WESTERN AREA POWER ADMINISTRATION

Public Information Forum

Post-2004 Operational Alternatives

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PROCESS SCHEDULE

• Federal Register Notice Pub	Jun 24
• Public Information Forum	Jul 9
• Public Comment Forum	Jul 30
• Final Comments Due	Aug 8
• Publish Proposed Decision	Sep
• Final Comments Due	30 Days/Publication
• Final Decision Published	Nov

OVERVIEW

- Three Alternatives
- Decision Criteria
- Pros and Cons
- Economic Analysis
- Break
- Questions and Answers
  - Identify yourself for the court reporter

Post 2004
OPERATIONAL ALTERNATIVES

- Why?
- Alternatives
- Decision Criteria
- Pros and Cons

WHY?

- Contracts Are Expiring Dec 31, 2004
  - 2949A - Malin-Round Mountain 500kV
  - 2947A – Transmission Exchange Service
  - 2948A – PG&E services to Western
    - PG&E acts as Control Area for Western
    - PG&E provides firming energy for Western customers
- PG&E Will No Longer Provide Services
- CA ISO became Control Area in 1998

WHY?

- Western must select an operational scheme in preparation for January 2005
- Alternatives under consideration will result in Western either
  - Obtaining or
  - Self-providing the services

ALTERNATIVES

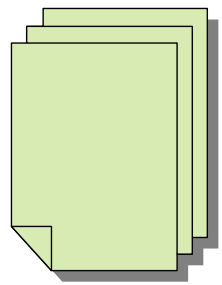
1. Become a Participating Transmission Owner (PTO)

   Obtain Control Area services from CA ISO

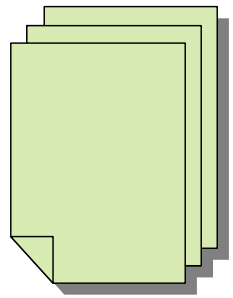
2. Become a sub-control area under the Metered Subsystem concept (MSS)
3. Form a Control Area (CO)

Participating Transmission Owner (PTO)

- Execute a Transmission Control Agreement w/ ISO
  - ISO takes over dispatch control of transmission and entitlements
  - Western maintains and operates transmission lines
- Western practices must conform to ISO protocols and procedures
- Agreement and ISO protocols must conform to Federal law



PTO Alternative #1



- Western & Reclamation execute a Participating Generator Agreement with ISO
  - Schedules CVP generation to ISO
  - Reclamation maintains and operates generators
- Reclamation practices must conform to ISO
- Agreement and ISO protocols must conform to Federal law

PTO Alternative #1

- IMPACT ON LOADS
  - ISO schedules power on transmission lines for loads
    - *No priority for Project Use or SNR's customers*
    - Project Use and other customers subject to Congestion and Re-dispatch costs (except existing contracts)
  - Western (Scheduling Coordinator) is subject to congestion and imbalance costs on Project Use deliveries

PTO Alternative #1

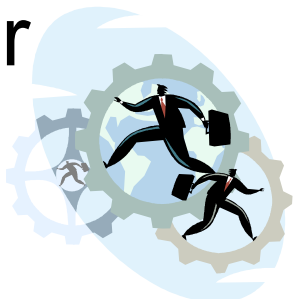
- IMPACT ON GENERATION
  - CVP generation provided to ISO Control Area to meet loads
  - Excess Energy (if any) available to ISO markets
  - Imbalances for Project Use loads paid to ISO

PTO Alternative #1

- Organizationally
  - Easiest to implement
  - Eliminate Real-Time Scheduling and AGC Desks
  - Keep Real-Time Switching and Merchant Desks
  - Add more Settlements personnel

Metered Subsystem (MSS)

- Establish geographic boundaries for subsystem
  - Install revenue quality meters at boundary and generation points
  - Identify and aggregate participating customers
- No need for Western and Reclamation to execute a Participating Generator Agreement



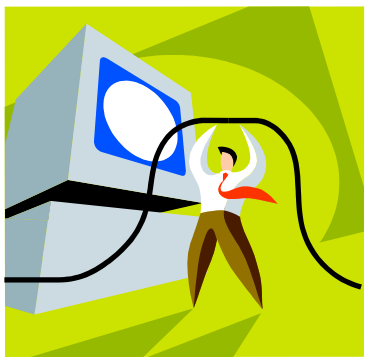
MSS Alternative #2

- Principles of ISO Offer
  - Include all participants that want in
  - "Net" settlements treatment for ISO charges based on cost causation principles
  - No PG&E UFE charges
  - Allow for system units (Generation)
  - No PGA
  - Multiple scheduling identifiers
  - Load ratio share of ancillary services

MSS Alternative #2

- To Minimize Costs:
  - Western would provide load following and reserves for MSS participants
  - Reclamation would be requested to change generation to maintain interchange balance
- ORGANIZATIONALLY
  - Keep Real-Time Scheduling, Switching, AGC and Merchant Desks
  - Requires revenue meters, communications and telemetry at boundary points

