

2002 ACCOMPLISHMENTS



BIDSS/MAXIMO Upgrade Project

Western initiated the BIDSS/MAXIMO upgrade—known as the BMX Initiatives Project—to move Western to Oracle Federal Financials release 11i and MAXIMO release 4.1.1. Functional analysis activities began in late FY 2002 and will continue next year, followed by design, development, testing, training and implementation. The upgraded versions will “go live” in October 2003.

Big Horn Basin Upgrades

The Rocky Mountain Region completed the Big Horn Project to increase the total transmission capability of the Big Horn Basin area of Wyoming. The project included converting the Big George-Carter 69-kV line to 115-kV, rebuilding an existing substation and replacing structures on the Lovell-Thermopolis 115-kV line. RM maintenance staff performed a significant portion of the construction work. As a result of these outstanding efforts, Western will save \$1.5 million per year in wheeling costs, have additional transmission capacity to sell and provide a more reliable system.

Bird Collision Study

Western is involved in a bird collision prevention project through the Electric Power Research Institute and the Avian Power Line Interaction Committee. Bird monitoring studies in North Dakota found 150 dead birds in power line rights of way in 2002. That number includes birds that col-

lided with power lines and those struck by motor vehicles. It also includes a single piping plover, which is a threatened species.

Bismarck Maintenance Facility

Construction on a new maintenance warehouse and maintenance facility was completed in Bismarck. The facility features a safe loading dock, improved project drainage and better insulation. The facility replaces two obsolete 50-year-old buildings, which didn't meet today's building, electrical or fire codes and had sustained flood damage.

Bonus Goals

Employees achieved three of five Bonus Goals in FY 2002: reducing the number of lost and restricted work days, reducing recordable motor vehicle accidents and reducing accountable outages.

Collaboration with Western States Power Corporation

Through a six-year collaborative program among Western, the U.S. Bureau of Reclamation and Western States Power Corporation, Western States has advanced to Western and Reclamation about \$20 million for funding purchased power expenses and many operation and maintenance expenses for Estes, Yellowtail and Mt. Elbert powerplants. Western States is a non-profit corporation

established by Western customers that provides advance customer funding to several projects.

Crime Watch Program

Western launched its Crime Watch Program, which allows the public to report theft, vandalism or malicious mischief to Western's facilities. The program includes a toll-free number and Web site to anonymously report these crimes. Witnesses can receive up to \$1,000 for information leading to the arrest and prosecution of a suspect. Western sent program information to local media, landowners and law enforcement agencies across its service area.

Electric Service to Albuquerque Operations Office

Western executed a letter agreement with the Department of Energy's Albuquerque Operations Office and Public Service Company of New Mexico, which makes Western the sole power supplier for Kirtland Air Force Base and Sandia National Laboratories in New Mexico. In addition to providing lower cost power to the facility, the agreement will help DOE more effectively use a special 15-MW capacity allocation under an interchange agreement.

Experimental Flow at Glen Canyon Dam

The Colorado River Storage Project Management Center developed a proposal for an experimental flow at Glen Canyon Dam that conserves resources within the Grand Canyon and calls for minimal change in operation or electric power production. Western negotiated with other Adaptive Management Program members—the Arizona Game and Fish Department, several Indian tribes, seven

Colorado River Basin states, environmental groups, recreation interests and Glen Canyon Dam power customers—to include this proposal in the second year of experimental flows. The Adaptive Management Program experiment is to remove non-native predators from the Little Colorado River and mainstem Colorado River in the Grand Canyon.

FEMA Assistance

A Western employee helped the Federal Emergency Management Agency assess technical damage and analyze repairs and restoration needed to rebuild the electrical grid on Guam, Chuuk and Tonoas Islands, which were devastated by a typhoon.

Green Tags

Western facilitated an agreement between the U.S. Air Force and Basin Electric Power Cooperative that will allow the Air Force to buy green tags, which represent the environmental attributes associated with energy produced from renewable resources. The Air Force will buy green tags associated with up to 4,320 megawatthours of wind turbine generation each fiscal year through 2006. The green tags are for Ellsworth Air Force Base in Rapid City, S.D. and F.W. Warren Air Force Base in Cheyenne, Wyo. Western also negotiated a contract for renewable energy on behalf of Edwards AFB. The new arrangement replaces a contract that Edwards had with Enron. The quantity of renewable power to be provided varies by time of day, but ranges from 7 to 23 MW. This five-year contract starts with a minimum of 25 percent renewable power and steps up to 100 percent renewables in 2004.

