FY 2000

ANNUAL PERFORMANCE REPORT

Western's Vision and Mission

Power marketing and transmission stewardship are our core business functions. This vision statement encompasses our intention and philosophy to strive for excellence in core businesses and to deliver value to the public.

Vision

Western will be a premier power marketing and transmission organization.

Mission

Western markets and delivers reliable, cost-based hydroelectric power and related services.

While the vision statement conveys the overall goal for Western's business environment, the mission statement focuses on activities that define the boundaries and opportunities faced every day.

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I. Introduction

This is Western Area Power Administration's first performance report under the guidelines of the Government Performance and Results Act (GPRA). Western is one of four power marketing administrations within the Department of Energy. The power marketing administrations deliver electrical power from Federal hydrogeneration dams in their service areas to a diverse set of customers. From a legislative standpoint, the Department of Energy is the primary entity required to comply with the GPRA. However, Western, as a principal power marketing administration, believes that the GPRA framework offers an opportunity to critically examine its goals and objectives; define strategies to achieve those goals and objectives; engage in long-term monitoring of its performance; and report to the public as to its goals and results.

In 1999, Western reviewed its existing strategic plan and revised it to meet the upcoming challenges of the 21st century. Western developed revised vision and mission statements, three strategic goals, and several objectives under each goal to explicitly define how we intend to accomplish our mission and achieve results to benefit our customers, the electric power industry, and the United States Treasury. These goals and objectives are supported by specific strategies and measurements, as well as an annual performance plan.

This FY 2000 performance report documents the actual versus planned results for several goals and objectives. In many cases, Western has initiated performance measures designed to establish baseline information for future performance assessment.

II. Goals and Results

Western's FY 2001 performance plan provides an extensive discussion of goals, objectives, strategies, measurements, and key results. Rather than repeating those here, the reader is directed to the FY 2001 performance plan linked at **http://www.wapa.gov/** through "General Information."

Table 1 provides a snapshot of Western's achievements for FY 2000. Section V offers a more detailed discussion of the results. More than half of the measurements are in a "baseline" development status; i.e., as a result of the new strategic plan, Western has developed a number of new objectives and measures that have no documented history.

Table 2 identifies Western's key results and key performance indicators associated with those results. Management's assessment of key result achievement is discussed in Section VI.

Table 1 - Strategic Goal Achievement

KEY: ✓ = Met Goal; X = Missed Goal; B = Baseline being established

Products and Services Goal		People Goal		Industry Goal	
Rate targets	X	Safety target	✓	Sanction avoidance target	✓
Cost target	✓	Recruitment/retention target	B	Control area performance targets	✓
Variance inrepayment target	✓	Job match target	B	Adverse 211 avoidance target	✓
Unpaid Federal investment target	___	Training/tools target	B	Renewable resource support target	B
Budget target	X	Process improvement target	B	Operational capacity protection target	B
Alternative financing target	B	Union relationship target	B	Generating agency financing target	B
Business system satisfaction target	B	Customer service target	B	Transmission studies target Reliability organization involvement	B
Maintenance target	B			Accountable outage target	✓
Project management target	B			Work program completion target	B
Environmental management target	B				
Security target	B				

Table 2 - Key Results Achievement Summary

Key Results	Key Performance Indicators
Power Delivery (sales)	• 45.3 billion kilowatt hours, up from 45.1 billion kilowatt hours in FY 1999.
Power Cost	• Program Direction costs = $132 million, 1.5% under target • Firm power rates met 5-year targets for 4 out of 6 major ratesetting systems
Delivery Reliability	• RMS Compliance Sanctions - 2 sanctions totaling $3,000 (extremely low) • Control Area Performance (greatly exceeds minimum performance) CPS1 = 199.81 CPS2 = 98.28 • Accountable Outages = 30 (record low)
Industry Support	• Transmission system open access - Zero Section 211 actions • Transmission studies participation - 132 studies • Reliability Council participation - Key positions held in NERC, WSCC, and MAPP
Treasury Repayment	• Variance from scheduled repayment = 3.7% • Unpaid Federal investment relative to Allowable Unpaid Federal investment = AUFI is 36.2% higher than UFI (ahead of required repayment schedule)

III. Context

Western is a member of a unique set of Federal agencies that provide tangible products and services to the Nation, and generate revenues that are returned to the U.S. Treasury or used to repay bond indebtedness. These agencies are the Federal power marketing administrations, and the Tennessee Valley Authority. Table 3 lists some comparative data about these agencies.

Table 3 - Power Marketing Organizations — Selected Statistics

Power Marketing Organization	FY 2000 Revenue	FY 2000 Total Assets	FY 2000 Generation Capacity	Transmission System
Tennessee Valley Authority [1]	$6.8 billion	$33.2 billion	29,500 MW [2]	17,000 miles
Bonneville Power Administration [3]	$3.0 billion	$16.8 billion	19,191 MW [4]	15,200 miles
Western Area Power Administration [5]	**$914 million**	**$2.2 billion**	**10,600 MW [6]**	**16,900 miles**
Southwestern Power Administration [7]	$101.9 million	$181.8 million	2,158 MW	1,380 miles
Southeastern Power Administration [8]	$150.0 million	$20.1 million	3,100 MW	None

Federal Context - Western has unique statutory authorities derived from a general body of law called the "Federal Reclamation Laws." The pre-1977 laws were passed to define and expand the Federal Reclamation program administered by the Bureau of Reclamation, Department of the Interior. Under the Department of Energy Organization Act of 1977, Western assumed the power marketing and transmission system stewardship role from the Bureau of Reclamation. Subsequently, Western has had specific statutory authority conferred on it and annual appropriations enacted to further define and fund its mission.

Western also has the responsibility to repay the Federal Treasury for current and past appropriations necessary to execute its program. In addition, Western has repayment responsibility for certain irrigation investments undertaken by the Bureau of Reclamation that are beyond the irrigators' ability to repay.

Customer Context - Western is a wholesale electric power supplier in the western United States. It is in the middle of a supply chain that begins with power generation facilities primarily owned by the Bureau of Reclamation and U.S. Army Corps of Engineers, and ends with consumers ranging from individual families to large Federal installations.

1 Tennessee Valley Authority, Annual Report for FY 2000

2 Winter dependable capacity, of which 5,500 MW is hydrogeneration

3 Bonneville Power Administration, Annual Report for FY 2000 and "BPA Facts"

4 Not adjusted for capacity reductions

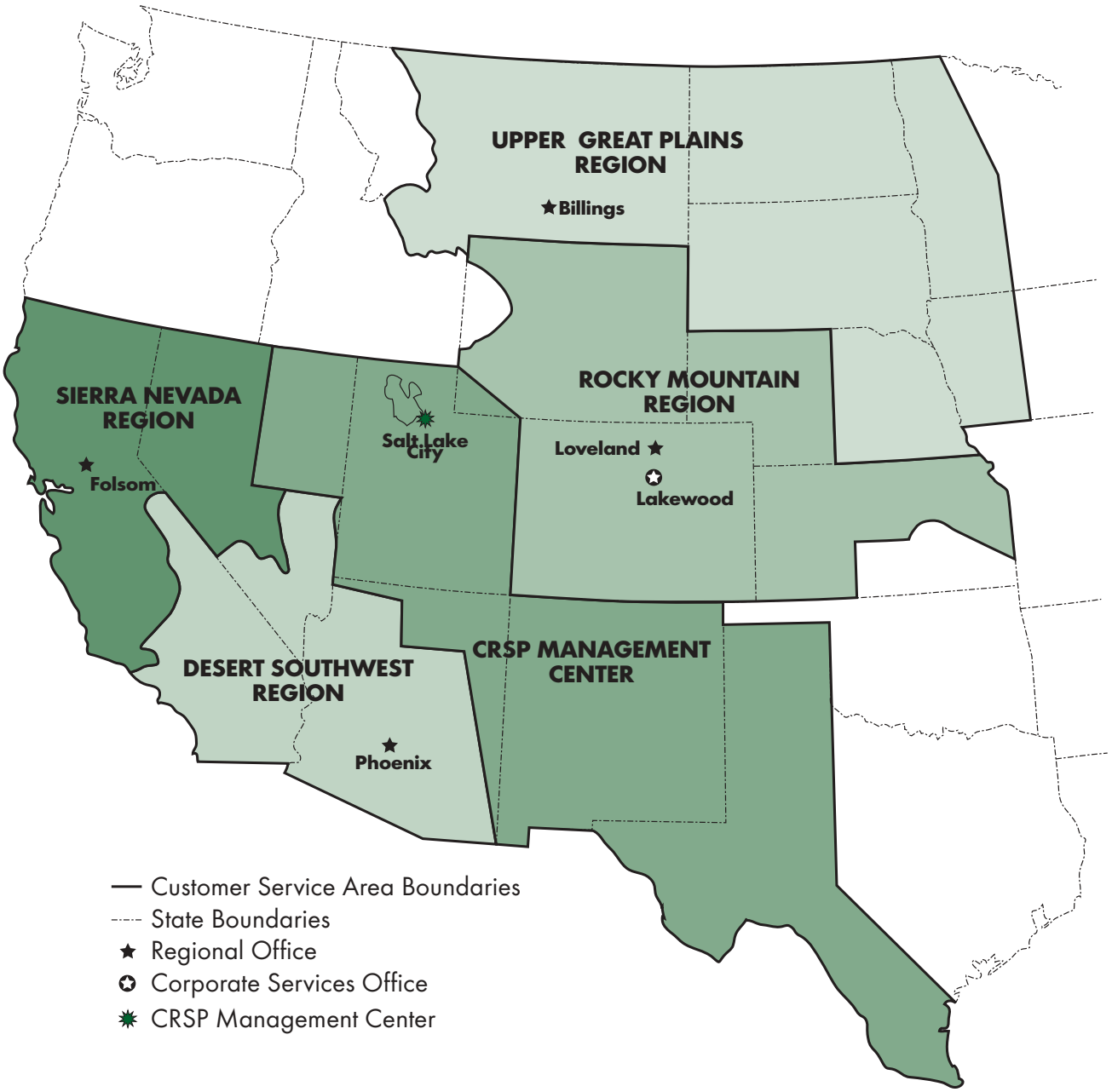
5 Western Area Power Administration, FY 2000 Results of Operations

6 Hydrogeneration plants operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, International Boundary and Water Commission, and the Federal share of the coal-fired Navajo Generating Station.

7 Southwestern Power Administration, Annual Report for FY 2000

8 Southeastern Power Administration, Annual Report for FY 2000

Figure 1
Customer Service Areas



In FY 2000, Western sold cost-based power to 647 wholesale customers including 287 municipalities; 59 cooperatives, 16 public utility and 44 irrigation districts; 53 Federal and 54 state agencies; 26 investor-owned utilities (only one of which purchases firm power from Western); 30 power marketers; and 78 Bureau of Reclamation customers that purchase project-use power (see Figure 3). Most of Western's customers provide retail electric service to millions of consumers in these central and western states: Arizona, California, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Texas, Utah and Wyoming (see Figure 1). Western operates and maintains an extensive, integrated and complex high-voltage power transmission system to deliver power to our customers. Using this 16,900-circuit-mile Federal transmission system, Western markets and delivers reliable electric power to most of the western half of the United States (see Figure 2).

Western's mandate is to "encourage the most widespread use (of power and energy) at the lowest possible rates to consumers consistent with sound business principles."[9] Western develops marketing plans and allocation criteria that define eligibility and the process for securing Western's firm marketable resources. In most cases, Western provides only a portion of the electrical resources for a particular customer. Western's challenges are to divide up a fixed (sometimes shrinking) resource among many existing and new customers, and still provide enough of that resource to represent a meaningful benefit to those customers.

Industry Context - In terms of power supply, Western has available 10,027 MW of hydroelectric generation capability. In addition, Western markets the 537-MW Federal share of the Central Arizona Project's Navajo Generating Station.[10] However, Western does not have "utility responsibility." In other words, Western is not required to construct or acquire new generation or transmission to meet the load (demand) growth of its customers.

Figure 3
Customer Mix

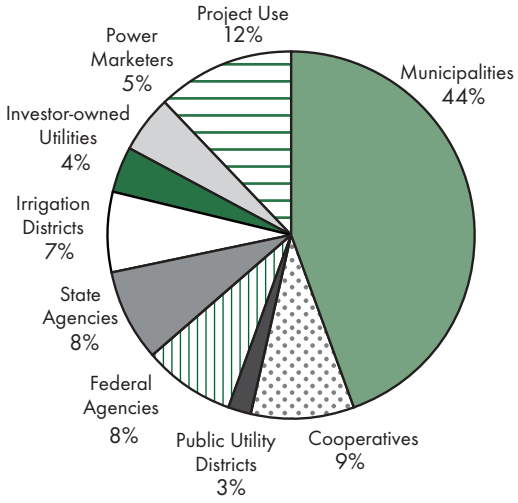


Figure 4
Where our revenues come from ($)

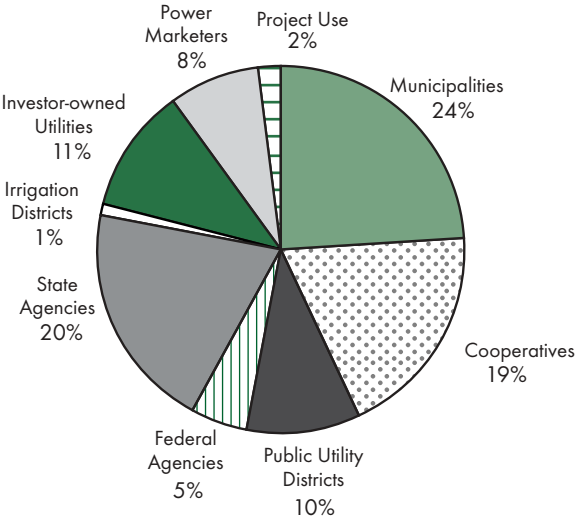
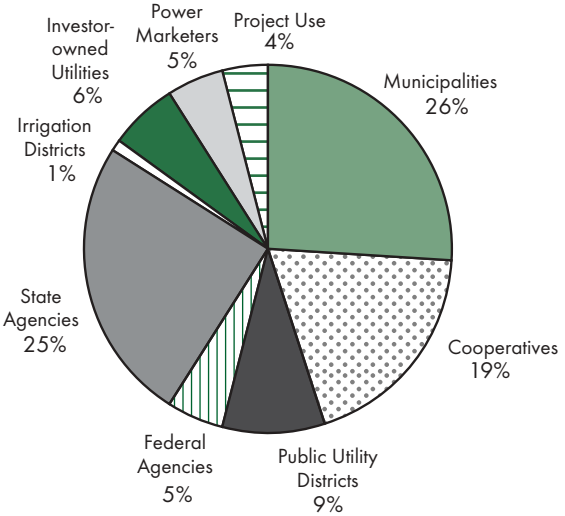


Figure 5
Where our energy goes (kWh)



9 Flood Control Act of 1944 (58 Stat. 890; 16 U.S.C. (825s)

10 The Federal government holds rights to 24.3 percent of the output of the coal-fired Navajo Generating Station that provides pumping energy for the Central Arizona Project.

