ROCKY MOUNTAIN REGION

Final Capital Investment Program Plan

2006-2015

FY2006.2

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1 INTRODUCTION

Western Area Power Administration (Western) is committed to maintaining and operating a reliable transmission system. The capital investment program plays an important role in Western's ability to provide cost effective, reliable power delivery to our customers.

The purpose of the Capital Investment Program Plan (Plan) is to present Western's Rocky Mountain Region (RMR) capital investment plan, to provide a mechanism for customer collaboration, and to clearly describe challenges, goals, strategies, and measurements for the Plan.

The Plan contains general information on the creation and maintenance of the capital investment program, the current ten year plan, and goals, challenges, strategies and success indicators for the capital program.

The Plan is revised annually in response to changes in funding levels, unforeseen problems with the transmission system, mandates or regulations, and new contractual obligations. When changes to the Plan are made to accommodate higher priority projects, existing projects are reduced in scope, delayed, or deleted.

The Plan is divided into the following six major program areas:

- Transmission Line Improvements and Replacements
- Substation Improvements and Replacements
- Communication System Improvements and Replacements
- Control, Protection and Metering Improvements and Replacements
- Mobile Equipment Replacements
- Programmatic Improvements and Replacement

2 PROGRAM OVERVIEW

This section will summarize information about major accomplishments and project plans for the next several years. The data is broken out by power system. The information addresses major accomplishments of the prior fiscal year, planned projects for the current fiscal year and significant changes to the Plan since its last publication.

2.1 Colorado River Storage Project (CRSP) Facilities

2.1.1 CRSP FY05 Accomplishments

CRSP Communication Facility Projects. Progress continued to replace the analog microwave system with a new digital system. Paths between Lands End and Upper Molina and Lower Molina communication sites were replaced. Also, four projects provided new microwave communication buildings and equipment at Flaming Gorge, Grizzly Ridge, Vernal, and Sunlight Peak sites.

Shiprock-Four Corners 345-kV Conversion. Work was completed to replace current transformers and disconnect switch parts which were limiting elements of the line rating. Completion of these tasks allowed the line rating to equal the thermal rating.

Other Equipment Replacement Efforts. High-voltage circuit breakers were replaced at Archer and Hayden Substations. Western also replaced reactors at Curecanti Substation.

2.1.2 CRSP FY06 Planned Activities

Animas-La Plata Project Power. One of the earmarks to the FY05 Energy and Water Development Appropriation Act was for the full funding of the facilities Western will construct as part of the Animas-La Plata Project. Western will construct a new 115-kV transmission line circuit and substation to provide power for the pumping plant being installed as part of the project in Durango, Colorado. In FY06, Western will continue project planning, begin design, and order transformers. A request to Tri-State for a new interconnection at Durango Substation has been made. The required in-service date is September 2007.

Flaming Gorge Transformer Uprate. The project scope is to replace an existing 100 MVA 230/138-kV transformer with a 250 MVA unit to address transformer overloading problems. Design will start early in FY06 with the transformer procurement planned for the second quarter of the year. The planned in-service date is May 2007.

CRSP Communication Facility Projects. A significant expenditure over the next several years will continue to be for the replacement of the old analog microwave

system with new digital technology. A large part of this work has already been completed on the backbone microwave system in partnership with other utilities. Most of the remaining work consists of installing digital communications links from the backbone system to individual substations. The work is expected to be complete in FY08.

Great Cut Transformer. A transformer to replace the failed unit KX1A will be ordered and installed In FY06.

Other Equipment Replacement Efforts. The other items identified in the Plan are routine maintenance activities such as replacing obsolete and worn-out substation equipment, purchase of supplies to repair and replace damage to transmission lines, and specialized equipment for the crews to accomplish maintenance of the system. High-voltage circuit breaker replacements are planned at Archer, Hayden, and Curecanti Substations. Transformer monitors are planned for installation on the Waterflow Substation phase shifting transformers, and the Hayden station service switchgear will be replaced.

Recent load testing of substation and communication site backup battery banks has identified an unusually high rate of failures in the newer valve regulated cells. Several of these sites are scheduled for cell replacements in 2006.

2.2 Loveland Area Projects (LAP) Facilities

2.2.1 LAP FY05 Accomplishments

Communication Facility Projects. Progress continued in replacing the analog microwave system with a new digital system. In FY05 the following five microwave communication paths were replaced: McCullough Peak to Meeteetse MW; Raderville MW to Raderville Substation; Horse Heaven to Spence; Casper Office to Casper Substation; Seminoe MW to Miracle Mile Substation. As part of this project, the microwave repeater site at East Prior was completely rebuilt.

Western also completed installation of fiber-optic cables on its existing transmission lines between the Valley and Estes Substations and between the Cheyenne and Archer Substations.

Lovell-Thermopolis Transmission Line. In November 2004, Western crews completed the replacement of 10 miles of structures on the Lovell-Thermopolis 115-kV transmission line. These replacements address a section of line with a high number of rejected structures.

Yellowtail Transformer Addition. Western relocated its spare 115/230-kV 167 MVA transformer from the Shiprock Substation in Arizona. It is now installed in parallel with the existing 130 MVA transformer at the Yellowtail Switchyard. A 115-kV bay was added and an existing 230-kV bay was modified to accommodate

the additional transformer. The addition of the second transformer allows full utilization of Western's 225-MW capacity in the Yellowtail South constrained path for all levels of Yellowtail generation, eliminates the need to purchase transmission from PacifiCorp, increases reliability between the 115-kV and 230-kV yards, and provides transformer maintenance flexibility. A leaking bushing on the transformer has delayed the planned in-service date of these additions until December 2005.