Human Capital Plan

Western unveiled a Human Capital Plan to address the challenges of attracting and retaining talented employees to replace our aging workforce. This Plan includes seven initiatives for implementation, including: 1) developing a human capital plan linked to Western's strategic goals; 2) developing a Westernwide workforce planning program; 3) establishing a succession planning program; 4) fostering a workplace environment to attract and retain talented employees; 5) establishing a Westernwide coordinated recruitment program; 6) developing a training program on human capital management; and 7) developing pay options to improve the link between pay and performance.

Interconnections, Merchant Plants

In FY 2002, Western managed proposed interconnections for eight merchant plants with 5,376 MW of generating capacity, which will be sold directly into the market. Work included a supplemental draft EIS for the Big Sandy plant that would interconnect with Western's Mead-Phoenix 500-kV line; construction of two Liberty-Sundance and Coolidge-Sundance 230-kV transmission lines for the Sundance Powerplant interconnection and commissioning of the Sundance generators; systems impact and facilities studies for the Mohawk Generation facility, Valley Electric Association interconnection, Centennial transmission line interconnection into Mead Substation, and the LV Cogen, Mirant, Duke, Reliant Big Horn and Pinnacle West Silver Hawk generators; a system impact study consultation for the San Luis generator; interconnection of transmission lines at Galivan Peak, Raceway and Flagstaff substations for Arizona Public Service; and commissioning of the Blythe

generator. Also completed in FY 2002 was developing a solution to transmission line sagging to lines built before 1975; and implementing net billing procedures and appropriate BIDSS development for Griffith, a merchant plant in Kingman, Ariz.

LAP Post 2004 Resource Pool

Final Loveland Area Projects Resource Pool allocations were published in the *Federal Register* on Jan. 10, 2002. Western allocated power to 26 new customers that include six Native American tribes, five cooperatives, 12 municipalities and three government agencies. Western allocated power to Colorado's Regional Transportation District and to Yellowstone National Park. Power deliveries start Oct. 1, 2004. The resource pool—about 28 MW and 80,000 MWhs—represents 4 percent of the RM's current marketable capacity.

Montana-Dakotas Transmission Study

To focus on expanding transmission to deliver energy from various types of generation to new markets in the Midwest, Western completed the Montana-Dakotas Regional Transmission Study. Authorized by Congress and commissioned by Western, the study specifically targets transmission system reinforcements and upgrades needed to support an additional 1,000 megawatts of new wind and lignite coal energy generation in North Dakota, South Dakota and Montana. The study consists of three volumes.

NERC Electronic Tagging

Western energy schedulers successfully upgraded the North American Electric Reliability Council E-tagging system, an Internet-based protocol. E-tags document the scheduling of energy from an energy supplier and the reservation to transmit that energy. The switch to the new version on April 10 was critical because every energy scheduling entity in the United States, Canada and Mexico had to launch the new software simultaneously at midnight Central Daylight Time and the system had to work correctly and accurately from the start.

New Substations

The newest substation in the Rocky Mountain Region—Cañon West—was energized and put into service two months ahead of schedule. The new 230-kV ring bus substation bisects the CRSP Midway-Poncha 230-kV transmission line. Western will own and operate the 230-kV part of the new substation. Western also completed the design and construction on two new Western substations in the Upper Great Plains Region. The Virgil Fodness Substation near Tea, S.D. was added to serve load for East River Electric Power Cooperative. The Elk Creek Substation near Rapid City, S.D. was added to serve load for Rushmore Electric Power Cooperative. Additionally, the Sundance Substation near Coolidge, Ariz., was acquired from Sundance Energy PPL as part of interconnection agreements allowing Sundance to interconnect with Western's transmission system. In addition, Western added one other substation—the Buck Boulevard switchyard in California—to bring the total number of substations to 266.