Table 4 - Transmission Assets

Transmission Line Rating (kilovolt rating)[11]	Western Systems Coordinating Council Transmission miles[12]	Western's Transmission miles in WSCC [13]	Western's percentage of WSCC transmission	Mid-Continent Area Power Pool Transmission miles[15]	Western's Transmission miles in MAPP	Western's Percentage of MAPP transmission
69 kV & below	Not tracked [14]	[751]	N/A	Not tracked	[213]	N/A
115-161 kV	47,450	3,999	8.4%	Not Tracked [16]	[2,929]	N/A
230 kV	40,290	3,413	8.5%	11,817	3,466	29.3%
287-360 kV	10,149	1,140	11.2%			
345 kV				5,742	458	8.0%
500 kV	15,997	448	2.8%	472	0	0.0%
260-280 kV DC	212	0	0.0%			
500 + kV DC	1,333	0	0.0%			
HVDC				1,990	0	0.0%
Total	115,431	9,000	7.8%	20,021	3,924	19.6%

Western is uniquely positioned as a major high-voltage transmission owner and operator in the Western United States. Western's nearly 17,000 miles of transmission line provide delivery into 13 of the states in its service area[17]. In addition, Western has significant long-term transmission service contracts with major transmission owners in many states that provide delivery paths to Western customers.

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11 A kilovolt (kV) is 1000 volts. It is analogous to water pressure in a pipe, except this is "electrical pressure." A typical distribution line to a neighborhood may be 15,000 Volts or 15 kV. Household voltages typically range from 120-240 volts.

12 The Western Systems Coordinating Council is a voluntary regional reliability organization and a member of the North American Electric Reliability Organization (NAERO).

13 Division of transmission between WSCC and MAPP approximated by allocating Western's transmission in MAPP by that transmission in the following states: North Dakota, South Dakota, Nebraska, Minnesota and Iowa.

14 WSCC does not track line mileage of 69 kV and below. Due to Western's significant amount of transmission in that category, it is indicated but is not included in the WSCC totals and percentage calculations.

15 The Mid-Continent Area Power Pool (MAPP) is a voluntary regional reliability organization and a member of the NAERO.

16 MAPP doesn't track line mileage below 230 kV. Due to Western's significant amount of transmission in that category, it is indicated but is not included in the MAPP totals and percentage calculations.

17 Western has no transmission assets in Kansas or Texas. Delivery to Western's customers in those states is accomplished by contract with other transmission owners.

IV. Western's Strategic Plan

Given the context of mammoth restructuring in the electric utility industry, and the internal and external challenges Western faces, Western revisited its strategic plan and examined the goals and strategies for achieving success in this new environment. While much of the plan reaffirms the business practices and policies Western has had for years, the changing environment caused Western to refine and, in some cases, adopt new goals and objectives.[18]

While some of Western's goals and objectives may seem more internally than externally oriented, Western's intention is to produce results that benefit the public through service to power customers, the electric utility industry, and the Treasury. However, Western cannot ignore the critical need to ensure it focuses on managing of its resources, physical, financial and human, necessary to achieve those results. Weaknesses in managing those resources will lead to impaired results to external constituencies. Therefore, Western has chosen to address critical elements of the entire production cycle that produce end results.

PRODUCTS AND SERVICES GOAL - Use sound business practices to create and deliver high-value products and services to our customers.

Western is a wholesale power marketing organization with an array of products and services that customers purchase. Through a strong tradition of customer service, Western's first strategic goal is to remain wholly customer-oriented. Western has listened to our customers and it is clear they expect excellent service and low power rates that will reinforce their ability to remain competitive in the evolving electric utility industry. The objectives under this goal are to:

- meet or exceed their expectations.
- ensure adequate financial resources to meet those expectations.
- leverage business systems to improve productivity, product and service delivery.
- control costs and rates.
- meet repayment and cost recovery requirements.

The results of these objectives directly benefit Western's customers by providing them with affordable power with a high degree of reliability. In turn, the U.S. Treasury benefits from the timely return of operating and investment costs.

PEOPLE GOAL - Recruit, develop and retain a safety-focused, highly productive, customer-oriented and diverse work force.

People are the foundation of our success. To sustain that success, Western provides a work environment that emphasizes safety, technical improvement, diversity and customer focus. Western expects a great deal from its people, and they deliver. In turn, Western must attract, retain and train people to perform those activities that create the greatest value for its customers, ensure their personal safety, and protect the interests of the Federal government.

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18 See http://www.wapa.gov/geninfo/pdf/stratplan.pdf

INDUSTRY GOAL - Promote competition and reliability in the evolving electric utility industry.

Western owns and operates the third largest high-voltage transmission system in the country. Western's facilities stretch from the upper Midwest to the West Coast and southwest corner of the United States. Western is a key player in maintaining the reliability and stability of the nation's electrical transmission system. Open access on Western's transmission system supports the transition to a competitive wholesale energy industry. System operation and maintenance are key to supporting customers. Because Western's high-voltage electrical facilities are interconnected to other systems, its activities can directly affect their stability. However, Western does not have the responsibility to meet load growth in our service territory, nor to procure long-term generation resources.

V. Western's FY 2000 Performance Results

In building our strategic plan, Western set objectives under the three main goals; established strategies to achieve those objectives; and identified performance measures to track progress. In some cases, the performance measures were only conceptual and were designed to provide a baseline to build from in the future.

In the following sections, we document actual results and evaluate our performance. In addition, we add a dimension on the degree of influence we had on the key results (performance analysis).

▸Cost and Rate Management

Cost-Based Rates Create Real Benefits

"Western's cost-based rates have been critical for the continued success of our organization," said Mr. Larry LaMaack, executive director of the Wyoming Municipal Power Agency. "We serve eight cities and towns in rural Wyoming that depend on us for competitively priced electric energy. Access to low-cost Federal power is a key element in that picture. To give you an idea of the impact of Federal power during these turbulent times, all you have to do is to look at a recent forced outage of our primary power supply source. One generating unit at Laramie River Station was out of service for fourteen days in December. Replacement energy for this outage cost our Agency more than $350,000. This is almost half of what we paid Western for Loveland Area Projects' power for the entire year of 1999. There is no doubt how important Federal power is to the Agency and the people it serves."

Western's rates are designed to recover annual operating and amortization costs. Hence, the **desired results** are (1) rates that make Western's products and services competitive to its customers while returning annual and investment costs to the Treasury and (2) expenditures at or below targeted program direction budget which, in turn, result in better managed rates.

In November 1997, Western established target firm power rates for its principal ratesetting projects. Those targets and the actual rates are listed in Table 5:

Table 5 - Comparison of Actual Composite Rates to Rate Targets (mills/kwh)[19]

Project	5-Year Target	1998	1999	2000
Pick-Sloan MBP (Eastern Division)	14.54	14.23	14.23	14.23
Loveland Area Projects	21.70	21.70	21.7	21.70
Salt Lake City Integrated Projects	20.17	20.17	17.57	17.57
Parker-Davis Project	5.07[20]	5.04	5.16	7.63
Boulder Canyon Project[21]	8.82	8.51	9.43	8.89
Central Valley Project	20.95	20.95	19.31	19.31

Rate Performance Analysis - For four projects, Western's rates remained at or below the 5-year target. As of FY 2000, for the Parker-Davis and Boulder Canyon projects, those rates exceeded the 5-year targets by 50 percent and 1 percent, respectively.

The target rate set for the Parker-Davis Project is comprised of two components — a generation component and transmission component. The transmission portion of the composite rate has not changed, but the generation portion has. The increase in the generation portion of the rate is due to the rewinding of the generator units by the Bureau of Reclamation at Davis and Parker dams that started in FY 2000. Because the rate design for Parker-Davis is based upon the projected yearly expenses and revenues on a year-by-year basis and not an average basis, the target rate was only for FY 1998 and FY 1999. Since the generator rewind program did not start until FY 2000, it was not included in the target rate.

The current Boulder Canyon Project (BCP) Electric Service Base Charge and Rates were developed from the FY 1999 Power Repayment Study (PRS). The BCP Base Charge is $46,145,334, the Forecasted Energy Rate is 4.59 mills/kWh, and the Forecasted Capacity Rate is $0.95/kWmonth. Under the BCP Implementation Agreement, BCP is committed to an annual rate process, whether it be a rate increase or a rate decrease. BCP energy sales revenues increased 12 percent from FY 1998 to FY 1999. This expected and realized sales revenue increase allowed the BCP rate to decrease during FY 1999. Similar results were experienced in FY 2000.

Western also tracks its wholesale firm power rates against the average of other utilities in its project service areas. The figures in Table 6 show the long-term trends for the six principal projects listed above as well as a composite rate comparison.

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19 All rates are as of October 1 of the fiscal year.

20 Because the rate design for Parker-Davis is based upon the project yearly expenses and revenues on a year-by-year basis and not an average basis, the target rate was only for FY 1998 and FY 1999.

21 The Boulder Canyon Project has no transmission assets. Unlike the other projects in this table, no transmission costs are included in its power rate.

Table 6 - Comparison of Wholesale Power Rates Between Western and Other Utilities[22]

Project	Western's Composite Wholesale Rate (mills/kWh)[23]	State Composite Wholesale Rate (mills/kWh)[24]
Pick-Sloan MBP (Eastern Division)	16	30
Loveland Area Projects	22	34
Salt Lake City Integrated Projects	18	32
Parker-Davis Project	3	30
Boulder Canyon Project	8	31
Central Valley Project	20	35

The percentage of power Western provides ranges from 1 percent to 100 percent of its customers' resources. Due to this, Western has a difficult problem in identifying the impact it has on customer viability. Western resources often represent the least-cost power to its customers, and any increase in Western's rates places more financial pressure on them. Western's studied conclusion is that its rates have a beneficial, but unquantifiable, effect on the viability of its customers' competitive positions. This is reinforced by Western's rate analysis that compares wholesale rates charged by other utilities in Western's service area.

Virtually none of Western's firm power customers declared bankruptcy, went out of business, were bought out by investor-owned utilities, or otherwise became non-viable in FY 2000. Due to competitive pressures having nothing to do with Western's rates, Plains Electric Generation and Transmission Cooperative of Albuquerque, N.M., merged with the Tri-State Generation and Transmission Association of Denver, CO.

Western will continue to support responsible cost management on those projects to keep the firm power rates competitive. As a passing note, as this report is being written, energy prices in much of Western's service territory are extremely volatile, and Western is acutely aware that rate and cost management are more important than ever to its customers. Also, those external forces will tend to force Western's rates to increase due to increased purchase power costs.

Western accomplished 100 percent of its cost management goal. Western focuses on what is termed "program direction costs" which relate primarily to salaries, benefits, and related personnel support costs. These represent the largest controllable component

22 *Pricing and Analysis of Power Rates, March 2000, Western Area Power Administration.* These rates are based on 1998 data from Resource Data International, Inc.

23 These rates are different from those shown in Table 5 because this calculation is derived by dividing total firm power revenue by total megawatthours of firm power sales and rounded.

24 Note that these wholesale rates were in effect prior to the significant increase in energy prices in year 2000.

of Western's cost structure, and the area where Western has the best opportunity to employ cost containment strategies.

Table 7 summarizes Western's FY 2000 results for cost management[25].

Table 7 - FY 2000 Cost Management Results

	FY 2000
Cost Target	$134,070,300
Actual Results	$132,043,421
% under/over	-1.5%

Figure 6

Cost Containment

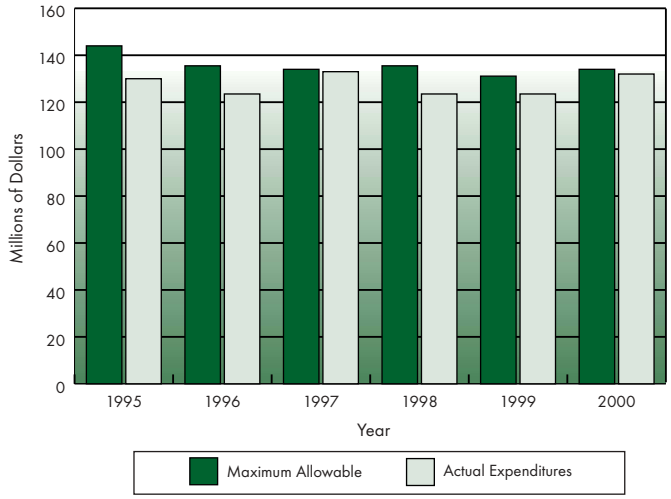

Figure 4 shows the long-term trend of Western cost management program.[26]

Cost Performance Analysis: Western continues to be successful in controlling its costs and rates. Program direction costs again came in under budget and under target. Firm power rates are within a few percentage points of the targets established. For the most part, Western continues to manage its wholesale power rates below those offered by competing wholesale utilities.

▸ Repayment of Federal Investment

Western establishes its rates using standards set forth in Department of Energy Order RA6120.2. Each year, a final power repayment study (PRS) is conducted on each ratesetting project. That study compares anticipated revenues for the next 5 years with anticipated costs. In that projection, the study estimates the principal payments that will be made to the Treasury to amortizate of power investment costs. The variance of the actual payment from the estimated payment is a key measure of whether Western is adequately meeting its repayment obligations to the Federal government. The desired result is a variance at zero or above; i.e., no underpayment (see Table 8).

25 Western's policy is to pay a bonus goal to its employees for achieving cost goals for the fiscal year using that fiscal year's funding. Therefore, to use the current year funding, the reporting period for the cost goal is August 1 through July 31.

26 The Cost Management Goals were established by Western's senior management at levels below the appropriations request to the Congress. Thus, achieving or beating the goal results in even a greater savings relative to the budget expectations.

Table 8 - Variance in repayment for FY 2000

Planned Principal Repayment	$99,937,000
Actual Principal Repayment	$103,609,000
Actual minus Planned Principal Repayment	$3,672,000
Percentage Variance	3.7%

Figure 7

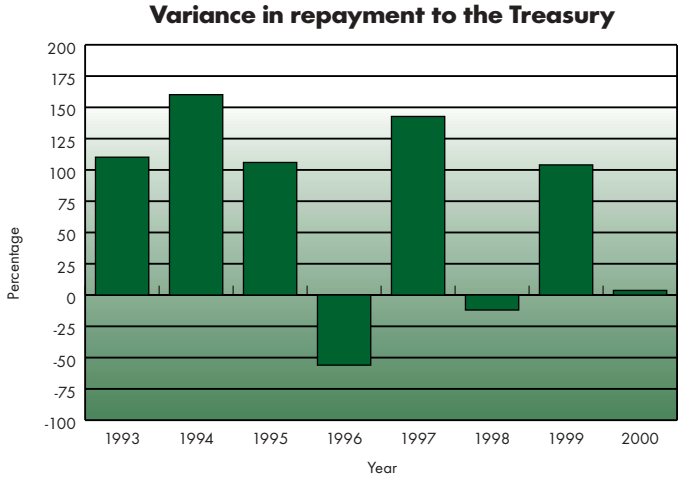

Figure 8

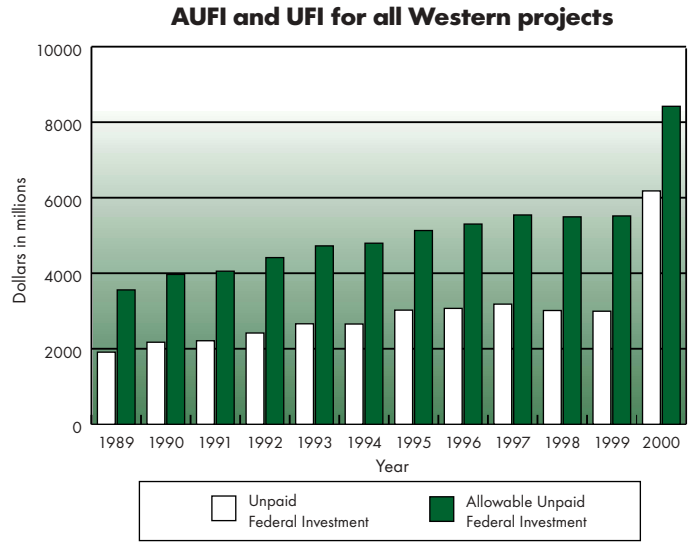

Figure 5 shows the history of variances over the last eight fiscal years.