Whiterock Substation. The new Whiterock Substation was commissioned in January 2005. This station sectionalizes Western's Glendo-Stegall North and South 115-kV transmission lines. This station provides voltage support in the Platte Valley region, and provides a second source of power to the Limestone-Platte Valley region and the Limestone-Platte Pipeline 34.5-kV line. Included in the project was the relocation of the Lyman-Yoder Tap from the North to the South line, providing additional voltage stability and reliability in the area.

Wray Substation. A joint Western/Tri-State project provided major renovations of the existing Wray Substation that included installing a 115-kV circuit switcher and takeoff structures, new 115-kV and 12.47-kV buswork, new relaying and associated controls, and communications equipment. The project will also provide for an emergency feed from Tri-State's Wauneta-Wray 115-kV line planned in FY06, which will support service in the area in the event of an outage on Western's line. The project improves the substation's reliability as well as the electric service to the Y-W Electric Association and the City of Wray.

Whitney Switching Station. Western and Poudre Valley REA partnered in a project to construct a new six-breaker 115-kV switching station in Windsor, Colorado. The project improves reliability to Western's Kodak-Airport and Kodak-Weld 115-kV transmission lines and to Poudre Valley's Kodak loads, while establishing a delivery point to serve a new Poudre Valley customer, the Owens-Brockway Bottling Plant.

Badwater Substation. A 69-kV bay addition was constructed at Western's Badwater Substation to serve the added load of Express Pipeline, Inc., a High Plains Power customer. The project included installing a breaker, disconnect switches, and associated instrument transformers.

Granby Pumping Plant (GPP) Switchyard - West Portal Optical Fiber Ground Wire (OPGW). In this 8.9-mile line section, one overhead ground wire will be replaced with a 48-fiber OPGW. The optical fibers will be equally allocated between Western and the Northern Colorado Water Conservancy District (District) to support the LAP power systems and the Colorado-Big Thompson project communications. The installation will complete the fiber optic backbone that already includes Valley-Estes (installed 2004), Estes-East Portal (installed 1992), and East Portal-West Portal (installed 1984). Planning and design activities were completed in 2005.

McGrew Substation. Western maintenance personnel installed two sets of pole-mounted shunt capacitor banks on two 34.5-kV lines that terminate at the McGrew Substation in southeastern Scottsbluff County, Nebraska.

Other Equipment Replacement Efforts. A high-voltage circuit breaker was replaced at Chappell Substation. Western also replaced regulators at Glendale Substation and control systems at Glendo Substation. Western continued its wooden pole test and treatment program.

2.2.2 LAP FY06 Planned Activities

Granby Pumping Plant (GPP)-Windy Gap 69-kV Rebuild. Western is developing a project to ensure system reliability before loss of the Adams Tunnel Cable circuit. The project will rebuild the 65-year-old 69-kV line from Windy Gap to GPP as well as add a new 138-kV line on the same structures. A 138/69-kV transformer will be added within the GPP switchyard. The project is a joint effort among the Northern Colorado Water Conservancy District, Tri-State and Western.

Ault-Cheyenne-Miracle Mile Transmission Line Rebuilds
For the past several years, RMR has been developing a series of projects to rebuild the Cheyenne-Miracle Mile and Ault-Cheyenne 115-kV lines. The result of the projects will be a new Ault-Miracle Mile 230-kV line and a rebuilt Ault-Cheyenne 115-kV line. In addition to the transmission line projects, several associated substation projects at Ault, Miracle Mile, Cheyenne and Snowy Range are required.

Cheyenne-Miracle Mile 115-kV: Western plans to rebuild this transmission line in southern Wyoming to 230-kV specifications. The environmental and survey tasks for this project are completed. In FY06, RMR plans to acquire necessary ROW easements, develop design and specifications, and award a construction contract. The planned in-service date is September 2009.

Snowy Range Substation: Western will build the Snowy Range Substation in Laramie, Wyoming, to address a number of customer load service concerns and to sectionalize the two long lines. Further, once the existing Cheyenne-Miracle Mile 115-kV line is rebuilt and operated as the Ault-Miracle Mile 230-kV line, the new source at Snowy Range will increase reliability and voltage support to the Laramie and Cheyenne areas. Snowy Range 115-kV Substation began design in FY05 with a planned construction contract award in 2nd quarter of FY06. The in-service date is February 2007. The 230-kV additions at Snowy Range are scheduled from FY07 to FY09.

Ault-Cheyenne 115-kV: Western plans to rebuild this transmission line as a double circuit 230/115kV. The environmental and survey tasks for this project are completed. In FY06, RMR will continue developing the project plan. In FY07, RMR will acquire any necessary ROW easements, develop design and

specifications, and in FY08 award a construction contract. The planned in-service date is September 2009.

Ault, Miracle Mile and Cheyenne 230-kV additions: The Ault, Miracle Mile, and Cheyenne projects are to add the necessary 230-kV facilities and transformation for the Ault-Miracle Mile 230-kV line. These projects will begin in FY07 with planning and design. The In-service date for each is September 2009.

Front Range Transmission Improvement Projects. In 2003, Western developed a comprehensive plan to systematically rebuild numerous 115-kV lines in Northern Colorado's Front Range. The plan for these projects has been further defined each year. FY05 saw the development of a joint project with Platte River Power Authority for rebuilding approximately 10 miles of transmission lines. Also in FY05, Western and Tri-State worked toward a possible joint project to rebuild the Beaver Creek-Hoyt and Hoyt-Erie 115-kV lines totaling 78 miles. This project would also include new 230-kV yards at Beaver Creek and Erie.