Non-Hydro Renewable Resource Program

The NHRRP secured more than \$263,500 from outside organizations to advance renewable resource use. The program also provided grants to the American Public Power Association, Nevada State Energy Office, Northern Arizona University, Northwest Seed and the University of Nevada at Reno for wind anemometers, regional wind resource maps, state wind and geothermal industry working groups and public power and cooperative utility technical outreach programs. The NHRRP manager also developed a publication called, "Green Pricing at Public Utilities: A How-to Guide Based on Lessons Learned to Date." Western is also continuing its partnership with the Public Renewables Partnership to foster demand for renewable resources.

Parker-Davis Project Marketing Plan Proposal

Western began the Parker-Davis Project remarketing process with a *Federal Register* Notice announcing a proposal to apply the Energy Planning and Management Program Power Marketing Initiative to the project. The Initiative calls for extending a major portion of the existing contracts for 20 years beyond their Sept. 30, 2008 expiration date. Western would establish a resource pool by reducing existing contracts by 6 percent. The pool power would be available to new customers, including Native American tribes. Western is consulting with current and potential customers and interested publics on its proposal.

Path 15 Project

The Federal Energy Regulatory Commission approved a Letter Agreement for the Path 15 Upgrade Project, setting out cost recovery and incentive proposals for a \$306 million upgrade to California's constrained Path 15 transmission line. In addition, the California Independent System Operator's Board of Directors voted to accept a Path 15 upgrade as part of the ISO-controlled grid. The upgrade project is being carried out by Western, Trans-Elect Inc., and PG&E. The new 500-kV transmission line is scheduled to come online in late 2004. The Project will be operated as a transmission facility within the ISO.

PG&E Gives Refunds to Western Customers

Western customers will receive refunds from Pacific Gas and Electric Company of about \$9.0 million, excluding interest. The refunds stem from a Federal Energy Regulatory Commission ruling that affirmed the initial Administrative Law Judge's ruling preventing PG&E from passing through reliability service costs under its integration contract with Western. The initial ruling found that the reliability service was not a new service and that PG&E had not met the contractual requirements nor provided sufficient cost of service information to make a filing under section 205 of the Federal Power Act to increase its rates. Due to the company's bankruptcy filing, FERC granted PG&E an extension on paying reliability service refunds. Western is working with PG&E to determine the amount and timing of the refunds and accrued interest. The charges have been accruing since June 2000.

Pick-Sloan Resource Pool

Western held four public meetings across the upper Midwest to determine how to allocate up to 1 percent of the power generated by eight hydroelectric powerplants from the Pick-Sloan Missouri Basin Program's Eastern Division. Staff from the Upper Great Plains Region also began gathering letters of interest as part of its public process to allocate up to about 20 megawatts of power for deliveries that could begin in January 2006.

Post-2004 SLCA/IP Energy Allocations

Final allocations of power and energy from the Salt Lake City Area/Integrated Projects Post 2004 Resource Pool to Native American tribes were published in the Federal Register. Western made allocations to 53 tribes in Arizona, Colorado, Nevada, Utah and Wyoming and began negotiating firm electric service contracts. Power deliveries will begin Oct. 1, 2004.

Pre-Scheduling Changes

The Montrose Energy Management and Marketing Office assumed the pre-scheduling duties for Basin Electric/Rocky Mountain Generation Cooperative. While EMMO staff was already scheduling in real-time for these entities, Basin Electric was also interested in pre-scheduling. The pre-scheduler works on the trading floor with the Montrose EMMO real-time marketers for enhanced coordination between both parties. The real-time marketers work directly with the pre-scheduler and Laramie River Station power-plant operators.

PV Modules Replaced

BP Solar is replacing 144 existing photovoltaic modules on the roof of Western's Folsom, Calif., office with more efficient modules. The installation will continue Western and BP Solar's partnership that began in 2000 with the installation of a 10-kW beta test site to obtain field measurements from BP Solar's cadmium telluride modules, a new technology. BP Solar receives valuable performance data and Western benefits from the generated electricity and system ownership.

Rapid City DC Tie

Western partnered with Basin Electric Power Cooperative and Black Hills Power and Light on the construction and operation of a back-to-back DC Converter Station project in Rapid City, S.D. When completed, the station will be able to transfer up to 200 MW of power between the Western Electricity Coordinating Council in the western interconnection and the Mid-Continent Area Power Pool in the eastern interconnection. The converter station will be operated by the Rocky Mountain Region's Western Area Colorado Missouri control area.