Because the above measure only provides a snapshot of annual revenue projections and performance, Western has developed a second measure. The PRSs include schedules of "Unpaid Federal Investment" and "Allowable Unpaid Federal Investment." The Allowable Unpaid Federal Investment is an annual schedule of the remaining investment that can remain unpaid in accordance with Reclamation law and RA6120.2. The desired result is the Unpaid Federal Investment is always less than or equal to the Allowable Unpaid Federal Investment. Figure 6 tracks both the aggregate and allowable unpaid balances as a means of assessing repayment performance[27]. As is evident, Western's actual return of investment is well ahead of the required level of investment repayment. Western is currently obligated to return approximately $6.0 billion[28] to the Treasury.

Repayment Performance Analysis - Western met its targeted repayment for FY 2000.

During FY 2000, both the Allowable Unpaid Federal Investment and the Unpaid Federal Investment increased by about $3 billion relative to FY 1999. Primarily, this reflects the addition of a large increment of irrigation repayment assistance by the power function for the Central Utah Project's Bonneville Unit. This amount includes the construction costs allocated to irrigation which are beyond the ability of irrigators' to repay and the states' apportionment obligations owed the other three states of Colorado, New Mexico, and Wyoming.

27 From FY 2000 Preliminary Status of Repayment Reports.

28 Approximately $2.5 billion in power-related investment, and $3.5 billion in Bureau of Reclamation, non-power irrigation development costs.

However, Western continues to repay the Treasury ahead of schedule on a cumulative basis. The Allowable Unpaid Federal Investment was 36.2 percent higher than the Unpaid Federal Investment at the end of FY 2000. From this standpoint, Federal taxpayers continue to receive a return of their investment in advance of when it is legally due.

▸ Funding

Energy Markets Put Pressure on Western's Financial Resources

As noted by Howard Hirahara, Power Marketing Manager for Western's Sierra-Nevada (SN) Region in California, rising energy costs in FY 2000 presented a challenge for Western's Purchase Power and Wheeling (PPW) program. Western's $135 million PPW program requirements were increased to $185 million as energy market prices rose three to five times the level of the previous year. It soon became apparent even that amount would not suffice unless additional measures were taken. In December 2000, one contract indexed to market rates was suspended and a second indexed contract was terminated to control costs. Western worked with the U. S Bureau of Reclamation to maximize generation needed to support energy and capacity requirements for Western's Sierra-Nevada Region under a contract with Pacific Gas & Electric Co. Western also executed contracts with customers to advance purchase power and wheeling funds and is exploring energy exchanges with customers and other agencies as a possible way to control costs. The outlook for FY 2001 is for continued turmoil in the power industry. Western will continue to work with suppliers and other agencies to maximize the value of the Federal power resource, support reliability and control costs.

To achieve the desired results Western is targeting, it is necessary to secure adequate budgetary resources (appropriations and spending authority) to carry out its strategic plan. The desired results are to (1) secure sufficient budgetary resources, tied to GPRA goals, to deliver results to firm power customers, the Federal Treasury, and the electric power industry; and (2) secure enough alternative financing to properly fund services that are not covered by appropriations or other funding authority (e.g., revolving funds). Table 9 shows of the results of Western's FY 2000 budget process.

The reductions in funding from the DOE submittal to the OMB submittal were a result of the OMB passback.

For program direction, OMB reduced Western's request by $1.9 million for software to align the request with FY 1999 funding levels.

For Operations and Maintenance (O&M) and Construction and Rehabilitation (C&R), OMB intended to reduce Western's program, but in the interim, Western discovered that it would not have to pay certain charges from the California Independent System Operator (ISO), so $6 million of reductions were taken instead from the Purchase Power and Wheeling Program (PP&W). OMB decided to also reduce the payment to the Utah Mitigation and Conservation Fund by $800,000, which is a pass-through appropriation that doesn't affect Western's program.

Subsequently, OMB declined to request funding of Western's entire Purchase Power and Wheeling Program in FY 2000. In concert with the Department of Energy, OMB assumed that power customers could fund the program through advances to Western.

Table 9 - Results of Western's FY 2000 Budget Request
(all figures in $000s)

Fund	FY 2000 Request	FY 2000 Enacted	Difference
Program Direction	$106,483	$104,537	-$1,946
O&M	$35,096	$35,096	
C&R	$26,802	$26,802	
PP&W	$59,868	$41,131	-$18,737
Utah	$5,847	$5,036	-$811
Total	$234,096	$212,602	-$21,494
Prior year balance use	0	-20,000	-$20,000
Total Budget Authority Request	$234,096	$192,602	-$41,494

The Congress, in its conference report on the FY 2000 Energy and Water Appropriation Bill, partially restored Western's purchase power request, but stated the following:

> "However, as the conferees attempted to determine the appropriate level of funding in the absence of an Administration request for such funds, their efforts were frustrated by WAPA's inability to provide basic information such as WAPA's current level of unobligated previously appropriated purchase power and wheeling funds and by uncertainties regarding future requirements caused by potential or ongoing contract renegotiations. If WAPA later determines that the amount provided is insufficient, the conferees direct the Department to expeditiously submit a reprogramming request."[29]

Appropriations Performance Analysis - There were two proximate causes to the Congress' refusal to fund parts of Western's program. The first cause was associated with problems in implementation of Western's new financial management system. In particular, data problems in the system made estimates of carryover appropriated balances unreliable. Second, certain customers were advocating a program of funding purchase power and wheeling expenses, even though the mechanisms for that funding were not in place. Carryover estimates were available soon after the committee's report, and Western is once again able to provide that information when needed. Other issues surrounding the financial management system are being actively addressed under the *Business Systems* objective.

Western's FY 2000 alternative financing resources were primarily based on contractual agreements with customers and power suppliers. Alternative financing is a function of these contractual agreements, as well as system conditions of supply and demand. Table 10 identifies Western's alternative funding mix for FY 2000.

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29 Conference Report 106-336, September 27, 1999, p. 103-104.

Table 10 - Alternative Financing

Financing Mechanism	Amount
Net Billing, Bill Crediting and non-Federal reimbursable [30]	$163,040,000
Reimbursable, Federal contract loads	$20,663,000
Additional Off-Budget Financing [31]	0
Total Alternative Financing	$183,703,000

Net billing, bill crediting and non-Federal reimbursable financing are dominated by contractual arrangements in the Pick-Sloan Missouri Basin Program and in the Central Valley Project. Net billing is a two-way agreement between Western and a customer where both buy and sell power to each other. On a monthly basis, the sales are netted out and the customer provided an invoice or a credit on the next power bill. Bill crediting involves a three-way arrangement among Western, a Western customer, and a third-party supplier. Western may purchase power from the third-party supplier, deliver it to the customer, and the customer will pay the third-party supplier and receive a credit on its bill from Western. Reimbursable costs primarily involve power service to Federal installations such as Department of Energy laboratories. "Offsetting Collections" involve the use of power revenues to offset the purchase power and wheeling costs of Western's program.

Alternative Financing Performance Analysis - Alternative financing appears to be slightly larger for FY 2000 compared to previous years. Most likely, this is a function of increasing purchase power costs which are funded through the net billing and bill crediting processes. The additional off-budget financing assumed for the year was speculative, at best, and was not realized.

▸Business Systems and Practices

Challenges of Implementing New Business Systems

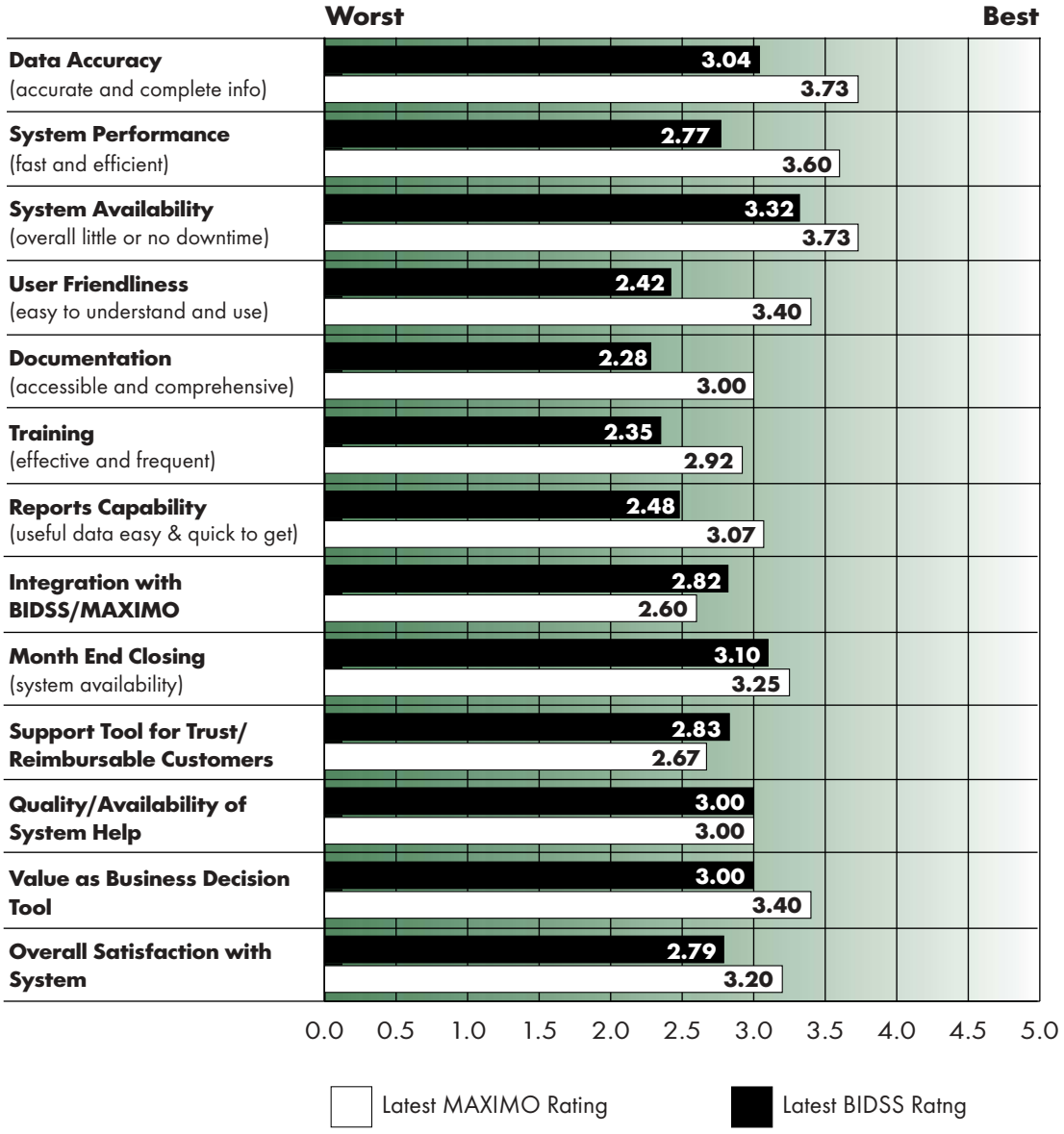
According to a Western BMX user, "We're still experiencing and expressing frustration. The interfaces between MAXIMO and BIDSS aren't working right; data from both systems is questionable; reporting is cumbersome at best; there aren't enough resources to meet demands for this, that, and the other thing. I guess we're all still confused about which system does what. Training and constructive input describing what our business processes and reporting needs really are would probably solve a lot of the problems."

The quality, accuracy and ease of use of Western's business systems directly impacts both the efficiency and effectiveness of Western's day-to-day business operations. Western has been engaged in implementing an enterprise resource management system for the past three years. A major part of this system is known as BIDSS; the Business

30 Primarily involves contracts among and between Western, energy suppliers and firm power customers.

31 $12 million of financing was assumed, but did not occur.

Table 11 - FY 2001 Results of System User Surveys



Information Decision Support System. The core of this system is a set of Oracle Federal Financial Applications. Another major part of the system is known as MAXIMO; a PSDI maintenance management system. Together, they are designated as the BMX (BIDSS/MAXIMO) system.

Design, configuration, linkage, and implementation of these systems has been a time-consuming, stressful experience for Western. These systems still had significant post-implementation issues during FY 2000 as well as additional learning requirements. During FY 2000, the BMX Project Management Office was established and a number of corrective actions undertaken. In addition, plans were initiated to upgrade both systems which will resolve many problems. The desired results are systems which produce timely information for effective project management, financial reporting, transaction processing, and maintenance planning, on which employees are well-trained and comfortable in use. This will allow Western to support its cost management strategy and

produce accurate information that is available to its customers, the public and the Federal community.

During system implementation, Western managers and staff expressed extensive dissatisfaction with the system performance, a lack of understanding as to how these systems were to be operated, mistrust of the data in the system, and concern about organizational support for users. As BMX is a critical support component for Western, and considering its recent history, a decision was made to measure system performance to gauge improvement and target problem areas. During FY 2000, Western conducted employee surveys to assess the satisfaction and utility of major systems Western uses to support its mission. The latest results of these surveys are summarized in Table 11.