Hoyt-Wiggins Transmission Line. This 13.1-mile line section is being rebuilt in a two-phased effort using Western's crews to tear out the existing line and install new structures. A contractor will install hardware, insulators, and conductors. The line is being rebuilt using 477 ACSR conductor and will prevent a reduction in future TOT3 capacity during the planned rebuild of the Beaver Creek-Hoyt transmission line in 2006. Also, the project replaces a section of aging transmission line for which maintenance costs have increased significantly. In-service is expected by April 2006.

Beaver Creek-Hoyt Transmission Line. To avoid a reduction in the total transfer capability of TOT3, Western is planning a project to rebuild the existing 32.4-mile line at 230-kV. Although the line has operated reliably, its 109 MVA rating can reduce the total transfer capability of the TOT3 transmission path between northeastern Colorado and southeastern Wyoming by as much as 500 MW. Tasks planned for FY06 are completion of design, acquisition of any required ROW and award of a construction contract. The planned in-service date is May 2007.

Eastern Plains Transmission Project. Western is in the conceptual planning phase to partner on this project intended to upgrade and expand the transmission system in southeastern Colorado and southwestern Kansas. The proposal is to construct several high voltage transmission lines with the final configuration and voltage classification depending on results of system planning studies. Western proposes to acquire capacity on the transmission system for purposes of economical transfer of Federal hydroelectric power and improving the reliability of the Federal transmission system.

Platte Valley Voltage Conversion: The lines in this area were rebuilt from 34.5-kV construction to 69-kV construction in the early 1990s. Western has been planning to begin converting the lines between Lingle and Gering to 69-kV operation starting in 2007 with a target completion in 2015. With the addition of Whiterock Substation and other improvements in the area, Western is delaying the start of the conversion projects from 2007 to 2011. The target completion date remains 2015.

Willoby Switchyard 115-kV: Western and Tri-State are working on an agreement to construct Willoby Switchyard at the site of the present Prospect Valley Tap. This project will provide additional voltage support for the future Boomerang Tap delivery off Western's Kiowa Creek-Weld 115-kV line. The scheduled in-service date is December 2007.

Torrington Substation KY2A Addition: Load forecasts show significant new loads being served from Torrington Substation which will exceed the rating of the existing transformer. A project is being developed to add a second 115/34.5-kV transformer in parallel to meet the new loads. Western will participate in this project since this additional transformer will serve as an integral link between the 115-kV system and the future 69-kV system being developed as part of the Platte Valley Voltage Conversion Project.

Communication Facility Projects: A significant expenditure over the next several years will continue to be the replacement of the old analog microwave system with new digital technology. A large part of this work has already been completed on the backbone microwave system in partnership with other utilities. Most of the remaining work consists of installing digital communications links from the backbone system to individual substations. The work is expected to be complete in FY07.

Fiber Optic cables will be installed this year on several Western transmission lines in the Cody, Wyoming area. These cables will replace analog microwave radio links between North Cody, Buffalo Bill, and Heart Mountain Substations.

Other Equipment Replacement Efforts. The other items identified in the Plan are routine maintenance activities such as replacing obsolete and worn-out substation equipment, purchase of supplies to repair and replace damage to transmission lines, and specialized equipment for the crews to accomplish maintenance of the system. High-voltage circuit breaker replacements are planned at Gering and Glendo Substations. Station Service switchgear will be replaced at Gering Substation. The HVAC system will be replaced at Virginia Smith DC Tie.

Recent load testing of substation and communication site backup battery banks has identified an unusually high rate of failures in the newer valve regulated cells. Several of these sites are scheduled for cell replacements in 2006.

2.3 Joint Power System Projects

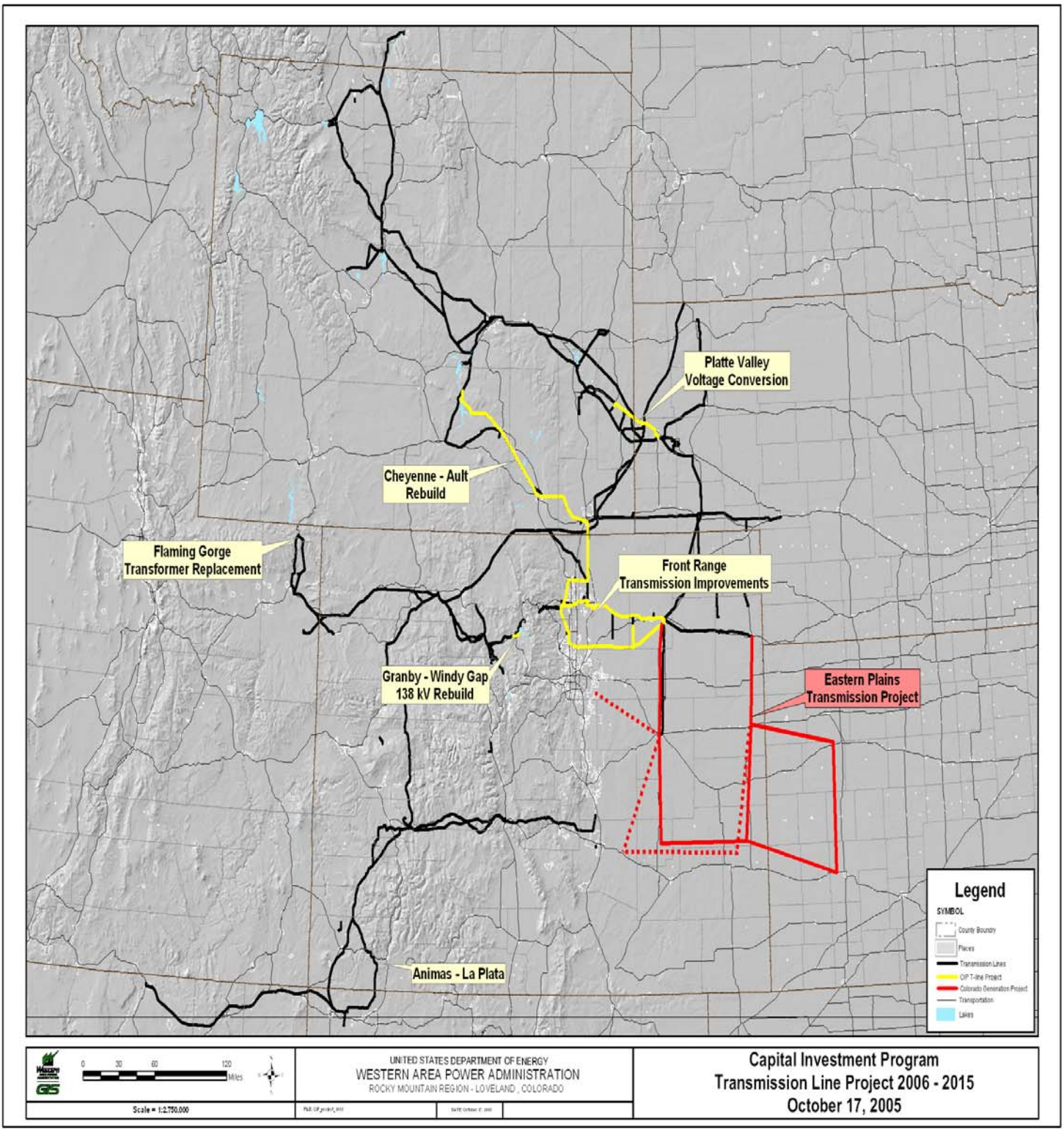
2.3.1 Joint LAP & CRSP FY05 Accomplishments