Rate Changes

The Energy Secretary signed the firm power, transmission and ancillary services rate order for Salt Lake City Area/Integrated Projects and the rates became effective Oct. 1, 2002. This signing culminated the Federal rate order process that began in 2001 and included informal rate meetings with firm power customers, as well as informational and comment forums.

Other rate actions included a rate extension for the Loveland Area Projects, which became effective on July 1, 2002.

Regional Science Bowls

Western sponsored seven regional competitions from North Dakota to California and winning teams participated in the Department of Energy's National Science Bowl in May. RM-sponsored Boulder High School, won second place in the national competition.

Reliability Centered Maintenance

Implementation of the Reliability Centered Maintenance program, which focuses resources on preserving overall system function, continued in FY 2002. RCM is a maintenance management tool that helps optimize Western's maintenance efforts. For example, some periodic equipment overhauls can be eliminated in favor of careful monitoring of potential failure, while non-critical items may be "run to failure" before maintenance is performed. A Western RCM coordinating team was established to oversee and coordinate program implementation. This work includes modifying the computerized maintenance management system to reflect revised maintenance practices, investigating condition monitoring, and remote monitoring of equipment condition in real-time. Program implementation builds upon a pilot project undertaken by RM in FY 2001.

RTOs, Seams Steering Group

Western met with numerous other utilities to discuss the costs and benefits of various regional transmission organization options, including the Midwest Independent System Operator and West Connect RTO. Western staff also participated in the Seams Steering Group-Western Interconnection Planning Work Group to discuss procedures for transactions among regional transmission organizations. Seams are boundaries between control areas that could lead to disruptions in transmission. Western has determined that it will pursue RTO membership after determining that benefits outweigh costs and after conducting an environmental review and public process.

Shared Safety Training

Western, Bonneville, and Southwestern power administrations formed a partnership to develop an online training program for the agencies' 1,478 craftsmen. The Online Safety Training Team will develop industry-uniform training that can be delivered just in time to a geographically dispersed staff. When completed, the Web-based safety courses will be added to the Energy Online Learning Center. The new system will also allow training to be recorded automatically, reducing labor and costs.

Standard Market Design 2002

Western established three working groups to prepare a response to the Federal Energy Regulatory Commission's Standard Market Design Notice of Proposed Rulemaking. The FERC NOPR includes far-reaching proposals to establish more competitive bulk power system.

Strike Team Evaluates Business Needs

Western formed an agencywide Common Electronic Scheduling Sub-team, referred to as the "Strike Team," to evaluate business system needs as the Sierra Nevada Region prepares to implement its 2004 Marketing Plan and considers forming a Federal control area in northern California. The team provides guidance, direction and perspectives in identifying all the components and functional systems necessary to operate as a control area, transmission provider, and purchasing-selling entity. The Strike Team's involvement helped assure the promotion of inter-regional coordination of business, process and implementation architectures as part of this effort. Using this team's input, Western is preparing a Request for Proposals that focuses specifically on control area/transmission provider scheduling and purchasing-selling entity scheduling needs, including settlements with the California Independent System Operator.

Virginia Smith Station Granted Flexibility

Western's Virginia Smith Converter Station near Sidney, Neb., began operating in the opposite direction of the Tri-State Generation and Transmission Cooperative's David Hamil Converter Station at Stegall, Neb. The new arrangement removes a significant obstacle to transmission operations. The Virginia Smith Converter Station ties together the eastern and western power grids by converting up to 200 MW of alternating current electricity on one side to direct current and then back to alternating current, allowing power to flow between the two grids.

“Wings of Honor” Awarded to Western

Western earned the “Wings of Honor” award from the Flight for Life of Colorado Springs, Colo., for supporting the organization’s communications needs. Western provides a no-cost lease to Flight for Life for two microwave channels, and also provided power to operate the associated equipment, which is located at Methodist Mountain, south of Salida, Colo.

25th Anniversary Celebrations

Western invited customers and retirees to celebrate our 25th-year anniversary on Dec. 12 as a Federal power marketing administration. In addition to hosting numerous open houses and receptions agencywide, we produced a history book and developed a history Web site. Staff also contributed items for a time capsule, which was made from a steel transmission structure section and will be on permanent display at the Corporate Services Office in Lakewood, Colo., and opened in 2027. ▼