Business Systems Performance Analysis - Survey respondents ranked the attributes in a range of 1 (very dissatisfied) to 5 (very satisfied). All ratings fall within levels 2 and 3. This is not surprising since Western is still modifying and learning to effectively use its new management systems. The ratings are consistent with Western's self-perception as to the most difficult and frustrating issues with which to deal. This baseline information assisted in formulating Western's FY 2001 performance plan for this objective. A detailed discussion of Western's plans for improving these systems can be found in Western's FY 2001 Performance Plan, linked at **http://www.wapa.gov/.**

▸ Maintenance Efficiency

Modernization of Transmission Line Structures Will Save Maintenance Effort and Costs

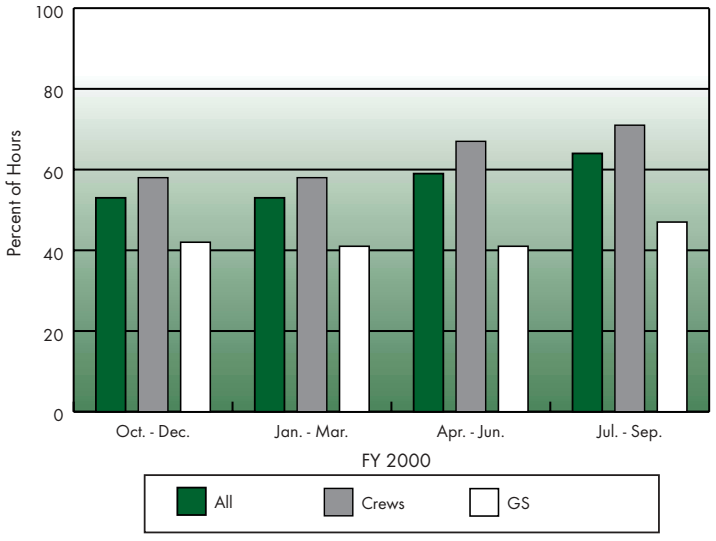
Maintenance crews in the Desert Southwest Region replaced 184 aging wood pole structures in the Parker-Gila 161-kV transmission line with light-duty steel structures. Modern light-duty steel poles are less expensive than wood to install and maintain. Steel poles don't need chemical treatment and aren't susceptible to rot, insects or woodpeckers. With many wood poles beyond their service life, steel pole replacement will reduce costs associated with maintaining wood structures.

Western's mission is to ensure reliable delivery of hydropower to our customers. Western operates and maintains nearly 17,000 miles of high-voltage transmission lines and associated equipment to accomplish this delivery. The desired results are to minimize administrative time (e.g., training, meetings, shop time, tool and vehicle maintenance, clerical, and supervision) by maintenance forces and, in turn, maximize productive (direct) work time.

Figure 7 shows the recent history of Wage Board (maintenance crews) and General Schedule (office) employees in Western's maintenance program. Western will use this and future data to evaluate the drivers behind

Figure 9

WAPA Maintenance Direct Work Hours



these ratios, and look for opportunities to achieve a reasonable balance[32] between direct and indirect work hours.

Maintenance Efficiency Performance Analysis - FY 2000 was the first year in which Western began recording this performance data. The only observation that can be made is a confirmation of the seasonal rise in direct hours worked during the spring months. As Western gathers more data, Western maintenance managers will have a better decision tool from which to understand the drivers behind direct work hours.

▸Project Management

Project Management Principles in Action

Twyla Folk in Western's Huron Maintenance Engineering Office was Project Manager on several successful projects in the Upper Great Plains Region during FY 2000. Project Management principles supported the successful completion of project objectives with Beresford Stage 07 and Summit Stage 10 projects through coordinating critical workload and schedules associated with these projects. Planned customer electrical outages were minimized, substation work performed, and system improvements/equipment upgrades initiated to Western's power system without experiencing major system disturbances. Project Management activities included monitoring project development and implementation. Project tracking enabled construction and maintenance work to proceed smoothly. Budget monitoring was difficult because Western's Financial Management system was in its infancy.

As far as lessons learned, Twyla shares, "With any project there are ways that things can be improved. The main thing is to keep the avenues of communication open, and encourage everyone involved in the project to inform others of any developments. With each new project that is managed, there will be project management skills that can be added to the toolbox."

A large part of Western's business is to maintain and rehabilitate its high-voltage transmission system, and perform trust and reimbursable work for customers whom interconnect with, or affect, Western's system. This work almost always constitutes a "project" which has measurable results. The desired results are projects that come in on

Table 12- Project Evaluation Report for FY 2000

Region	Project	Percent Budget Execution	Percent Over/Under Schedule	Customer Satisfied with Results?	Comments
RMR	Stegall Breaker Replacement	79.2%	109%	Yes	Completed via force account labor
SNR	Elverta Sub Shop Building Replacement	100%	114%	Yes	Completion schedule was extended due to additional work required.
SNR	Elverta Substation Rehabilitation	142.8%	100%	Yes	Cost exceeded initial feasibility estimates (FDR Budget)
UGPR	Beresford Stage 07	75.2%	64%	Yes	None
UGPR	Summit Stage 10	103.4%	94%	Yes	None

32 It is neither possible nor desirable to achieve 100-percent direct hour usage since there are some indirect hours (administrative, training, etc.) that are necessary for program accomplishment.

time, within budget, and meet the expectations of the internal or external customers. (See Table 12).

Project Management Performance Analysis - FY 2000 was the first year in which Western adopted criteria for assessing project management performance on a comprehensive basis. In all cases, the customer (internal or external) was satisfied with the quality of work and the fact that the project achieved its goals. In some cases, there were either schedule or cost overruns (as well as underruns). For some projects, the cost or schedule was exceeded due to an expansion of the project scope. In other cases, the initial project cost/time estimates were low, or there was some indecision on using contract or in-house resources. The performance on these projects has provided Western with a set of "lessons learned" that will be reviewed and performance improvements adopted for ongoing and future projects.

▸ Environmental Management

Environmental Management System

According to Bill Karsell, Western's Environmental Manager, a large portion of the EMS is now available to the public on Western's external Web site[33]. Development of the EMS is ongoing by implementing a comprehensive self-assessment program, developing of agency performance measures, increasing communication to employees and stakeholders, and enhancing partnerships with regulatory agencies.

Western owns and has rights to significant land resources on which its facilities are located. In the course of operating, maintaining and rehabilitating its system, Western potentially can impact environmental resources with hazardous material, equipment failures, or other events. It is in Western's best interest to minimize environmental impact through a proactive environmental management program. Desired results are to reduce operational and regulatory costs, and to protect the environment. The program has kept Western free from violations and fines for more than 10 years.

Environmental Management Performance Analysis - During FY 1999-2000, Western completed self-assessments on two-thirds of the environmental management program and began work on corrective actions. The plan for completing the first "round" of self- assessments is ahead of schedule. Self-assessments identify the status of Western's environmental programs, where gaps occur in program elements, and where formality is lacking. From 1998 through 2000, Western has completed 10 out of 15 applicable assessments defined in Environmental Protection Agency protocols for Polychlorinated Biphenyls, Cultural and Historic Resources, Emergency Planning and Community Right to Know Act, Comprehensive Environmental Response, Compensation and Liability Act/Superfund Amendments and Rehabilitation Act, Resource Conservation and Recovery Act, Spill Control and Response, Storage Tanks, Groundwater, Water Pollution Controls, and Hazardous Materials management. Corrective actions, found through the self-assessment process, are prioritized and implemented in a timely manner. Self assessments for Environmental Impacts (National Environmental Policy Act), Pesticides, Air Pollution, Nonhazardous Wastes, and Pollution Prevention management programs are on track for completion by June 2001.

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33 http://www.wapa.gov/cso/officefun/funenvir.htm

Environmental Performance Measures are an important aspect of an EMS. They provide objectives and goals toward which each employee works. In 2000, Western-wide environmental staff joined with representatives from other key organizations, such as maintenance, engineering, procurement, safety, and management, to develop a broad spectrum of Environmental Performance Measures. In 2001, these measures will be refined to include 4 or 5 goals. They will then be further defined and clarified, to implement in full partnership with the rest of the organization.

▸ Security Management

Cyber Security Management

Fiscal Year 2000 has been the beginning of a renewed awareness and expanded definition of cyber security. Western began the fiscal year with a new Cyber Security Program Plan (CSPP) to be implemented by its new CyberSecurity Program Manager (CSPM), Laurent Webber. Laurent said that, "I have implemented network and host-based intrusion detection systems, participated in forming a cooperative team to promote cybersecurity and perform peer reviews among all the power marketing administrations, began collecting and monitoring firewall logs, implemented a new system to control and audit internet access, begun vulnerability scanning of Western's computer systems and corrected vulnerabilities found. These same actions will be extended to cover all Western's cyber systems, including business systems and power operations."

Figure 10

Security Incidents: Vandalism

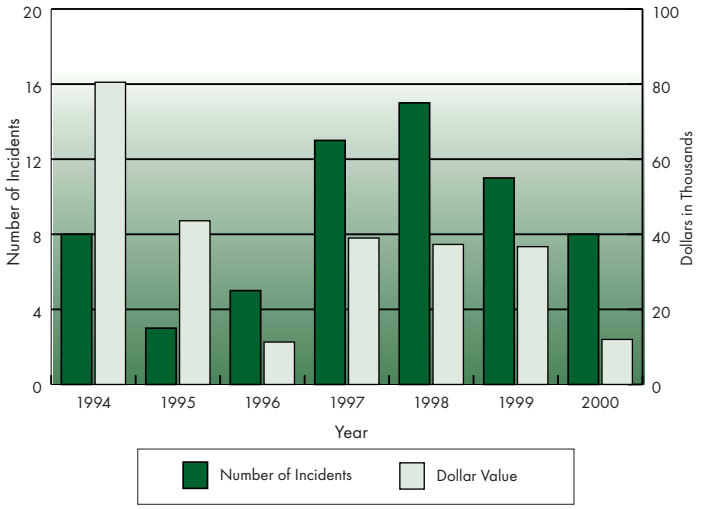
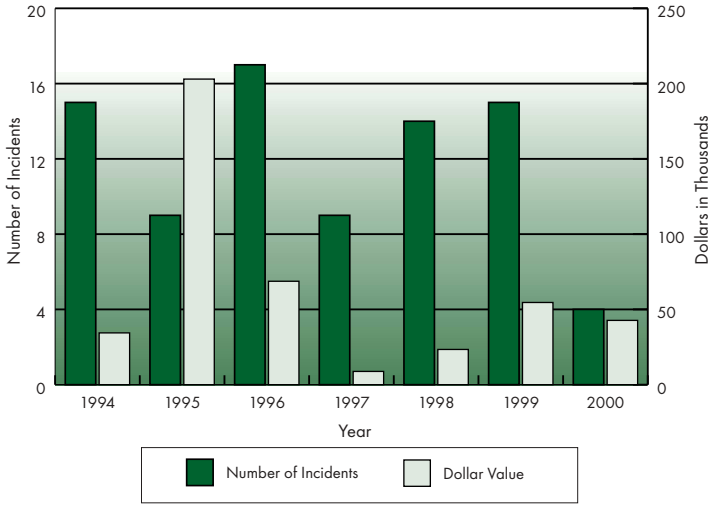


Figure 11

Security Incidents: Larceny/Theft

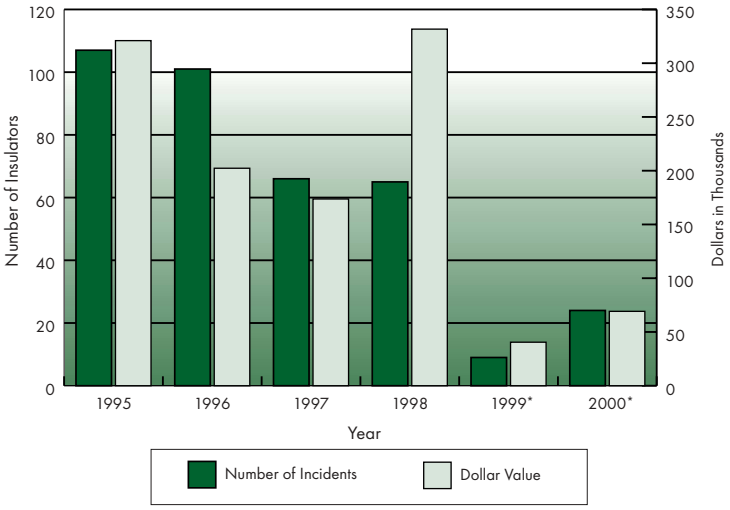


Like all organizations, Western has human resources, physical assets, and information resources that are vulnerable to theft, vandalism, violence, hacking, and other security threats. Prudent management dictates a proactive program to minimize the incidence and/or magnitude of these events. Desired results are maximum protection of our employees from threats and violence, and preservation of the integrity of our physical and information assets. The primary categories of violations are theft, breaking and entering, and vandalism; particularly the use of transmission line insulators for "target practice." The following figures show the number and dollar value of these types of incidents.[34] (See Figures 8-10.) In late FY 2000, Western installed software that can detect and count computer system intrusion attempts. This

34 1999 and 2000 data are ambiguous as the codes and business rules for entering security-related data were not defined, understood nor practiced. This issue has been corrected.

Figure 12

Security Incidents: Shot-out Insulators



*Data for these years is inordinately low due to problems with uniform coding of data entries into Western's new MAXIMO maintenance management system.

software is part of Western's cyber security strategy and data from it will be available for the FY 2001 performance report.

Security Management Performance Analysis: Western's security analysis for FY 2000 indicates that criminal activity has not significantly increased and therefore risk of disruption to the system is assessed as "low". This assessment is based on the adequacy of the security countermeasures and security programs in place which reduce vulnerability.

PEOPLE GOAL
▸ Safety Management

AEDs Deployed

Terry Dembrowski, Western's Safety and Security Manager, noted that Western continues to place a high value on safety and monitors the latest technology trends in the safety and health field. Recently, Western purchased a set of automated external defibrillators (AED's) for use at its Lakewood Corporate Services Offices. These devices are to be used during an emergency medical response should an employee experience cardiac distress. This technology is the latest development in the health care emergency response area. In deploying this technology, Western continues to demonstrate its strive for excellence in administering its safety and health program.

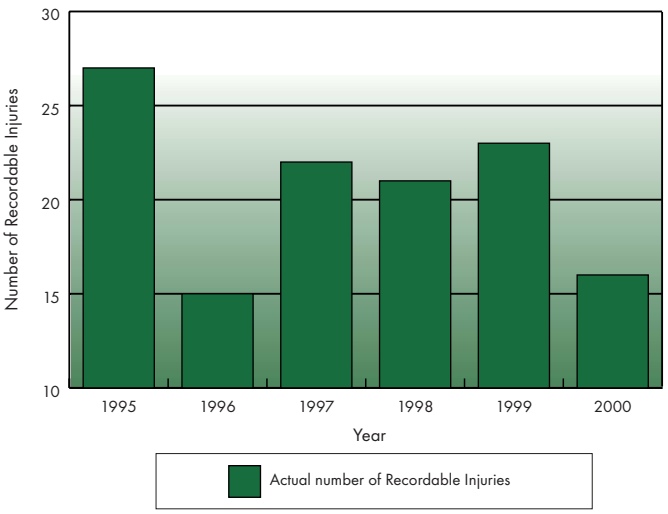
Personal safety and a safe work environment are key management objectives for Western. The desired result is no personal injury or death with a secondary result of minimal vehicle damage.

Western tracks recordable injuries, lost or restricted workdays, and recordable motor vehicle accidents. The last five years of safety statistics are shown in Figures 11 through 13.

Western's policy is to measure the total number of recordable injuries as a performance meas-

Figure 13

Recordable Injuries



ure. Western also informally tracks the recordable injury rate which is a measure published by the Bureau of Labor Statistics (Standard Industry Code (SIC) 491 - Electric Services). (See Table 13).