Alternate Control Center. In 2004, Western commissioned its Alternate Control Center (ACC). The ACC provides continued real-time power system operation in the event of a loss of primary control center functionality. The ACC supports all SCADA functionality, including monitoring and control of critical facilities, AGC, reserve monitoring, power system modeling, inter-utility data exchange, WECC messaging, and the Rocky Mountain Reserve Group (RMRG), as well as tagging and schedule administration applications. The ACC provides backup facilities for the Western Area Colorado-Missouri (WACM) control center operations, the Rocky Desert Reliability Coordination (RDRC) office, and WECC database operations for the Extremely High Voltage (EHV) data pool.

The ACC is required to meet the North American Electric Reliability Council (NERC) standards and has been exercised in Fall 2004, Spring 2005, and Fall 2005. Each exercise consists of dispatching from the ACC for a four-hour period. The Spring 2006 exercise will include the United States Bureau of Reclamation (USBR) Loveland Control Center generation control functionality. USBR personnel will monitor and control their power plant operations from the ACC.

2.3.2 Joint LAP & CRSP FY06 Planned Activities

RMR Dispatch Map Board. The map board in the Operations Dispatch Center provides a large format, real-time visual display of all important operational data in the WACM Control Area. The display is a matrix of individual rear-projection video monitors that are controlled by a computer to display a large continuous image. The primary maintenance of the map board has been replacement of the projector lamps that have a life of about 400 hours. Recently, the manufacturer of the monitors has given Western notice that it will no longer manufacture replacement bulbs for the monitors. The map board display must be replaced prior to running out of spare bulbs. RMR will plan and design for the map board replacement in FY06 with award and completion in FY07.


Platte Valley
Voltage Conversion
Cheyenne - Ault
Rebuild
Flaming Gorge
Transformer Replacement
Front Range
Transmission Improvements
Granby - Windy Gap
138 kV Rebuild
Eastern Plains
Transmission Project
Animas - La Plata
Legend
SYMBOL
County Boundry
Places
Transmission Lines
CIP T-line Project
Colorado Generation Project
Transportation
Lakes
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UNITED STATES DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
ROCKY MOUNTAIN REGION - LOVELAND, COLORADO
Capital Investment Program
Transmission Line Project 2006 - 2015
October 17, 2005

3 PROGRAM SUMMARY BUDGET

The following spreadsheet summarizes Western's capital program budget estimates by major program area.

Revised: 3/7/2006

Rocky Mountain Region Capital Projects Ten Year Plan

Total Costs (x1000)

		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Pick Sloan												
T-Line Improvements and Replacements			24,370	30,801	12,230	24,480	20,850	14,750	8,890	11,650	17,845	9,795
Substation Improvements and Replacements			9,484	8,377	10,947	8,108	2,133	2,122	1,952	7,685	2,799	3,940
Communication System Improvements and Replacements			2,024	589	350	1,860	1,214	1,400	770	900	900	900
Substation Control, Protection, and Metering			904	850	770	1,055	1,055	970	740	740	740	790
Mobile and Heavy Equipment Replacements	FY2005		837	300	1,395	600	600	600	600	600	600	600
Buildings and Programmatic Investments	Actuals		2,323	2,217	1,749	733	803	698	1,248	735	726	726
Total	10,047		39,942	43,134	27,441	36,836	26,655	20,540	14,200	22,310	23,610	16,751
FY2005 CIP Plan Totals	19,010		41,351	31,381	25,236	17,990	14,840	31,100	21,450	28,380	22,980	
CRSP												
T-Line Improvements and Replacements			3,502	1,796	325	450	530	130	50	50	50	50
Substation Improvements and Replacements			4,994	1,612	1,090	1,680	1,456	1,530	1,230	1,490	1,440	1,440
Communication System Improvements and Replacements			2,785	2,175	650	295	125	100	100	100	100	100
Substation Control, Protection, and Metering			770	750	790	790	790	790	790	790	790	790
Mobile and Heavy Equipment Replacements	FY2005		165	185	350	500	500	500	500	500	500	500
Buildings and Programmatic Investments	Actuals		1,501	1,413	1,187	856	927	798	1,435	858	825	825
Total	6,260		13,717	7,931	4,392	4,571	4,328	3,848	4,105	3,788	3,705	3,705
FY2005 CIP Plan Totals	5,305		12,080	7,470	5,020	4,566	5,393	5,018	4,275	3,878	3,795	