MSS Alternative #2



- All Customers electing to participate would be in 1/1/05
- Western would provide Regulation, thus reducing imbalances for participants
- Directly connected customers avoid some ISO charges

Control Area (CA)

- Key Principles
  - Control Area will include direct connected customers
  - Customers inside the CA will not be subject to ISO charges
  - No PG&E UFE charges
  - Western to provide load following to customers inside the CA
  - Reclamation can move generation around their system as needed for water deliveries

Control Area Alternative #3

- Key Principles (Continued)
  - Western will participate in ISO Markets
  - Scheduling to customers in ISO Control Area done as SC to SC Trades
  - Reserve obligations shared by those within the Control Area
  - Control Area services will be provided by Western to those within the Control Area

Control Area Alternative #3

- Establish boundaries With SMUD, BPA, ISO using telemetry
- Match load with generation
- Provide frequency support
- Scheduling, Switching, AGC and Merchant Desks Needed

Comparison
Reliability Function

- MSS Alternative
  - Accountable to the ISO Under MSS Agmt
  - Must sign Reliability Management System (RMS) Agreement with WECC
  - Policies that can be waived/negotiated with ISO
- Control Area Alternative
  - Accountable to NERC and WECC
  - Must sign RMS agreement with WECC

Comparison
Changes in Performance Requirements

- MSS Alternative
  - Negotiate changes on MSS Agreement with ISO.
  - Changes filed at and concurred in by FERC
- Control Area Alternative
  - NERC and WECC Committees develop changes and recommend to board.
  - Changes by industry consensus

Comparison
Maintenance Outage Scheduling

- MSS Alternative
  - Coordinated with ISO and affected utilities
- Control Area Alternative
  - Coordinated with neighboring CAs, affected utilities, and Reliability Coordinator

Comparison
Metering

- MSS Alternative
  - Revenue Quality
  - Generation, MSS member interchange, and interconnection flows, telemetered to Control Center and ISO
- Control Area Alternative
  - Revenue Quality
  - Generation and interconnection flow telemetered to Control Center

Comparison
Emergency Operations

- MSS Alternative
  - Plan approved by ISO
  - Operations consistent with NERC and WECC policies
  - ISO directs Emergency Operations
  - MSS must comply with direction given
- Control Area Alternative
  - Procedures consistent with NERC and WECC policies
  - Emergency Operations coordinated with neighboring Control Areas and Reliability Coordinator

Comparison
Deviations From Schedule

- MSS Alternative
  - Must operate within 3% Band
  - Over generation outside of band lost to system
  - Under generation penalized at 200% of market price
- Control Area Alternative
  - Must follow WECC control performance criteria
  - Over and under generation accounted for as inadvertent interchange

Comparison
Scheduling

- MSS Alternative
  - Scheduling done in accordance with ISO protocols which may change through ISO action, such as tariff changes
- Control Area Alternative
  - Scheduling done in accordance with WECC protocols which may change due to industry consensus

Comparison
Reserves

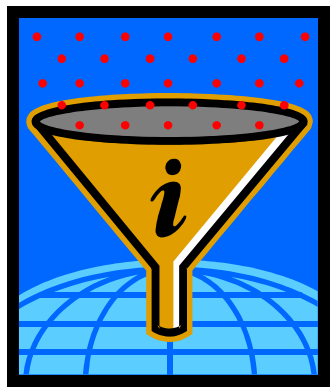
- MSS Alternative
  - Must maintain Reserves in accordance with ISO tariff
  - Generally, a load ratio share of ISO Reserve requirement
- Control Area Alternative
  - Must maintain reserves In accordance with WECC criteria
  - Generally, Reserves will be shared with those inside the CA to cover the CA largest hazard

Comparison
Neutrality Charges

- MSS Alternative
  - Proportionate share based on net MSS loads
- Control Area Alternative
  - No charges

DECISION FACTORS

- Flexibility
- Certainty
- Durability
- Operating Transparency
- Cost Effectiveness



SOME PROs and CONs

- PTO Alternative
  - Lowest labor cost
  - Highest cost to customers
- MSS Alternative
  - Regulation and Reserves provided by Western
  - Some participants may avoid charges
  - Lower Reserve Reqm't
  - Off system customers in earlier

SOME PROs and CONs (Continued)

- Control Area Alternative
  - Customers within the Control Area could avoid some ISO charges
  - Possible limitation on services provided if Control Area becomes large (Dynamic Scheduling)
  - Rules change by industry consensus

SUMMARY

- Alternatives Under Consideration
  - Participating Transmission Owner (PTO)
  - Metered Subsystem (MSS)
  - Control Area (CA)
- Decision Factors
  - Flexibility
  - Certainty
  - Durability
  - Operating Transparency
  - Cost Effectiveness