Table 13 - Recordable Injury Rates

Year	1995	1996	1997	1998	1999	2000
Industry Rate	5.7	5.1	5.7	5.1	4.9	NA[35]
Western Rate	2.1	1.3	1.9	1.7	2.4	1.9

Figure 14

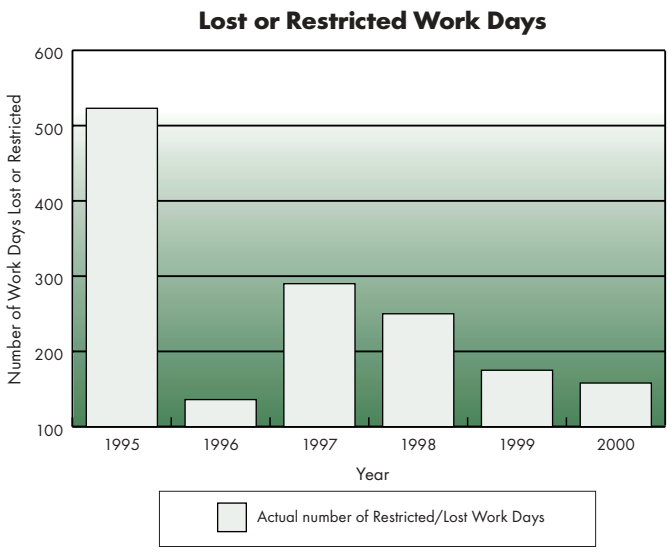
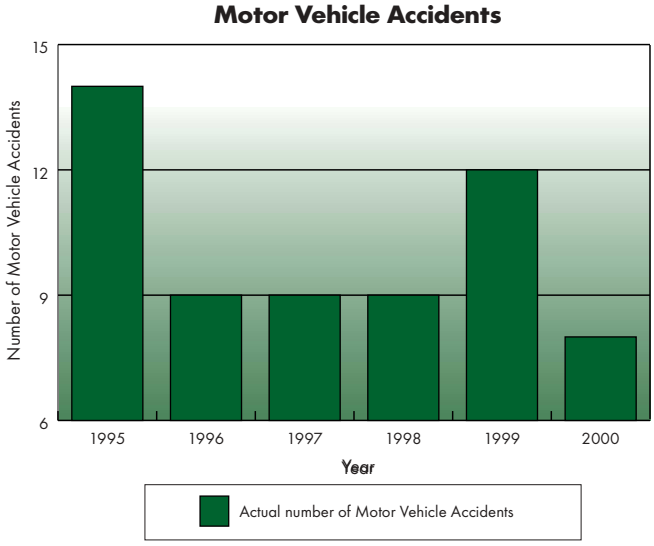


Figure 15



Safety Performance Analysis - Generally, Western continued to demonstrate its high commitment to safety and its program of safety awareness pay off from both a financial and human standpoint.

▸Hiring and Diversity

Hiring Success

According to Chuck Marquez, an EEO Specialist, the increasing demand on potential high-quality applicants in the career fields of computer specialist, public utility specialist, and engineering has been answered by Western's effort in developing a formal Rotation Program. In the Desert Southwest region (DSW), several options were used to attempt to recruit and retain employees this past year including recruitment bonuses and retention allowances. Neither of these efforts was successful in competing with other companies' compensation packages. The Rotation Program has been used in this region to recruit for these positions at lower grade levels and either select internal candidates to train or seek outside diverse applicants. In one recruitment effort, DSW personnel visited the

35 Not available.

DeVry Institute of Technology in Phoenix and Arizona State University located in Tempe to discuss Western's needs and what opportunities were being offered. This resulted in the hiring of two female student trainees in the computer specialist series, one at the GS-4 grade level and the other at a GS-5 grade level, with both positions yielding future promotion potential as a career ladder opportunity.

The quality and diversity of Western's employees are the main factors that add value to the services we provide to our customers (see Table 14). In keeping with the Department of Energy's Workforce 21 initiative, and recognizing the demographics of the workplace have and will change dramatically, Western seeks to attract a well-qualified pool of applicants for its vacant positions. The desired result is a strong pool of applicants from which to select employees whose skills match the position and who can add to the diversity of Western.

Figures 14 and 15 show the 10-year trend for diversity at Western.

Figure 16

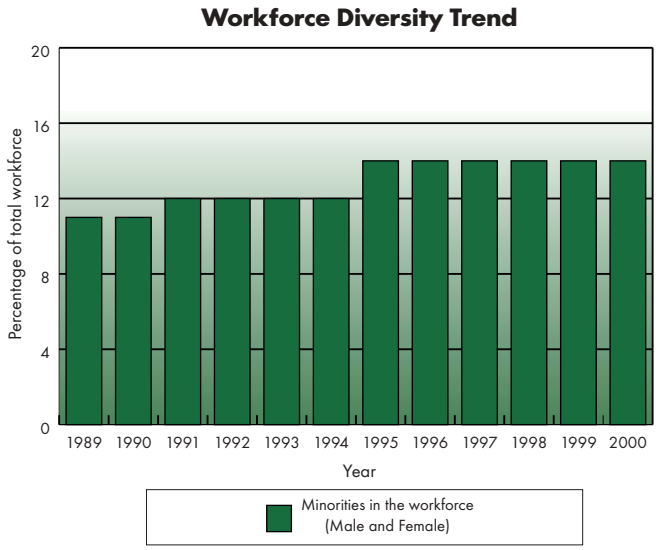


Figure 17

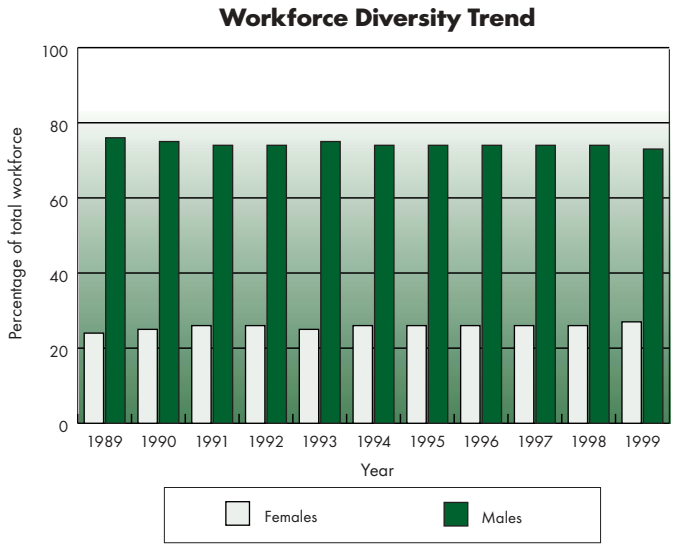


Table 14 - Hiring and Diversity Status

	AAM	AAF	AIM	AIF	BM	BF	HM	HF	Total Minorities Male	Total Minorities Female	NMM	NMF	Total Employees
FY 2000 Base	27	17	23	4	13	12	53	39	116	72	825	285	1298
% of total workforce*	2.1	1.3	1.8	0.3	1.0	0.9	4.1	3.0	8.9	5.6	63.6	22.0	100

Key: AAM - Asian-American Male
AAF - Asian-American Female
AIM - American Indian Male
AIF - American Indian Female
BM - Black Male
BF - Black Female
HM - Hispanic Male
HF - Hispanic Female
NMM - Non-minority male
NMF - Non-minority female
*Total percents are not exact due to rounding

Workforce Diversity Performance Analysis - Western initiated two actions -broadening of recruitment sources and increasing the amount of time an announcement is open - to assist in achieving workforce diversity. Based on a sampling of the number of applicants self-identifying, there has been a 7-percent increase (6 percent in FY 1999 baseline versus 13 percent in FY 2000) in the number of non-minority women, minorities and disabled individuals applying for positions. More minorities and disabled individuals are seeking opportunities at higher rates, however, non-minority men and women continue to be selected at higher rates than minorities and the disabled. Few of the minorities applying for positions make the "best qualified" list, and of those that do, a limited number are being selected. Statistics show that the disabled constitute the smallest applicant pool and, therefore, have the smallest selection rate. Minority males and females constituted 20 percent of total separations, while they constituted 7.8 percent and 9.4 percent, respectively, of total accessions for the fiscal year. Despite the successes in hiring efforts to broaden recruitment sources through including organizations and resources that target minorities, women, and the disabled, Western's workforce profile has not changed significantly.

A formal rotational program for the occupations of public utility specialists, engineers, and computer specialists that was developed last fiscal year was implemented this fiscal year and includes accelerated promotions. Vacancy announcements were advertised using trade publications and other paid advertising.

▸ Job Match

A Good Fit

"My job is challenging and offers new learning experiences constantly. The job is extremely busy with plenty to do, which I also enjoy. I am very happy with my decision to join Western and management here is excellent. Management here wholeheartedly supports self development and provides lots of opportunity for growth and is very supportive."

— Wayne Metzger, Electrical Engineer, UGP Region

"This employee is excellent. We got lucky with Wayne."

— David Neumayer, Supervisory Maintenance Specialist, UGP Region

In conjunction with Western's objective to hire a well-qualified and diverse workforce, once that hiring decision has been made, there needs to be a follow-up check to see if a correct decision was made and if the employee and supervisor are satisfied with their decisions. The desired result is a good match between employee and position so as to maximize employee productivity, satisfaction and retention. Tables 15 and 16 show survey results for FY 2000.

Table 15 - FY 2000 New Employee Job Satisfaction Survey Results

(Average score of respondents on a 1 (worst) to 5 (best) scale)

Question	FY 2000 Survey Results
Employee has sufficient information, tools, and direction to adequately assume his/her duties?	4.4
Employee's position description accurately describes his/her duties?	4.3
Employee's supervisor has discussed the elements and standards of the position and has given the employee a copy of the performance plan?	4.5
Employee feels personal qualifications (i.e., technical abilities, competencies, skills, and education) match well with the knowledge, skills, and abilities that are required to perform the job?	4.6
Developmental activities and knowledge enhancements outlined in employee's Individual Development Plan adequately address needs?	4.4
Employee has been able to participate in formal training and developmental activities to enhance job performance?	4.7
Employee believes actual experience on the job compares favorably with his/her expectations before entering into the position with Western?	4.4
Employee is satisfied with position at Western and would choose to accept the position again if given the opportunity?	4.6

Table 16 - FY 2000 Supervisor Satisfaction with New Employee Survey Results

(Average score of respondents on a 1 (worst) to 5 (best) scale)

Question	FY 2000 Survey Results
When I hired this employee, I felt that I had a good selection of candidates for the position?	3.9
The employee's job performance compares favorably with my expectations.?	4.8
The employee's personal qualifications (i.e., technical abilities, competencies, skills, and education) match up well with the knowledge, skills, and abilities, which are required to perform his/her job?	4.5
I have included developmental activities and/or knowledge enhancements in the employee's Individual Development Plan?	4.3
The employee has been able to participate in formal training and developmental activities since assuming the duties of his/her position to enhance his/her job performance?	4.7
In general, I am satisfied with the employee's performance and would still choose to hire the employee if I had it to do over again?	4.6

Job Match Performance Analysis - Generally, the survey results demonstrate that Western is doing a good job in matching employees with vacant positions. Coupled with a continuous emphasis on attracting qualified candidates, Western expects to continue demonstrating success in this area. However, this survey instrument has only been used for the first time during FY 2000, and it will take several years to build up a valid baseline and record.

▸Work Force Development

World-Class Power Operations Training Center

According to Dennis Schurman, Manager of Western's Electric Power Training Center, during FY 2000, Western employees have benefited from such in-house courses such as "Overview of Power System Operations," "Fundamentals of Power System Operations," "Generation Dispatching," "Transmission Dispatching," "Relaying for Operations Personnel," "Operations for Maintenance Personnel - Western Only" and "Personal Protective Grounding." As a result of this development effort, existing as well as new administrative employees are gaining a better understanding of the electric utility business and issues facing Western. Technical employees such as technicians, engineers and power system dispatchers are honing their skills. Wage-board employees (craftworkers) are enhancing their knowledge and abilities to safely and effectively perform their maintenance responsibilities.

One of Western's strategic objectives is to select and retain individuals whose technical abilities, competencies, and personal goals best align with their jobs and organizational objectives. Additionally, Western desires that these employees remain safety-focused, highly productive, and customer-oriented. Western is committed to ensuring that each employee has adequate and appropriate training to be successful in their job.

Delivery of services by Western is directly impacted by the availability and quality of tools and training to Western's employees. The desired result is adequate tools, space and training for Western's employees to be successful in their jobs.

The following (see Table 17) survey was conducted in FY 2000 to help determine Western's success in meeting our work force development objectives:

Table 17 - Employee Survey on Training and Development

Question	FY 2000 Survey Results[36]
Employee has a current Individual Development Plan (IDP) on file that was agreed upon by both employee and supervisor?	67%
The developmental activities and knowledge enhancements outlined in the IDP adequately address the employee's needs?	64%
Employee believes personal qualifications (i.e., technical abilities, competencies, skills and education) match well with the knowledge, skills and abilities required to successfully perform the job?	84%
Employee thinks that additional formal training would enhance job performance?	76%
Employee is interested in pursuing more complex or challenging assignments?	56%
Employee supervisor is supportive of adequate, job-related training that correlates between personal developmental needs and goals and those of Western?	74%

Work Force Development Performance Analysis - During FY 2000, the use of Individual Development Plans within Western increased both in quantity and quality. Formal and on-the-job training was used to promote employees' professional growth and development consistent with mission and organizational training needs and priori-

36 Average score of respondents.

ties. Funding priorities were based on a projected assessment of short- and long-term workforce needs. The Western Corporate Training Office continues to work closely with the Regional Administrative Officers and Training Points of Contact to help managers and employees assess training needs and set priorities that are aligned with Western's strategic mission objectives and employee development goals. Western continues to focus on cost-effective, state-of-the-art training methods and opportunities.

▸ Process Improvement

Process Refinements in Operations and Maintenance

According to Cathy Cunningham, Environmental Specialist at the Corporate Services Office, "Facilitating changes to the Power System Switching Procedure Chapter of the Power Systems Operations Manual was a powerful and rewarding experience for me because of the challenges of the project–from the diverse work requirements of Regional operations and maintenance personnel to the technical and timing aspects of writing and publishing the document. My receipt of a SOAR award was especially gratifying because it demonstrated how much my efforts were appreciated by those using the document."

A key ingredient to cost containment and progressive efficiency in delivering services to our customers is improving of work processes throughout Western. The ideal measurement would be cost savings or delivery improvements resulting from these ideas. However, measuring these results would be time consuming and not cost effective.

Therefore, we intend to measure the number of SOAR[37] and other awards given for process improvement ideas, and also the monetary value that can serve as a surrogate for some measure of value to Western from the process improvement idea. The desired result is to encourage the submission and institution of process improvement initiatives by employees that will increase Western's cost competitiveness and delivery of services.

Process Improvement Performance Analysis - During FY 2000, the CSO Human Resources Office implemented a process to automatically track all SOAR Awards recommended as a result of a "process improvement." The Western-wide form "Nomination for SOAR" was modified in May 2000 for the nominator to check the appropriate box indicating if the award recommended was the result of a process improvement or implementation of a suggestion. The CSO HR Office then worked with the DOE CHRIS Office to include a field in the CHRIS awards data base designed to track each award based on process improvement. The end result is that Western now has the capability to track and monitor the number and dollar amounts of SOAR awards given for process improvements. Further, management can now obtain automated CHRIS reports and special queries for their use in reviewing the number of awards given to employees based on process improvement initiatives and in deriving their measure of value to Western. This information can then be used by the manager to continue to encourage and reward employees for their process improvement ideas. In FY 2000, 43 SOAR awards were given (individual and group awards) for process improvement ideas submitted by 83 employees.