Western-only Costs (x1000)

		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Pick Sloan												
T-Line Improvements and Replacements			20,870	13,380	10,730	14,805	11,175	14,750	8,890	11,650	17,845	9,795
Substation Improvements and Replacements			7,934	7,656	10,866	8,030	2,093	2,122	1,952	7,685	2,799	3,940
Communication System Improvements and Replacements			1,644	500	350	1,785	1,214	1,400	770	900	900	900
Substation Control, Protection, and Metering			904	850	770	1,055	1,055	970	740	740	740	790
Mobile and Heavy Equipment Replacements	FY2005		837	300	1,395	600	600	600	600	600	600	600
Buildings and Programmatic Investments	Actuals		2,323	2,217	1,749	733	803	698	1,248	735	726	726
Total	8,923		34,512	24,903	25,860	27,008	16,940	20,540	14,200	22,310	23,610	16,751
FY2005 CIP Plan Totals	17,443		31,916	30,028	25,146	17,990	14,735	29,200	21,150	28,380	22,980	
CRSP												
T-Line Improvements and Replacements			3,502	1,796	325	450	530	130	50	50	50	50
Substation Improvements and Replacements			4,786	1,612	1,090	1,680	1,456	1,530	1,230	1,490	1,440	1,440
Communication System Improvements and Replacements			2,785	2,175	650	295	125	100	100	100	100	100
Substation Control, Protection, and Metering			770	750	790	790	790	790	790	790	790	790
Mobile and Heavy Equipment Replacements	FY2005		165	185	350	500	500	500	500	500	500	500
Buildings and Programmatic Investments	Actuals		1,459	1,413	1,187	856	927	798	1,435	858	825	825
Total	5,570		13,467	7,931	4,392	4,571	4,328	3,848	4,105	3,788	3,705	3,705
FY2005 CIP Plan Totals	5,010		12,053	7,470	4,610	4,484	5,393	5,018	4,275	3,878	3,795	

4 PROGRAM SUMMARIES

The following sections summarize the goals, priorities, and significant near-term projects for Western's six major capital program areas. The investment costs shown are Western's projected estimates within the 3-year budget window for the more significant projects. It should also be noted that some of these projects have additional costs that occur either before or after the 3-year budget window.

4.1 Transmission Line Improvements and Replacements

The goal of the Transmission Line Facilities program is to develop a practical plan based on available resources that will satisfy system-operating criteria, extend service life of existing facilities and rehabilitate an aging infrastructure with nominal rate impact.

Priorities

- Use results of long-range system operations planning studies to identify strategic replacement or uprate projects. Incorporate into the Plan in order of merit, value, and priority.
- Continue existing wood pole testing, treatment, and replacement program.
- Evaluate all wood structure transmission line segments relative to age, historical maintenance concerns, and pole test program results to identify rebuild projects.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
Beaver Creek-Hoyt 230kV Upgrade[1]	3,800		
Granby Pumping Plant-Windy Gap Rebuild[1]	100	1,400	200
Cheyenne-Miracle Mile 230-kV Upgrade	15,500	10,600	5,500
Hoyt-Wiggins 115-kV Uprate	250		
Gering/Gering Valley 34.5-kV T-Line	100	225	
Animas-LaPlata Project[2]	3,397	1,746	275
Wood Pole Testing and Treatment	435	480	480
Cheyenne-Ault 230-kV Upgrade	35	475	4,500
Timnath – Black Hollow 230-kV Upgrade[1]	650	150	

[1] Joint project; Western cost shown.

[2.] Non-reimbursable funding will be used.

4.2 Substation Improvements and Replacements

The Substation Equipment Improvement and Replacements program seeks to assure the highest possible reliability of substation equipment and to adequately meet the needs of a changing power system while minimizing life-cycle costs, environmental risks, and personnel hazards.

Priorities

- Extend the service lives of major substation equipment without compromising reliability.
- Replace major substation equipment when justified by increased maintenance costs, lack of spare parts, personnel hazards, or environmental risks.
- Replace oil breakers with SF-6 or vacuum breakers to reduce environmental risk.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
Willoby Switchyard 115-kV[1]	1,300	600	200
Snowy Range Substation 115-kV	4,350	200	
Lusk Rural and Podolak Substation Improvements		120	280
Torrington Substation Transformer (KY2A) Addition	350	350	50
Limestone Substation 34.5-kV Additions & Control Rpl.	324	422	
Miracle Mile Substation 230-kV Additions		1,450	2,050
Ault Substation 230-kV Additions		350	1,250
Cheyenne 230-kV Additions		1,500	3,250
Snowy Range Substation 230-kV		1,300	2,600
Haxton Interrupter MOI 264 Replacement	50		
Fleming Interrupter MOI 164 Replacement	88		
Beaver Creek 230-kV Additions		50	400
Power Transformer Replacements			
Granby PP Transformer Modifications[1]	200	88	
Great Cut KX1A	480	50	
Flaming Gorge KY2A & KY2B	2,767	125	
Sidney KY1A	50	646	
Garland KZ1A[1]		109	46
Yellowtail 2nd Transformer Addition	75		

