and Market Discipline

- Utilities with ongoing resource acquisition responsibility report to some regional entity (PNUCC?)
- Assess results, including independent analysis
 - Utilities would see how they looked in regional context and respond appropriately
- Those that were short would face market prices
 - BPA customers exceeding allocation would face overrun penalties (current imbalance penalty is 125% of spot market index)
- Steeper penalty if BPA forced to declare hydro emergency to meet load (e.g., 150% of index) with revenue to support fish

Approach 1: Public Information and Market Discipline (cont'd)

- Pros
 - Responsible entities can make independent decisions and costs fall on them
 - Not require other than minor additional mechanisms
- Cons
 - May encourage risk-taking behavior by those who can't afford it
 - May encourage free riding, especially if price caps are significantly constraining prices
 - May be insufficient to provide enough resources to avoid outages

Approach 2a: Binding BPA Contracts and Binding PUC Processes

- Binding provisions in BPA 20-year contracts with its public customers
 - Customers agree to report and BPA assesses
 - Upcoming inadequacy triggers potential BPA action to remedy
 - BPA only acts if Council also sees regional inadequacy
 - BPA rate mechanism recovers costs from inadequate LSEs
- PUCs and IOUs agree to binding processes to ensure consistency with regional metrics and targets
 - Similar to above but with appropriate PUC responses

Approach 2a: Binding BPA Contracts and Binding PUC Processes (cont'd)

- Pros
 - Mechanism to ensure regional adequacy
 - Minimizes free ridership
- Cons
 - Mandatory procurement mechanisms might be considered onerous
 - Additional staff required for BPA and PUCs
 - May be inconsistent with SC principle “Don’t trample on jurisdiction of states or prerogatives of utilities”

Approach 2b: Some Regional Entity Provides Reserves

- A regional entity agrees through contract to provide adequacy reserve for short-term (e.g., year or so) to utilities that need it
 - Addresses lumpiness problem of resource acquisition
- Various mechanisms to pay for reserve
 - Option fee up front giving rights to purchase power later
 - Utilities fund up front and can sell if don't need it later
 - Tax by some government entity on all LSEs to finance reserve

Approach 2b: Some Regional Entity Provides Reserves (cont'd)

- Pros
 - Centralizes acquisition and minimizes overbuilding reserves
- Cons
 - Existence of reserve might create incentive not to act
 - Could be too expensive or might not be enough interest
 - Entity could fail (financially or otherwise)
 - If tax is relied on, and fails to be approved, there is no assurance reserve would be provided otherwise

Approach 2c: Voluntary Contracts Among Utilities, Similar to WECC RMS

- Voluntary contracts among utilities and between utilities and some regional entity
- Entity would do assessments and could impose sanctions (conceived to be limited to public disclosure of assessment results)
 - Sanctions only if regional and individual assessments both show deficiencies
 - RMS has monetary sanctions for violations

Approach 2c: Voluntary Contracts Among Utilities, Similar to WECC RMS (cont'd)

- Pros
 - Designed to ensure region is never deficit
 - Minimizes free ridership
- Cons
 - May be inconsistent with SC principle “Don’t trample on jurisdiction of states or prerogatives of utilities”

Approach 3: Implementation Through Control Areas

- Control area operators contract for “planning reserves” based on forecast of need for their control area
- Reserves would be tied to specific generators and transmission paths, rather than more-common WSPP system sale or liquidated damages contracts
 - Would require seller to carry operating reserves not subject to *force majeure* clause
- Costs would be allocated to appropriate LSEs through transmission rates

Approach 3: Implementation Through Control Areas (cont'd)

- Pros
 - Continues implementation through entities currently responsible for load and resource balancing in real time
 - Provides bridge to structure envisioned in NERC “functional model” for control area functions
 - Administration over all market participants
 - Consistent implementation over publics and IOUs
 - Maintains commercial relationship between BPA and customers

Approach 3: Implementation Through Control Areas (cont'd - 2)

- Cons
 - Expansion of control area responsibilities over time
 - Role confusion between control areas (transmission focused) and utility merchant/power supply group
 - Control areas now undergoing transformation under NERC “functional model” and may become obsolete in future in current form