37 Special Outstanding Achievement Award

▸Union Relationships

Progress Made — More Work to be Done

Commenting on the working relationship between Western management and the American Federation of Government Employees, AFGE chapter president Glenn DePriest said, "There are some minor problems, but we are working on them."

The American Federation of Government Employees (AFGE) and the International Brotherhood of Electrical Workers (IBEW) represent a substantial portion of Western's employee population. Western and union officials attempt to negotiate agreements and adopt practices that enhance Western's business performance and provide for positive employee working arrangements. The desired result is a positive working relationship between Western and its bargaining unit employees that is conducive to employee morale and productivity.

Union Relationships Performance Analysis - For FY 2000, the following activities and results were achieved in line with Western's strategy and qualitative performance measures:

Western continued to participate with AFGE in regional partnership councils throughout Western. DSW continued to have a DSW Regional Partnership Council that met regularly with AFGE to discuss a broad range of issues. RM and AFGE have had a substantial partnership activity in negotiating office space arrangements to accommodate a reorganized staff in a partnership context. UGP has not formed a regional partnership council due largely to the geographic diversity of the region, and accordingly the union officials, which makes it difficult and expensive to meet. However, the region continues to stress pre-decisional involvement of the union on an ad hoc basis, providing the union opportunities for input to regional decisions. SN holds periodic partnership meetings with AFGE and discusses a wide range of issues. Recently, issues surrounding pre-decisional planning for organizational changes in the region necessary to react to changes in the utility industry, and issues surrounding dispatch desk assignments have been discussed. CSO-Partnership Council has not met for over a year. However, CSO has involved local AFGE representatives in issues surrounding Western's new building such as smoking arrangements, security, parking arrangements, etc.

The Westernwide Partnership Council met twice in FY 2000. Issues discussed have included charge card reimbursement for travel, merit promotion, industry changes, Presidential and Secretarial Memos on Partnership, pre-decisional involvement, Partnership Report to the President, dispatcher alternative work schedules, Bureau of Reclamation training videos, Regional Partnership Council meetings, compensatory time, telecommuting, etc.

An article was published in the *Closed Circuit* in July 1999 describing several issues discussed in the recent Partnership Council meeting. Many other issues have been discussed that have not come to full closure which would lend themselves to *Closed Circuit* articles.

Special partnership sessions were held to brief union officials on, and demonstrate, Quick Hire operation. Other partnership activities included several training sessions on partnership related subjects, including union and management attendance at the

Federal Dispute Resolution Conference, Unions and Utilities Conference, and National Partnership Council Skills Building Conference.

Several meetings of the DOE Partnership Council Charter drafting sub-group were attended by Western's representative to the sub-group, Western's General Counsel and two representatives of AFGE. A charter was drafted and signed by the Secretary. Western is currently in the process of designating three Western members to the DOE Partnership council. During FY 2001, Western will attempt to schedule a Western-wide Partnership Council meeting with AFGE to discuss implementation of the DOE Partnership Charter, specifically on bargaining and impasse resolution.

Western met with IBEW in January and July 2000. The topic most discussed was implementing an arbitration award on craft employee pay setting for the FY 2000 contract, and scheduling and logistics of contract negotiations for FY 2001. Western will attend the next regularly scheduled meeting in January 2001.

Western continues to inform IBEW and involve the union pre-decisionally on a wide range of issues affecting craft employees. IBEW is a willing and productive participant on a number of groups studying issues of concern. Examples of pre-decisional involvement of IBEW during FY 2000 include Power System Safety Manual revision, Power System Maintenance Manual revision, Tire Replacement Safety Policy, Fire Retardant Cold Weather Clothing Policy, grounding issues related to fiber optic cables, chain sawing and tree felling manual, and arc exposure analysis thresholds and controls.

All Regional maintenance managers regularly conduct shop steward meetings with IBEW representatives. A wide range of issues is discussed and the meetings are generally productive.

The Chairman of IBEW, GCC1, was informed of all activities of the DOE Partnership Council charter drafting subgroup. However, he did not elect to participate at that stage of the process. IBEW was recently informed that the Partnership Council Charter has been signed, and expressed his interest in attending the actual Partnership Council meetings on behalf of IBEW. Western will support his participation.

▸Customer Service

The Point of It All

A letter from Bruce Carlson, General Manager of Verendrye Electric Cooperative in Minot, North Dakota, thanked Upper Great Plains Regional Manager Gerry Wegner for being a great partner in Verendrye's wholesale power supply. "Your firm, reliable and inexpensive power supply is critical to our cooperative as we wrestle with a very depressed farm economy. For years Western has been a major factor in rate competitiveness and our ability to hang on to the North Dakota Territorial Law."

Western's mission is to deliver reliable, cost-effective hydroelectric power to our customers. The desired result is to understand and meet our customers' needs, and to search for opportunities to improve our service.

Western did not perform a customer satisfaction survey During FY 2000. A tri-annual survey is planned for FY 2001.

INDUSTRY GOAL

▸Industry Reliability

Western Changes with the Electric Utility Industry

According to Ed Hulls, Operations Manager for Western's Rocky Mountain Regional Office (RMR), RMR implemented a variety of energy and transmission management software during FY 2000. This software provided an automated Open Access Same Time Information System (OASIS) to allow posting and purchase of available transmission capacity on a real-time basis for Western and Basin Electric Power Cooperative systems. In addition, the software facilitates identifying energy sources and transmission (tagging) and the amount of available transmission capacity (ATC). Hourly transmission usage and ATC data are available to RMR real-time system operators to allow them to maximize transmission capacity sales across constrained transmission paths while operating within established transfer limits. It has also provided RMR operators with information to carry out transmission schedule reductions in a timely and equitable manner during transmission contingency overload situations, while maintaining compliance with the WSCC Minimum Operating Reliability Criteria (MORC). These automation systems allow transmission customers to request the latest information on ATC and request it on either a pre-scheduled or real-time basis.

With the advent of transmission system deregulation by FERC and opening high-voltage transmission systems to market forces, the electric utility industry has had to reinvent itself in terms of assuring reliability of service. The Western Systems Coordinating Council (WSCC) has adopted a Reliability Management System (RMS) to which its members are subscribing. Western is a member of WSCC and signatory to the Reliability Management System Agreement. Twenty-nine WSCC members including Western have signed the RMS agreement. This includes 21 of the 30 control areas in the WSCC representing 88 percent of the WSCC load.

RMS provides for control area operating criteria (Western operates three control areas in WSCC) and sanctions for non-compliance. Violation of these standards is an indicator of an operations quality problem and can result in a sanction by WSCC. Therefore, this measurement and the establishment of baseline data on the number of annual sanctions imposed by WSCC on Western is a direct measure of the desired results (i.e., zero sanctions) Western intends to achieve in control area operating reliability.

Once MAPP (or MISO) reliability sanctions are defined and Western is subject to them, similar measurement criteria will be adopted.

FY 2000 Results - The RMS program marked the end of its first year of operation on August 31, 2000. During this period (September 1, 1999 through August 31, 2000) the signatory members were assessed 92 sanctions with a total value of $724,593.[38] During this period, Western was assessed two sanctions totaling $3,000. Western sanctions were approximately 0.41 percent of the total of the signatory member sanctions.

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38 It should be noted that some of the sanctions levied against members are in dispute and have been appealed to the Reliability Compliance Committee (RCC) for adjudication. The RCC is the dispute resolution body within the RMS program. Should the appeals be upheld, the total number and value of the sanctions for the first year of operation would be revised downward. Western has not disputed its sanctions.

Industry Reliability Performance Analysis: Western's FY 2000 goal for sanctions, both number and dollar value, was to be less than the average number and value for the 10 largest WSCC control areas. Due to WSCC confidentiality issues, it is not possible to get the sanctions broken out by member, but from the results stated above, it is obvious Western met the goal.

WSCC also tracks the sanctions that would be assessed the non-signatory members for benchmarking purposes. If these members were part of the RMS program, the total number of sanctions would have been 207 with a total value of $947,593.

▸Control Area Compliance

Reliability is Key

"Western's ability to consistently exceed NAERO real-time control area compliance standards is a result of the dedication and commitment that our employees have to operating a reliable electrical power system," notes Lloyd Linke, Operations Manager at Western's Watertown Dispatch Office. "The NAERO real-time control area compliance standards measure how well a control area has been able to meet the electrical energy demands within its area on a real-time basis. Western has been able to maintain adequate levels of generation reserves within our control areas. The use of these generation reserves allows us to meet the real-time electrical energy demands within our control areas and exceed the NAERO real-time control area compliance standards."

NAERO establishes real-time control area[39] standards for member organizations. Those criteria are:

- Control Performance Standard 1 (CPS1)—a statistical measure of ACE[40] variability and its relationship to frequency error. The minimum level of compliance is 100 percent and the maximum is 200 percent.[41]
- Control Performance Standard 2 (CPS2)—a statistical measure designed to limit unacceptably large net unscheduled power flows. The minimum level of compliance is 90 percent and the maximum is 100 percent.

These are nationwide, standard performance criteria for control area operators. Therefore, the desired result Western wants to achieve is cost-effective compliance with these reliability standards.

Control Area Compliance Performance Analysis: Western exceeded these national control area performance standards by a wide margin during FY 2000 (see Table 18).

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39 Operational responsibility for transmission systems in the United States is vested in "control areas." A control area is an electrically defined section of the interconnected transmission system for which a utility has the responsibility for controlling generation and transmission to meet its internal load, and to achieve a balance of electrical interchange (import and export) with adjacent control areas. There are about 150 control areas in the continental United States.

40 "ACE" is area control error. ACE is the difference between the actual exchange of energy between control areas and the scheduled exchange of energy between control areas.

41 Under certain conditions, a score of over 200 percent is possible.

Table 18 - FY 2000 results

	CPS1	CPS2
Minimum Performance Level	100.00	90.00
North America Industry-wide Average	173.91	96.22
Western Control Areas' Average	199.40	98.28

▸Open Access Transmission

Open Access = Good Business

According to Tim Calkins, Western's Operations Manager in the Desert Southwest Regional Office (Phoenix, AZ), in FY 2000, the office's OASIS brought in $5 million in the form of non-firm transmission sales. As of early February 2001, $20 million dollars in non-firm sales already have been generated. This increase in transmission revenue is due to the Region having the ability to track and collect for non-firm transactions. "Open access is working and customers are benefiting." said Calkins.

Under the Federal Power Act, as amended, the Federal Energy Regulatory Commission (FERC) has authority to order the provision of non-discriminatory transmission access by utilities engaged in interstate commerce. Western is a transmitting utility subject to Section 211 of the Federal Power Act as amended by the Energy Policy Act of 1992[42]. The Department of Energy has issued a Power Marketing Administration Open Access Transmission Policy that reflects that rulemaking. Western issued an Open Access Transmission System Tariff[43] that complies with the spirit and intent of the DOE Policy and the tariff required by FERC. In Western's tariff, a requesting entity can ultimately file for access to Western's system under Section 211. The desired result by Western is to support industry competitiveness and open access as evidenced by no adverse Section 211 rulings by FERC. An adverse ruling (against Western) by FERC would be an indicator that Western is perhaps not adequately supporting industry competitiveness and open access to its transmission system.

FY 2000 Performance Results - Western received no Section 211 adverse rulings.

Open Access Performance Analysis - Western continues to be a strong industry advocate for open access and actively meets the spirit and intent of its Open Access Transmission System Tariff.

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42 In 1992, Congress amended Sections 211 and 212 of the Federal Power Act so that the FERC could order transmitting utilities to provide open access to their transmission systems. As a result, if one utility wants to obtain transmission over a second utility's system, and the second utility unreasonably refuses or wants to charge exorbitant rates or place other unreasonable conditions on the sale of transmission, the first utility can file a case before the FERC seeking redress. The redress they would seek is called a Section 211 Order; i.e., a FERC Order to the second utility to provide transmission service on reasonable terms to the first utility. If FERC issues such an Order, it means FERC has found the second utility has behaved unlawfully by either refusing to provide transmission to others when they had it available to sell, or offering it only upon unreasonable terms.

43 http://www.wapa.gov/intercon/tariff.htm

▸Energy Services

Customers Appreciate Energy Services Support

The inscription on a plaque presented to Peggy Plate, Energy Services Manager, Rocky Mountain Region. "The ARPA (Arkansas River Power Authority) membership wishes to recognize your invaluable efforts on behalf of public power in Colorado and the significant assistance you have given to ARPA as we work our way through the new challenges facing the electric industry."

Western's energy services program strives to offer the best energy resource information, technology transfer, and technical assistance services for customers to sharpen customers' competitive edge in light of the changing electric utility industry. Western offers technical assistance and related services that enable our customers to perform integrated resource planning and remain competitive in the changing utility industry. This also supports the Department of Energy's strategic goals and objectives in the area of energy security for the Nation. The desired result is adoption of effective energy strategies by Western's customers to conserve or optimize the use of limited energy supplies.

FY 2000 Results - Western's strategy is to "encourage the voluntary use of renewable resources and energy efficiency measures by our customers." Results for FY 2000 are shown in Table 19.

Table 19 - Energy Services Results

Energy Services Function	Results
Develop and sustain partnership activities that include meetings, consultations and other direct communication with firm power customers related to energy services/ renewables.	270 partnership activities
Sponsor and/or participate in workshops. This includes full and partial financial or other sponsorship of workshops, conferences, seminars, etc., that are attended by or benefit firm power customers.	29 workshops
Support and maintain Western's "Power Line" telephone service to answer customer questions on energy services	220 Power Line calls
Support and maintain Western's Energy Services Web site	104,921 site hits
Support and maintain Western's Equipment Loan Program	1,184 loan-weeks

Energy Services Performance Analysis

Western undertook a number of activities to encourage the voluntary use of renewable resources and energy efficiencies. These included loaning technical equipment such as infrared cameras and power quality monitors, making available anemometer kits to assess the potential for wind generation, providing direct and indirect technical assistance and information services through the Regional Energy Services Programs and facilitating opportunities for customers to evaluate and implement renewable resources through Western's Non-Hydro Renewable Resources Program. Western also promoted customer workshops, which were "partnership actions," where Western provided some or all of the funding for speakers and trainers, while customers provided meeting space, audio/visual support and refreshments.

As a result of these activities and Western's active promotion of the benefits of renewable energy, Western's customers are becoming more interested in renewable resources, particularly wind power generation. During FY 2000, the number of partnership activities and workshops increased from past years, the web site experienced a 74-percent increase in use and the loan of technical equipment increased by 22 percent.