[1] Joint project; Western cost shown.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
Circuit Breaker and Switch Replacements			
Midway 1886, 1562, 1662,	69	90	90
Blue Mesa 1066, 1162, 1362, 1462	121	90	90
Gering Breakers 162, 462, 966 Replacement	274		
Glendo 524	63		
Raderville 115-kV Switch Upgrade	195	221	
Hayden 2772, 2872 & 2972	130		
Shiprock 3262, 3362, & 3462	127	85	85
Alcova 462, 662, 862, 1062 Replacement			450
Hayden 230-kV Switches[1]	4		
Ault 696 Rebuild[1]	111		
Archer 1566 Replacement	40		
Curecanti 1082 Replacement	177		
Reactor Replacements			
Hayden KV1A, KV1B, KV2A		240	240
Other Substation Work			
Gering SS Switchgear	25		
Hayden SS Switchgear Replacement	180	460	
CRSP Transformer Monitors			100
Waterflow KU1A Transformer Monitor	109		
Shiprock Transformer Monitor		100	
Curecanti Black Start MOD			150

4.3 Communication System Improvements and Replacements

The goal of the Communications System Improvements and Replacements program is to maximize the reliability and availability of the communications system by infrastructure investments while minimizing its life cycle cost and responding to changes in user requirements, technology, and regulations.

Priorities

- Replace analog MW radios with digital to reduce operational costs.
- Replace wide band radios with narrow-band to meet FCC mandates.
- Install fiber optic cable to reduce long term operational costs where appropriate.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
Microwave Spur Replacements – (Wyoming, Nebraska, N.E. Colorado)	825	200	
Microwave Spur Replacements – CRSP	2,400	1,900	150
Estes-Valley Fiber Optic Installation	70		
Granby-West Portal Fiber Optic Installation	204		
VHF Mobile Radio Replacement	135		
Cody Fiber Optic Cable	345		
Archer Communications Building Replacement		25	200
PMOC-Crossroads Fiber Optic Cable[1]	80		
Grouse Mountain Communications Bldg Replace.			200
Blue Ridge Communications Building Replacement		200	
Buffalo Pass Communications Bldg. Replace.		200	
Raspberry Creek Communications Bldg. Replace.			200

[1] Joint project; Western cost shown.

4.4 Control, Protection and Metering Improvements and Replacements

The goal of the Control, Protection and Metering program is to maintain and improve system reliability by the cost effective application of control, protection and metering technologies at Western substations and meter sites.

Priorities

- Replace electromechanical relays and revenue meters with microprocessor-based equipment.
- Replace obsolete QEI remote telemetry units (RTU)
- Implement Digital Control Systems (DCS) schemes in substations as opportunities arise.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
Protective Relay Replacements	1,278	1,380	1,380
RTU Replacements	185	60	30

4.5 Mobile Equipment Replacements

The goal of the Mobile Equipment Replacement program is to assure that Western craftsmen have adequate, reliable equipment and tools available to accomplish the maintenance program efficiently and safely.

Priorities

- Maintain adequate inventory for normal and emergency maintenance activities.
- Minimize life-cycle costs of equipment.

Planned Replacements	*Investment ($ thousands)*		
	FY06	FY07	FY08
Versalift, 38' – Loveland	80		
Bucket Truck - Casper	600		
Lowboy Trailer – Casper	60		
Motor Grader - Craig	165		
Mobile Transformer - Loveland			950
Bobcat – Loveland			45
Manlift 65' – Cheyenne			300
Front End Loader – Montrose			150

4.6 Programmatic Improvements and Replacements

These program elements support the infrastructure of the Region that is not integrated with the transmission, substation, and communication systems. In general, they involve the buildings and facilities improvements, SCADA, and IT programs. The current program priorities are presented by designated individual elements and the projects and accomplishments are combined by fiscal year as follows:

Priorities

SCADA System:

- Upgrade SCADA hardware and base system release.
- Expand RMR's Alternate Control Center to meet NERC requirements.
- Develop a Common Information Model (CIM) based ability to exchange modeling topology information.
- Upgrade the Remote Terminal Unit (RTU) data acquisition system at Loveland and Cheyenne.

Information Technology (IT):

- Maximize resource efficiencies by consolidating systems, automating processes, and implementing process improvements.
- Implement procedures and systems to maintain and secure existing systems to ensure business continuity.

Lands:

- Develop and maintain a Geographic Information Systems (GIS) program that displays all regional generation sources, transmission lines, substations, communication facilities, office locations, archeological and cultural sites; and topographic, boundary, and municipal features relative to geographic and spatial reference.

Buildings and Facilities:

- Initiate facility inspections and develop remedial actions to reduce the risk of a catastrophic failure of any one facility's intended function.
- Incorporate unique designs that provide extended service life, especially for those facilities in remote locations, without adding significantly to the cost or routine maintenance.

Major Projects	*Investment ($ thousands)*		
	FY06	FY07	FY08
SCADA Upgrades	401	478	399
IT General Support Systems (GSS)	46	15	98
E-Scheduling/E-Tagging	388	726	362
Small Facility Projects (Civil /C&R)	1,000	950	1,000
Small Facility Projects (Electrical/RRADs)	541	125	591
Virginia Smith DC Tie HVAC Replacement	564		
GIS Development	287	287	287
Alternate Control Center	142	49	49
Montrose Phone Switch Replacement	122		
Operations Map Board Replacement	30	1000	
Loveland Maintenance Bldg. Vehicle Lift	133		

5 TEN-YEAR BUDGET PROJECTIONS

The following spreadsheets list Western's capital budget estimates by project and by fiscal year. By request of the Colorado River Energy Distributors Association, we have also included Western's Desert Southwest Region CRSP projects in the spreadsheets.

