

customers, Western will need the ability to accurately forecast load requirements to optimize power purchases and minimize costs. Under Contract 2948A, since Western was not the load serving entity for these customers, it had no responsibility to meet customer loads other than to reduce load whenever energy deliveries to its customers exceeded Contract 2948A's maximum simultaneous demand level.

The Generation Optimization system is another new system that will enable Western and Reclamation to maximize the value of the hydropower generation from each Central Valley Project (CVP) power plant. Using the required daily water releases and hourly energy price forecasts, the Generation Optimization system will develop a water release schedule, which still allows Reclamation to meet its daily water delivery obligations, while simultaneously maximizing the value of the hydropower generation. When Contract 2948A expires, PG&E will no longer integrate CVP's hydropower generation with its own resource portfolio. Consequently, Western will need to have the optimization capability to maximize the value of the hydropower generated from the project's facilities.

The Enterprise Architecture Integration (EAI) is a software integration system and serves as the communications backbone for the different software packages. EAI allows data sharing and coordinates/integrates the interaction between other software programs to develop reports and analytical studies that support day-to-day business operations.

The Meter Data Repository system will allow Western to collect metered quantities from its delivery and interconnection points. Collecting this data will allow Western to analyze system performance and support its day-to-day operations. The information stored in the data repository will be used by the maintenance, operations, and power billing functions to conduct day-to-day operations to ensure that Western's transmission facilities

continue to operate reliably and in conformance with all applicable NERC and WECC operating criteria. In addition, the metered data quantities will be used in Western's power rates function to support cost-of-service determinations.

The Settlements system will allow Western to keep track of its transactions with the ISO for each commodity purchased or sold in the ISO markets. Western's existing system is inadequate for post-2004 operations since significant amounts of data need to be entered manually, and the current application is not easily integrated with other business applications/systems. A replacement system capable of automatically integrating data from other business information systems is required.

Western requires each identified system to meet the statutory obligations associated with implementing its post-2004 Marketing Plan regardless of which operational alternative it selects. Because of the projected cost of the identified systems and resultant budget impact, Western worked with its customers during calendar year 2001 to secure additional funds to implement its new marketing plan. Customers recognized this need and provided more than \$19 million to develop and implement these new business systems in fiscal years 2002–2004.

Comparative Economic Benefits Study

Navigant prepared a comparative economic analysis of each post-2004 operational alternative under consideration as part of this public process on behalf of Reclamation and Western. Navigant's initial comparative analysis showed that, of the three alternatives, the comparative net benefits of Western operating as either an MSS in the ISO control area or as a new control area were similar. Navigant's analysis indicated the Participating Transmission Owner (PTO) Alternative was the least cost-effective option.

During the public comment period, the ISO and other commentators

questioned some of the underlying assumptions used in the Navigant study. The ISO submitted a separate economic analysis showing the PTO and MSS options were the least-cost options. Navigant reviewed the assumptions used in the ISO's studies and the comments received on its study assumptions. As a result, a number of assumptions in Navigant's initial economic comparative benefits study were changed. The revised study indicates from an overall comparative economic standpoint, the PTO option continues to remain the least cost-effective of the three alternatives being considered.

The revised comparative benefits study incorporated the following recommended changes to the assumptions: (1) Changing the treatment for self-provided ancillary services to correct a misinterpretation of the ISO Tariff, (2) changing the operating reserve requirement under the Federal control area option to be the greater of 5 percent or the largest single contingency, (3) increasing Western expenses to escalate these costs at the rate of inflation, (4) changing the assumption to include all transmission revenues on the 94-mile section of the Pacific AC Intertie (PACI) line between Malin and Round Mountain substations, (5) changing the assumptions regarding reliability services charges to eliminate charges for direct-connected customer loads, and (6) changing the congestion charges applied to Western loads to reduce net congestion charges to 80 percent of the total charges.

The comparative economic benefit analysis estimated the comparative costs Western would incur under each proposed post-2004 operating alternative over a 15-year analysis period. The nominal values identified in the Navigant comparative economic benefit study were discounted at a Federal discount rate of 5.6250 percent to determine annualized benefits and costs. The annualized results of the study are summarized below:

ANNUALIZED COSTS ASSOCIATED WITH IMPLEMENTING AND OPERATING EACH POST-2004 ALTERNATIVE

[In millions of dollars]

	Participating transmission owner option	Metered sub-system option	Federal control area option A	FCA option B	FCA option C	FCA option D
Total Benefits	88.1	76.7	81.6	81.6	81.6	81.6
Total Costs	98.8	85.6	91.1	90.5	90.4	63.1
Net Benefits	(10.7)	(8.9)	(9.5)	(8.9)	(8.8)	18.5
Net Benefits Normalized to PTO Option ...	0.0	1.8	1.2	1.8	1.9	29.2