▸Operational Capacity

Competing Interests Reduce Operational Capacity

Controversy and contentiousness continue to haunt the operations of the various Colorado River Storage Project (CRSP) facilities according to Dave Sabo, Manager of Western's CRSP Management Center. Much of the reason for this centers on the location of these project facilities, and the concern by environmentalists for the riverine environment below each dam. The controversy surrounding the Sierra Club's proposal to decommission Glen Canyon Dam exemplifies environmental fundraising efforts. Recognized as a hopeless effort by the environmental community, it has nonetheless gained a life of its own as a fundraising cause cè lébre and rallying point for other riparian protection schemes.

Unfortunately, these protection schemes tend to complicate collaborative processes and flavor discussions that could otherwise be valuable for ecosystem protection. The Adaptive Management Work Group (AMWG), a Federal Advisory Committee created to deal with the operational impacts from Glen Canyon Dam, is wrestling with proposals from the environmental community that would support removal of the dam. Environmentalists hope that by having the AMWG formally recognize the importance of pre-dam ecosystem communities, they can bolster their case for the dam's decommissioning. Recent decisions to create the Black Canyon of the Gunnison National Park also have focused attention on the three Reclamation dams that are a part of the Aspinall Unit. Water rights issues and endangered fish concerns have brought such attention to those units that real power generation impacts are likely. Operational changes at Flaming Gorge Dam to protect endangered species have already reduced the generating capability of that facility and the current Environmental Impact Statement being undertaken by the Bureau of Reclamation poses additional risks to its operations. All-in-all, the challenges to the CRSP generating resources remain as great as any time in the past.

Western's fundamental mission is to "market and deliver reliable, cost-based hydroelectric power and related services." The availability of operational capacity from the Bureau of Reclamation, Army Corps of Engineers, and International Boundary and Water Commission hydrogeneration facilities is critical to our mission. Increasingly, conflicting demands on these facilities are arising. Environmental, recreational, flood control and other benefits can restrict the availability of electrical capacity at these generation facilities. Western's intent is to ensure tradeoffs to power generation are well understood and supported by scientific and economic analyses before hydrogeneration capacity is curtailed. The desired result is to preserve operational capacity to the benefit of Western's customers and the environment.

Operational Capacity Performance Analysis - Western is supporting the application of the international standard for environmental preferability to electric power generation. ISO 14042 requires comprehensive life-cycle environmental impact assessments to support claims of environmental preferability for products and services. Western

expects this scientific method to demonstrate the environmental benefits of hydropower, when compared to all other forms of replacement power, makes a strong case to preserve and recover hydrogeneration capacity. Such an assessment is already in progress for the power generated by Glen Canyon Dam.

▸ Alternative Financing for Generation Agencies

In Partnership with the Bureau of Reclamation

The Bureau of Reclamation appreciates Western's efforts to assist in working with its customers to secure funding for the Parker-Davis generation project," said Reclamation Lower Colorado Region Area Manager Tim Ulrich. "The non-Federal funding will ensure that the Parker-Davis Project has adequate funds to maintain reliable generation at the two plants, and continue to serve its Southwest customers in an efficient and cost-effective manner. Western's role was paramount to accomplishing the non-Federal funding arrangement," he added.

As most Federal agencies, the Bureau of Reclamation and the Army Corps of Engineers have challenges in securing adequate funding to maintain and rehabilitate generation facilities. As a strategy, in particular by Reclamation, power customers are being asked to contribute up-front funding for needed work. Also, power customers are increasingly willing to fund work they believe is necessary to ensure the reliability of Reclamation and Corps generation facilities. Since Western's mission is to market and deliver such power, the desired result is adequate maintenance and rehabilitation of Reclamation and Corps facilities to maximize generation and minimize forced outages. The concern about generation maintenance waxes and wanes over time. However, with the increasing volatility in energy prices, the opportunity cost for equipment failures is becoming increasingly high. In past years, equipment failures that affected power operations seemed frequent, and Western had a great concern about the maintenance of Reclamation facilities. Even though there haven't been any significant failures recently, and Reclamation is much more open to allowing work program review, adequate funding is still a concern and Western intends to lend support when warranted. As such, Western has developed this surrogate measure to represent a level of effort by Western to promote and realize adequate maintenance and rehabilitation funding for the generating agencies.

Alternative Financing for Generation Performance Results—Western's Desert Southwest Regional Office, in partnership with the Bureau of Reclamation's Lower Colorado Region and project-use customers of the Parker-Davis Project (P-DP), entered an agreement October 18, 1996, with two of these power customers to advance-fund a proportionate share of Western's and Reclamation's generation-related expenses. The customers advanced Reclamation and Western $1,081,841 and $185,712 respectively, for generation-related expenses in FY 2000 and are on schedule to advance $865,035 (Reclamation) and $159,088 (Western) for FY 2001. Each year, the parties will determine the total amount to be advanced by these customers, as well as the customers' proportionate share of the total funding requirement.

The P-DP firm electric service customers, Reclamation, and Western executed a long-term advance of funds contract on March 31, 1999. Reclamation and Western received $6,359,454 and $1,091,684, respectively, in FY 2000. Each year, the parties will determine the total amount to be advanced by these customers, as well as the customers' proportionate share of the total funding requirement.

▸Reliability Organizations and Transmission Studies

Engaged

As the current chairman of the Mid-Continent Area Power Pool's (MAPP) Management and Executive Committee, I have been elected to represent MAPP, one of the North American Electric Reliability Council (NERC) Reliability Regions, on the NERC Board of Trustees (BOT). "stated Bob Harris, Upper Great Plains Region Power Marketing Manager. "In this, my second year on the BOT, I find participating in transforming NERC into the new North American Electric Reliability Organization (NAERO) in this changing industry environment the most interesting and important. The most recent actions by the BOT toward independent governance and a voluntary, contract-based reliability compliance program will have an immense effect on our industry across the North American continent for a long time."

Western operates and maintains the third largest high-voltage transmission system in the Nation, nearly 17,000 miles. The system is interconnected with other utility transmission systems. In fact, due to this interconnectedness, power-related incidents happening thousands of miles away can and do affect Western's system. As the industry becomes more profit-driven, system reliability and profit targets will come into conflict more often than in the past. The existing national and regional reliability councils are attempting to reinforce the reliability requirements of the systems, without the need for legislative and regulatory intervention by the Congress, FERC, or State public utility commissions. The desired results are (1) consistent, voluntary self-regulation of transmission system reliability standards; and (2) system additions or modifications (be it Western's or someone else's) in a manner that does not adversely impact the reliability or delivery capability of Western's system. It is critical that Western participate in the regional and national reliability councils and in transmission studies to protect its interests and bring its expertise to the process to the benefit of the whole industry. Since these are processes with many participants, it is rarely possible to ascertain quantitatively to what degree Western's direct participation brought about the desired result. However, Western will make a qualitative self-assessment on its impact (see Table 20).

Table 20 - Transmission System Studies with Western Participation as of October 1, 2000

Study Focus	Western Participation Level High	Medium	Low
System Impact	9		
Regional	34	7	2
Local	8		
Local/Regional	1		1
Interconnection	24	4	1
Generator Interconnection	8		
Capacity Upgrade	1		
Capacity Determination	1		
Power Quality	1		
WSCC Support	7		
Transmission Upgrade	3		
Transmission Sales	6		
Transmission Maintenance	1		
Transmission Needs	1		
Transmission Planning	1		
Project Support	4		
Reliability	3		

Reliability Organizations and Transmission Studies Performance Analysis - Western planning personnel in all Regional Offices carried out their assigned study plans this fiscal year. Of the interconnection-related studies carried out in the Regions, approximately 40 percent resulted in some type of addition being made to the transmission system. The workload on system planning personnel continues to increase with the number of new study requests and additional operational responsibilities.

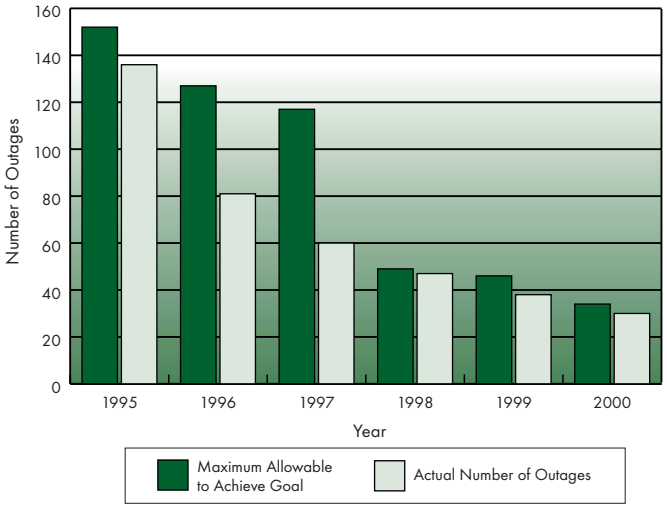
Western is very active at NERC/NAERO, WSCC, MAPP, CAL-ISO and a variety of RTO/ISO formation initiatives. Western staff are working on nearly every level and initiative to maintain and improve reliability. From a Regional Reliability Council (MAPP and WSCC) perspective, Western's input and expertise have always been well respected. This continues with the level of involvement we have on the major planning committees within each Region.

▸Accountable Outages

"Keeping the Lights On"

Figure 18

Reliability



As noted by Mark Meyer, Power Operations Specialist, interruption of electrical service can cause customers major problems in this age of computerization and mechanization. Many accountable outages involve human error. "Human error" implies that we should be able to learn from the incident to avoid similar occurrences. In FY 2000, Western Safety, Maintenance, and Power Operations personnel reviewed and revised Chapter 3 "Written Reporting of Power System Incidents" of the Power System Operations Manual. The objective of the revision was to clarify the reporting requirements and to produce reports that will be of more value for training sessions and "lessons learned" so we may reduce the number of incidents involving human error. Thus, Western can provide more reliable electric service to our customers.

Power delivery reliability is a cornerstone of Western's mission. Customers depend on uninterrupted power supply. Interruptions (outages) occur for a number of reasons; e.g., weather, other utilities' operations/events, sunspots, etc. Accountable outages occur because Western failed to install or maintain equipment with known problems, or Western personnel misoperated equipment (see Figure 18).

The desired result for bonus year 2000 was to reduce the three-year rolling average (1997-1999) of 48.3 accountable outages by 30 percent to 34 or fewer accountable outages. The actual FY 2000 results were a total of 30 accountable outages.

Accountable Outages Performance Analysis: For FY 2000, Western estimates accountable outages were one-third due to switching errors; one-third due to commissioning/wiring errors; and one-third due to maintenance or equipment failure. During FY 2001, Western will continue to evaluate these incidents and institute corrective measures, when warranted.

▸Construction and Rehabilitation

Meeting Every Challenge

John Harris, Western's construction manager in Huron, South Dakota, points out that Western's construction program is heavily focused on rehabilitating and upgrading existing facilities. Scheduled replacements of aging equipment, such as power transformers, circuit breakers and disconnecting switches, require careful planning of limited resources (equipment and personnel). Examples include the upgrading and replacement work at our Woonsocket Substation in South Dakota, Sioux City No. 2 Substation in Iowa, and Jamestown Substation in North Dakota. Work at the Jamestown Substation included installing a capacitor bank in adverse weather conditions of

snow and sub-zero temperatures to maintain the reliability of the transmission system in the area.

Additionally, flexibility is needed to respond to unscheduled events that can have significant impacts on customer service, e.g., weather-induced transmission line and substation outages. As an example, an unscheduled rebuild of a section of the Groton-Summit 115-kv transmission line near Rush Lake in South Dakota occurred last spring as a result of rising waters and structure damage from ice. Western's ability to place this line back in service in an expedient manner was a result of the combined team efforts of the design, construction and maintenance work forces. The efforts and responsiveness of crews in accomplishing these critical tasks under adverse conditions have helped to minimize service interruptions to customers and improve transmission system reliability.

During the past decade, Western has moved away from large-dollar transmission and substation construction projects toward a concentration on reliability-based replacement and rehabilitation of its existing system. Every budget cycle, and before the beginning of the fiscal year, Western assesses its most critical needs and subsequently executes its construction and rehabilitation program to meet those needs. The desired result is to reduce the risk of equipment failure and/or safety-related incidents, which is also reflected in the performance measures for accountable outages and safety.

Accomplishing the MDCC[44] work program directly reflects resolution of the highest risk equipment and safety problems as they are identified at the beginning of the fiscal year.

Construction and Rehabilitation Performance Analysis - During fiscal year 2000, Western executed $30,569,688 of its C&R budget of $37,669,535, or 81 percent. These figures refer to the Non-Program Direction dollars only; the Program Direction dollars executed in conjunction with the C&R program are analyzed together with the rest of Program Direction. The General Ledger showed a total under-execution of $5,113,182 as compared with the Congressional Budget.

The percent execution was less than the target 95 percent for several reasons. The Congressional Budget for fiscal year 2001 had not yet been through the conference committee at the end of FY 2000, so Western did not know how much carryover it would need to fully fund FY 2001. House and Senate marks for carryover were different, and the conference committee could have increased the number over either mark. The uncertainty over the final figure, the fact that little carryover was identified in Western's programs, and the need to fully fund the current year led to decisions not to fully expend the FY 2000 C&R budget. A very heavy workload in priority, externally funded interconnection projects in one region led to underexecution in its appropriated program. Execution was also affected by differences between actual contract awards and estimates used in budget formulation, decisions by other entities involved in joint participation projects, and schedule and project scope adjustments.

Another factor affecting C&R program execution in fiscal year 2000 was the difficulty each region had in determining its exact execution. Execution numbers provided by Western's new financial management system were not entirely reliable, causing regional financial managers to be somewhat conservative in execution to avoid any risk of exceeding their budgets and being deficient.

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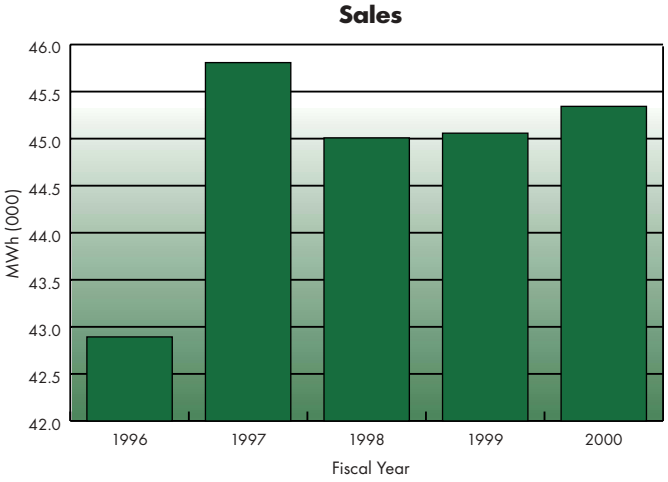
44 Maintenance, Design and Construction Council

VI. Key Results Performance Assessment

Western's strategic plan is designed to generate substantial benefits to the public. There are five overarching results that Western is trying to achieve by implementing this plan.

Power Delivery - Western markets an average of 45 billion kilowatt hours[45] annually to more than 600 utility customers, much of it to serve their peak hour needs. This power is clean, flexible and represents part of the diversity in resource mix of customers. For many customers, many of whom reside in rural settings or areas below the national average income level, this power is an important, stable component of their energy mix. Its delivery is a key result for Western.