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RMR CRSP Capital Investment Plan FY06-FY15 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY06			FY07			FY08			FY09			FY10		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Transmission Lines																				
Animas-Laplata Project	CRSPWCF		5,418	447	5,865	3,397		3,397	1,746		1,746	275		275						
Shiprock - Four Corners 345-kV - Completed	CRSPWCF			1,537	1,537															
Wood Pole Replacement (CRSP) - Cancelled	CRSPWCF																			
Line Equipment Replacements - General (CRSP)	CRSPVMF		555		555	105		105	50		50	50		50	50		50	50		50
Wood Pole Testing & Treatment (CRSP)	CRSPVMF		960		960										400		400	480		480
RMR T-Line SubTotal			**6,933**	**1,984**	**8,917**	**3,502**		**3,502**	**1,796**		**1,796**	**325**		**325**	**450**		**450**	**530**		**530**
Substations																				
Bushing Replacements (CRSP) - Expensed	CRSPVMF																			
Shiprock - Four Corners 345-kV - Completed	CRSPWCF																			
Wood Pole Replacement (CRSP) - Cancelled	CRSPWCF																			
Shiprock - Four Corners 345-kV - Completed	CRSPWCF																			
Ault 1096 & 892 Replacement - Completed	CRSPVMF																			
Ault 692 Replacement - Completed	CRSPVMF																			
Archer 2224 Replacement - Completed	CRSPVMF			78	78															
Archer 1566 Replacement	CRSPVMF		40	75	115	40		40												
Ault 696 Rebuild	CRSPVMF		272		272	111	161	272												
Hayden Station Service Replacement	CRSPVMF		640		640	180		180	460		460									
Waterflow KU1A Transformer Monitors	CRSPVMF		129		129	109	20	129												
Great Cut Replace Transformer KXIA	CRSPVMF		530		530	480		480	50		50									
Curecanti 1082 Breaker Replacement	CRSPVMF		177		177	177		177												
Substation Test Equipment (CRSP)	CRSPVMF		953		953	53		53	100		100	100		100	100		100	100		100
Battery and Charger Replacements (CRSP)	CRSPVMF		1077	203	1,280	177		177	100		100	100		100	100		100	100		100
CCVT, PT, & CT Replacements (CRSP)	CRSPVMF		541	163	704	82		82	64		64	45		45	50		50	50		50
Substation Disconnect Switch Replacements (CRSP)	CRSPVMF		523		523	65		65	58		58	50		50	50		50	50		50
Surge Arrester Replacements (CRSP)	CRSPVMF		439	67	506	69		69	50		50	40		40	40		40	40		40
Monitors for WCMO Transformers	CRSPVMF		800		800							100		100	100		100	100		100
Blue Mesa 1066, 1162, 1362, 1462 Replacement	CRSPVMF		416		416	121		121	90		90	90		90	90		90	25		25
Collbran 362 Replacement	CRSPVMF		110		110															
Curecanti Black Start MOD	CRSPVMF		150		150							150		150						
Curecanti KV1A, KV1B Reactor Replacement	CRSPVMF			152	152															
Curecanti KZ1A Transformer Monitors - Completed	CRSPVMF																			
Flaming Gorge KY2A Replacement	CRSPVMF		2,892		2,892	2,767		2,767	125		125									
Hayden 230-kV Switch Replacements	CRSPVMF		31		31	4	27	31												
Hayden 2072,2272,2476 Replacement - Completed	CRSPVMF			471	471															
Hayden 2772, 2872, 2972 Replacement	CRSPVMF		130	142	272	130		130												
Hayden KV1A, KV1B, KV2A Reactor Replacement	CRSPVMF		720		720				240		240	240		240	240		240			
Midway 1866, 1562, 1662 Replacement	CRSPVMF		364		364	69		69	90		90	90		90	90		90	25		25
Midway KW1A, KW2A Reactor Replacement	CRSPVMF		654		654													294		294
Rifle 282, 382 Replacement	CRSPVMF		200		200															
Shiprock 3262,3362,3462 Replacement	CRSPVMF		317		317	127		127	85		85	85		85	20		20			
Shiprock KU3A Transformer Monitors	CRSPVMF		100		100				100		100									
Vernal 1372, 1576, 1672 Replacement	CRSPVMF		312		312													172		172
Vernal 1872, 2172 Replacement	CRSPVMF		220		220															
Buffalo Pass MW Site - Replace Engine Generator	CRSPVMF		25		25	25		25												
Misc. Substation Elect. Equip. Replace. (CRSP)	CRSPVMF		5200		5,200										800		800	500		500
RMR Substation SubTotal			**17,962**	**1,351**	**19,313**	**4,786**	**208**	**4,994**	**1,612**		**1,612**	**1,090**		**1,090**	**1,680**		**1,680**	**1,456**		**1,456**

