



# *Public Information Forum*

## *Study of Central Valley Project Operational Alternatives*

*Shawn Matchim*

*Mike Brozo*

*Navigant Consulting, Inc.*

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# Presentation Topics



- Overview of Study
- General Assumptions
- CVP Resources
- CVP Loads
- Cost Components
- Revenue Components
- Summary of Results

# Overview of Study



- Navigant Consulting was contracted by the Bureau of Reclamation (Reclamation) and partially funded by the Western Area Power Administration (Western) to perform a study of Central Valley Project (CVP) Operational Alternatives.
- The purpose of the Study is to aid Reclamation and Western with the cost effectiveness aspect of selecting a viable Operational Alternative. Other non-economic factors are also being considered by Western in addition to this Study.
- Operational Alternatives include becoming a Participating Transmission Owner (PTO) in the California ISO, becoming a Metered-Subsystem (MSS), and forming a Control Area.
- The Study represents a 15-year projection of estimated costs and benefits associated with each Operational Alternative.
- The Study does not recommend a particular Operational Alternative; rather, it provides the financial analysis to be used as a part of the overall process in considering each of the Operational Alternatives.

# General Assumptions



- The Study focuses solely on deliveries from Western and does not account for other “non-Western” served loads or resources of Western’s customers.
- Estimates for generation output and the availability of ancillary services from the CVP are based on median water-year conditions.
- The Study uses existing rates and estimated costs based on historical market data.
- Cost and revenue estimates included in the Study are subject to change due to various regulatory, legal, and policy-related proceedings.
- The Study uses the California ISO PTO Alternative to measure the relative costs or benefits associated with the other Meter-Subsystem (MSS) and Control Area Operational Alternatives.
- Under the Control Area Alternative, four levels of Western customer participation were considered to determine the relative cost effectiveness of Control Area formation.

# CVP Resources



- CVP Resources
  - CVP Generation
    - Median water-year conditions
  - California-Oregon Intertie Transmission Capacity
    - PACI – 400 MW
    - COTP Transmission Capacity – 177 MW
  - Custom Product Purchases
    - Full Load Service Customer Requirements
  - Ancillary Services
    - Spinning Reserve
    - Non-Spinning Reserve
    - Regulation

# CVP Loads



- As a part of the Control Area Alternative, four customer groupings were analyzed to estimate the sensitivity of Control Area formation under specific levels of participation. The four customer groupings are:
  1. Group A – Project Use Loads
  2. Group B – Group A Loads, Redding, Roseville, and Shasta Lake
  3. Group C – Group B Loads, Other Direct Connect Customers
  4. Group D – Group C Loads, First Preference Customers, and all Other Customer Loads
  
- Load estimates for Western’s Variable Resources Customers (VRC) and Full Load Service Customers (FLSC). VRC loads are derived from their Base Resource allocation resource percentage, while the FLSC loads are estimated based on fiscal year 2000 deliveries.

# Cost Components



- Cost Components included in the Study represent a range of charges, including those imposed by the California ISO, the Pacific Gas and Electric Company (PG&E), as well as costs applied by Western.
- To determine the specific rates associated with the Cost Components in the Study, existing tariff rates were used where applicable, otherwise projected estimates for the 15-year Study period were derived based on historical market charges for the period 1999 through 2001.
- Although an array of potential charges may be applicable when transacting in the California marketplace, this Study focuses on the major Cost Components that Western may be subject to on behalf of its customers.

# Cost Components



- The following table identifies each of the Cost Components included in the Study:

Cost Component	Entity	Source
A. Grid Management Charge (GMC)	California ISO	2001 GMC Settlement
B. Transmission Access Charge	PG&E / California ISO	Northern California Rates
C. Ancillary Service Costs	California ISO	Historical Market Data
D. Transmission Congestion Charges	California ISO	Historical Market Data
E. Reliability Services (RS) Charge	PG&E	2001 PG&E RS Tariff
F. Deviation Charges	California ISO	Historical Market Data
G. Unaccounted For Energy	California ISO	Historical Market Data
H. Neutrality Charges	California ISO	Historical Market Data
I. Grid Operations Charge	California ISO	Historical Market Data
J. Capital or "Start-Up" Costs	Western	Western
K. Operating Expenses	Western	Western
L. Transmission Revenue Requirement	Western	Western

# Revenue Components



- Revenue Components or Benefits associated with each of the Operational Alternative were also considered in the Study.

Revenue Component	Entity	Source
A. Ancillary Services Revenues	Western	Western
B. Transmission Access Charge Payment	Western	Western

- Ancillary service revenues represent the sale of excess ancillary services at projected market prices.
- Repayment of Western's Transmission Revenue Requirement from the Transmission Access Charge Payment represents a Revenue Component for the California ISO PTO Alternative only.

# Summary of Results



- The following table highlights the variance in costs between both the MSS and Control Area Alternatives compared to the California ISO PTO Alternative

**Annual Cost Reduction Compared to California ISO PTO Alternative**  
**Figures Shown in Million Dollars**

<b>Year</b>	<b>Metered Subsystem</b>	<b>Control Area Group A</b>	<b>Control Area Group B</b>	<b>Control Area Group C</b>	<b>Control Area Group D</b>
2005	\$9.2	\$9.0	\$9.7	\$10.4	\$23.9
2010	\$13.2	\$14.1	\$14.9	\$15.8	\$31.5
2015	\$18.0	\$19.6	\$20.6	\$21.7	\$40.3
2019	\$23.6	\$25.9	\$26.9	\$28.2	\$49.2