Figure 19



During FY 2000, Western marketed 45.3 billion kilowatt hours in its service territory. This marketing level is consistent with the range of past resource marketing (see Figure 19).

Power Cost - Western markets this power at the lowest possible rates consistent with sound business practices. Western's rates to these customers are generally below their alternative cost of power. Western provides an efficient, cost-effective source of energy to a major portion of the Nation and continued affordability of this power is a key result for Western.

As discussed under the section Cost and Rate Management, Western has been successful in achieving real cost containment and mostly successful in achieving its rate goals.

Delivery Reliability - Western has nearly 17,000 miles of high-voltage transmission lines spanning the nation from the upper Midwest to the Southwest and California. It operates three control areas and a system security region for the Western Systems Coordinating Council. The vast majority of Western's physical, financial and human resources are focused on maintaining the reliability of this system. Western holds critical positions on industry reliability councils. All of this is particularly important in the current climate of electric industry restructuring and the increased focus on competition. Western, as a not-for-profit organization, is focused on providing reliable service to its customers as a key result.

During FY 2000, Western continued to perform well in this area. Western incurred only two sanctions, totaling $3,000, for non-compliance with the WSCC RMS. Control Area Performance was excellent, and accountable outages were the lowest since Western began tracking them. Western customers and the electric power industry benefited from Western's excellent reliability performance in these areas.

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45 A kilowattt hour is 1,000 watts of power per hour. A typical family in the United States would use about 10,000 kwhs annually.

Treasury Repayment - Western is responsible for repaying approximately $9.1 billion of Federal and non-Federal investment, of which about $3.5 billion is associated with non-power investment.[46] Of this $9.1 billion, about $3.1 billion of principal has been repaid to the U.S. Treasury, along with $3.2 billion of interest. This investment recovery is a key result for Western (see Table 21).

Table 21 - Key Results Achievement Summary

Power Marketing Organization	FY 2000 Revenue	FY 2000 Total Assets	FY 2000 Generation Capacity	Transmission System
Tennessee Valley Authority[47]	$6.8 billion	$33.2 billion	29,500 MW[48]	17,000 miles
Bonneville Power Administration[49]	$3.0 billion	$16.8 billion	19,191 MW[50]	15,200 miles
Western Area Power Administration[51]	**$914 million**	**$2.2 billion**	**10,600 MW[52]**	**16,900 miles**
Southwestern Power Administration[53]	$101.9 million	$181.8 million	2,158 MW	1,380 miles
Southeastern Power Administration[54]	$150.0 million	$20.1 million	3,100 MW	None

VII. Performance Evaluations

As this is the first Western annual performance report under the GPRA, Western has chosen to review its recent history of performance evaluations instead of just those for FY 2000. The historical context is important as many changes have been wrought as a result, and some of those changes are still "settling in."

▶ 1994

Transformation - In 1994, it was evident to Western's senior management that fundamental changes were occurring in the business environment in which Western operated. Those changes included:

46 This $3.8 billion represents repayment of irrigation investment costs associated with Bureau of Reclamation project where such investment costs are beyond the irrigators' ability to pay.

47 Tennessee Valley Authority, Annual Report for FY 2000.

48 Winter dependable capacity, of which 5,500 MW is hydrogeneration.

49 Bonneville Power Administration, Annual Report for FY 2000 and "BPA Facts."

50 Not adjusted for capacity reductions.

51 Western Area Power Administration, FY 2000 Results of Operations.

52 Hydrogeneration plants operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, International Boundary and Water Commission, and the Federal share of the coal-fired Navajo Generating Station.

53 Southwestern Power Administration, Annual Report for FY 2000.

54 Southeastern Power Administration, Annual Report for FY 2000.

- Increased competition (natural gas, transmission access, industry restructuring and declining rate differentials)
- Hydrogeneration reoperations
- Pressures on generation agencies
- Environmental community influence
- Empowering legislation
- Federal budget/deficit constraints
- Customer demands for stable rates
- Increased costs balanced against fixed resources
- Misalignment of resources (skill/workload mismatch, inconsistent degree and level of review/oversight)

The intent and focus of the Transformation Process was to transform Western's operations, as much as possible, into a more efficient and businesslike organization.

The process was not just focused at cutting costs, but at how to position Western and its people for greater competitiveness and performance. Western looked at its then-current reality, or what we were; at what the organization "could be," if it were to begin from scratch; and what Western wanted "to be" in the future, given real-world constraints.

The proposed "To Be" organizational map was presented to union representatives, employees, and Western's power customers in May 1995. Subsequently, an employee Focus Group was formed to study in more detail and make recommendations on the feasibility of Western's proposed future organization. The Focus Group's work included a review of every function and position proposed for the new organization. It focused on what work needed to be accomplished and what specific competencies are necessary to perform the tasks successfully. Input from employees and customers was an ongoing part of the Focus Group's efforts. The Focus Group's analysis was presented to employees and customers later that year.

A number of overall successes can be attributed to Transformation. These included:

- Western began to understand the need to share common goals across the organization. As employees gained a better understanding of the changes facing the utility industry and what those meant to Western, they realized the need for change to meet a different challenge.
- Western employees focused on working in businesslike ways. Employees have a better understanding of Western's driving forces, goals and the steps they can take to move Western toward meeting its vision.
- Employees became much more oriented toward finding ways to meet customer needs. This customer service focus is apparent both within the organization in terms of internal customers and when dealing with external customers of our power products and services.
- Employees across Western became attuned to cost savings as one way to measure good business decisions. Employees gained a better understanding that Western's

costs translate directly into customer rates.

- Western began to benchmark processes and undertake streamlining efforts to improve them.
- Western organizations learned how to share resources and work cross-functionally.
- Western managers began sharing more business information directly with employees.

Perhaps the main benefit of this reengineering effort was that it set the stage for further reevaluations of Western's business practices and future opportunities.

▸ 1995

Project Management - The 1995 Transformation Analysis Documents and the subsequent Transformation Implementation Plan (TIP) identified a series of actions intended to improve Western's general business methodology through a formal project management process. Western undertook a review of project management and, subsequently, implemented a revised direction for institutionalizing project management within Western. An overall consistent, organizational policy was developed within each major functional unit specifically to address their unique project management processes. The recommendations included:

- Assure orientation, policy implementation, project manager skill development, program guidelines and evaluation for continuous improvement.
- Expose and educate all levels of the organization to the principles and practices of project management as they apply to both facility and programmatic projects.
- Establish project management methodology as an organizational priority consistent with associated performance criteria and appropriate success factors. Senior Management should demonstrate support for the project management program through action and various forms of communication.

▸ 1996

Strategic Performance and Benchmarking - A part of the outcome of Transformation, Western undertook an effort to provide initial information on how Western compares to leaders in the electric utility industry in areas that are critical to achieving strategic goals; identify next steps required to implement and institutionalize benchmarking as a way of doing business at Western; and provide leadership and assistance for cohesive benchmarking and performance measurement implementation Westernwide. A "Selected Performance Measures" report was completed in December 1996. The report included information on a series of Western operational and financial measures. Measures included those related to power operations efficiency, power system reliability, power rates, safety, costs, and staffing. A number of the measures compared Western to other electric utilities in its service area.

While Western engages in benchmarking and performance measurement practices in several offices, there has not been a sustained effort to do such on a corporate-wide basis until now. Western will take the "lessons learned" from 1996 effort and apply them to the present effort to meet its business needs and the requirements of the GPRA.

▸ 1997

Engineering and Construction Review - Western undertook a review of its declining engineering and construction functions based on the following factors:

- The composition of construction activity has shifted from new construction to a predominance of minor replacement and additions.
- Maintenance forces will be used for replacement work to attain reductions in O&M expenses and capitalization costs.
- The design and construction organization must be staffed to support Western's program requirements.
- There is a need to maintain a core of engineering and construction expertise within Western.

The review's conclusions and recommendations were based on a 5-Year Engineering Plan (for needed projects), a Combined 5-Year Plan of Required Functional Expertise for these projects, an Index of Services of design and non-design functions, and data from the Financial Management System for historical project charging. Implementation of the recommendations resulted in a reduction in design and construction functions, reporting of the Construction Offices to the Maintenance Offices in Western's Regions, and better accounting and tracking of direct and indirect hours charged to projects at a Regional and Corporate Service level.

This report also included conclusions and recommendations to modify the structure of the existing engineering and construction function. These recommendations included an annual review of the Engineering and Construction program, defining small projects, adherence to the 5-Year Engineering Plan (for needed projects), improved project tracking, and appropriate charging to cost structures.

The recommendations from this review have been fully implemented within Western.

Control Area Consolidation - Western's Transformation process called for elimination the Montrose (Colorado) Operations Center and the consolidation of its power system control area and associated functions into its newly designated Desert Southwest Operations Center, administered by Western's Desert Southwest Region (DSW) in Phoenix, AZ, and Rocky Mountain Operations Center, administered by Western's Rocky Mountain Region (RMR) in Loveland, CO. It was believed that such a consolidation would yield significant benefits, including annual cost savings to Colorado River Storage Project (CRSP) customers, enhanced coordination with emerging regional transmission groups, increased operational flexibility, and capitalized cost savings due to the elimination of the Montrose Supervisory Control and Data Acquisition (SCADA) system.

Western's Control Area Consolidation (CAC) project required an extensive and complex rework of existing and new SCADA and scheduling systems as well as substantial modifications to communications systems. Substantial changes in scheduling, billing, and accounting practices, with associated training for affected personnel as well as other changes in policy and procedures, were required. This project was a substantial technical and logistical undertaking requiring high levels of collaboration among

Western offices in Montrose, CO; Phoenix, AZ; Loveland, CO; Salt Lake City, UT, and Golden, CO. Contributing to the complexity of project implementation were the use of three different power system control computers in each of the existing control centers; the new Merchant function located in Montrose; on-going installations of new SCADA systems; emerging re-structuring issues, such as OASIS; significant customer concern about changes in operational procedures; and the need to maintain interconnected power system reliability and meet customer contract commitments.

Final reconfiguration of the control area boundaries occurred on April 1, 1998. Under this arrangement, RMR staff operate the CRSP transmission system north of Shiprock, AZ, in addition to their existing responsibilities for real-time operation of the Loveland Area Projects' generating resources and transmission system. DSW staff operate CRSP transmission south of Colorado and all CRSP generation, in addition to their existing responsibilities for Parker-Davis and Hoover generation.

▸ 1998

FERC Orders 888 and 889 - Tariff and Standards of Conduct - In January 1998, Western filed its Open Access Transmission Tariff with the Federal Energy Regulatory Commission (FERC), in voluntary compliance with Order 888. Order 888 requires public utilities to implement Standards of Conduct (SOC) and to separate their transmission/ reliability functions from their merchant functions. FERC issued Orders 888 and 889 to ensure fair and equal access to the interconnected electrical transmission system that criss-crosses the nation. These Orders apply to all public utilities that own, control, or operate facilities used to transmit electricity in interstate commerce. Compliance with this order required some fundamental changes in how Western conducted its marketing and transmission control functions.

Under Order No. 888, public utilities under FERC jurisdiction (such as investor-owned utilities) must offer open and comparable access to their transmission systems. Order No. 889 requires separation of transmission functions from power marketing functions and restricts communications between power marketing and transmission operations employees within any one company. It also calls for developing Open Access Same-Time Information Systems (OASIS) as the tool to be used to share transmission price and availability information.

FERC does not have jurisdiction over Western. But because Western is a major transmission system owner and provides wholesale electricity across the West, Western voluntarily chose to follow FERC's rules. Western is showing good faith by complying with the rules other wholesale power and transmission utilities must follow. Utilities only have to extend reciprocal service to other utilities that have filed an open access tariff with FERC and implemented FERC's standards of compliance. By complying, Western will be able to obtain transmission service from public utilities when we request it.Western filed its SOC with FERC on December 9, 1998.

In developing these new operating procedures, all power marketing and system operations activities were classified as either Power Marketing (Merchant), Operations (Transmission) or Support functions. An organizational chart was developed using these classifications as guides and has been used to reorganize Western's power marketing and transmission operations activities. An employee providing a Support service

supports both the Transmission and Power Marketing functions, but does not direct, organize or execute activities in either function.

Transmission information obtained by transmission operations staff from other customers or developed in the course of responding to requests for transmission or ancillary services is not accessible to power marketing employees, except through OASIS postings.

Power marketing employee access to SCADA and EMS information is limited to data about Federal generation. They do not have access to specific transmission customer load information, but only to aggregated data, nor to tie line or other transmission information.

Shared Services - In concert with Western's desire to reduce its overhead costs, Western undertook a study of adopting a shared services approach to a number of administrative and support functions. Western researched and reviewed the applicability of shared services business concepts in Western using a staged approach, focusing on the cost savings of the shared services concept.

Western performed a detailed study of the accounting, procurement, human resources, and budget functions. In most cases, the studies found that there were opportunities for further cost savings and streamlining of functions. However, no study concluded that a fully implemented shared services organization was desirable.

▸2000

Human Resources - Western senior management established and tasked a Human Resources (HR) Baseline Study Team to collect and analyze operational data on Western's HR function. The HR Shared Services (SS) Study and Implementation Plan (IP), which were completed in May 1998, served as the basis for the study plan and included specific areas of attention for the Team. The Team obtained and analyzed staffing, workload, operational process, and other data from which they prepared a current "snapshot" of Western's HR function and made the following observations:

- The collective management and leadership approach in executing the IP has not been effective and has not resulted in a sustained, consistent, and coordinated effort to implement recommendations.
- External program mandates, such as DOE Workforce 21, and new internal processes, such as Western's Merit Promotion Plan, and union activities affect HR in terms of the availability of staff and time needed to implement.
- For a number of reasons, automation and emerging information technologies have not fulfilled the optimistic expectation of bringing operational efficiencies to Western HR processes.
- Implementing the central processing function in Western has faced some challenges; and there has been general dissatisfaction regarding the timeliness, quality, and responsiveness of services from the central processing unit.
- A series of more specific HR operational themes were observed relating to full-time equivalent (FTE) usage, workload patterns and variability in processing times.

Western again rejected the idea of a full-scale shared services operation for human resources. A follow-up assessment is being conducted to focus on areas where this is opportunity for improvement.

VIII. Measurement Instruments and Data Quality

Western has developed a number of measurement instruments over time to track certain performance measures. In many cases, however, suitable instruments have been only recently developed and used to gather data for this annual GPRA performance report. Also, Western has adopted and slightly modified[55] the data quality assessment tool developed by Abate, Diegert and Allen[56]. That tool consists of a three-tier hierarchical framework to assess and identify opportunities for data quality improvement.

An extensive discussion on measurement instruments and data quality is contained in Western's FY 2001 performance plan at **http://www.wapa.gov/.**

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55 Western has added a data quality dimension of "verifiability" to the "intrinsic" category in the ADA model.

56 "A Hierarchical Approach to Improving Data Quality." Marcey L. Abate, Kathleen V. Diegert, Sandia National Laboratories and Heather W. Allen, Heather Allen & Associates. Data Quality, September 1998, Vol. 4:1. http://www.dataquality.com/998abate.htm#2

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