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PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY06			FY07			FY08			FY09			FY10		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Substations																				
DESERT SOUTHWEST REGION																				
Replace MOI 2681 at Pinnacle Peak	CRSPVMF																			
Fire Protection System at Pinnacle Peak	CRSPVMF		200		220	20		20	20		20	20		20	20		20	20		20
Video Surveillance System at Glen Canyon	CRSPVMF		1510		1,661	151		151	151		151	151		151	151		151	151		151
Upgrade Programmable Logic Controller Pinnacle Peak	CRSPVMF																			
Install Remote Lighting at Glen Canyon	CRSPVMF		1150		1,265	115		115	115		115	115		115	115		115	115		115
DSW Substation SubTotal			**2,860**		**3,146**	**286**		**286**	**286**		**286**	**286**		**286**	**286**		**286**	**286**		**286**
Communications																				
Microwave Spur Replacements (CRSP)	CRSPWCF		4450	3,074	7,524	2,400		2,400	1,900		1,900	150		150						
So. Colorado Joint Microwave Project	CRSPWCF		50	2,682	2,732	50		50												
VHF Mobile Radio Replacements (CRSP)	CRSPVMF		135	1,427	1,562	135		135												
Archer MW Communication Building Replacement	CRSPVMF		225		225				25		25	200		200						
Central PMOC Communications Loop	CRSPVMF	20%	220		220										195		195	25		25
Buffalo Plass Communication Bulding Replacement	CRSPVMF		200		200				200		200									
Raspberry Creek Communication Building Replacement	CRSPVMF		200		200							200		200						
FGE, VNL, GRL Comm Bldgs (CRSP) - Completed	CRSPVMF		100	712	812	100		100												
Sunlight Tower Replacement - Completed	CRSPVMF			158	158															
Sunlight Bldg Replacement - Completed	CRSPVMF			147	147															
Communications Test Equipment (CRSP)	CRSPVMF		950		950	100		100	50		50	100		100	100		100	100		100
RMR Communications SubTotal			**6,530**	**8,200**	**14,730**	**2,785**		**2,785**	**2,175**		**2,175**	**650**		**650**	**295**		**295**	**125**		**125**
DESERT SOUTHWEST REGION																				
Communication Power System Upon Testing	CRSPVMF		840		924	84		84	84		84	84		84	84		84	84		84
Replace DSW Telephone (Multi-Proj. Cost Allocation)	CRSPVMF																			
Upgrade Communication Alarm Sys. (Multi -Proj. Cost)	CRSPVMF																			
RTU Replacement-FLG, GCP, KAY, LHV, NVS	CRSPVMF																			
Microwave ELD-FLG (Back-up Path Glen Canyon PP)	CRSPVMF																			
DFR Replacement	CRSPVMF		950		1,045	95		95	95		95	95		95	95		95	95		95
DSW Communications SubTotal			**1,790**		**1,969**	**179**		**179**	**179**		**179**	**179**		**179**	**179**		**179**	**179**		**179**
Control, Protection and Metering																				
Protective Relay Replacements (CRSP)	CRSPVMF		6,794	1,958	8,752	584		584	690		690	690		690	690		690	690		690
Test Equipment Replacements (CRSP)	CRSPVMF		864		864	4		4	60		60	100		100	100		100	100		100
Relay Test Set Upgrade	CRSPVMF		88		88	88		88												
Boundary Meter Telemetry System (CRSP)	CRSPVMF		94		94	94		94												
RTU Replacements (CRSP) - Completed	CRSPVMF																			
RMR CPM SubTotal			**7,840**	**1,958**	**9,798**	**770**		**770**	**750**		**750**	**790**		**790**	**790**		**790**	**790**		**790**
DESERT SOUTHWEST REGION																				
Line Relays, NAV, LHV, KAY, GCS Facilities	CRSPVMF		1,500		1,650	150		150	150		150	150		150	150		150	150		150
Meter Replacement	CRSPVMF																			
DSW CPM SubTotal			**1,500**		**1,650**	**150**		**150**	**150**		**150**	**150**		**150**	**150**		**150**	**150**		**150**

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Mobile & Heavy Equipment																				
Brush Hog - Montrose - Completed	CRSPVMF																			
Brush Hog - Montrose - Completed	CRSPVMF																			
Tree shredder – Montrose - Completed	CRSPVMF																			
Front End Loader - Montrose	CRSPVMF	RMR1	150		150							150		150						
Motor Grader - Craig	CRSPVMF		165		165	165		165												
Misc Heavy Equipment Replacements (CRSP)	CRSPVMF		3885		3,885				185		185	200		200	500		500	500		500
RMR Mobile & Heavy Equipment SubTotal			**4,200**		**4,200**	**165**		**165**	**185**		**185**	**350**		**350**	**500**		**500**	**500**		**500**
Programmatic Improvements																				
GIS Development (CRSP)	CRSPWCF	33%	285	906	1,191	95		95	95		95	95		95						
Small facility Projects (C&R - CRSP)	CRSPWCF		5000	615	5,615	500		500	500		500	500		500	500		500	500		500
Alt. Control Center Expansion - CH (CRSP)	CRSPVMF	31%	72	346	418	42		42	15		15	15		15						
Operations Center Map Board Replacement	CRSPVMF	33%	340		340	10		10	330		330									
WIN Router	CRSPVMF		150		150							150		150						
E-Scheduling/E-Tagging (CRSP)	CRSPVMF	31	551		551	120		120	225		225	114		114	46		46			
IT General Support Systems (CRSP)	CRSPVMF	31	676		676	23		23	15		15	49		49	46		46	47		47
SCADA Upgrades (CRSP)	CRSPVMF	31	1394	141	1,535	161		161	158		158	132		132	64		64	180		180
RRADS Small facility Projects (CRSP)	CRSPVMF		1960	455	2,415	311	42	353	75		75	132		132	200		200	200		200
UPS Replacement - MOC	CRSPVMF		75		75	75		75												
Telephone Switch Upgrade - MOC	CRSPVMF		122		122	122		122												
RMR Programmatic Improvements SubTotal			**10,625**	**2,463**	**13,088**	**1,459**	**42**	**1,501**	**1,413**		**1,413**	**1,187**		**1,187**	**856**		**856**	**927**		**927**
DESERT SOUTHWEST REGION																				
Safety Enhancement, Fire Protection-PHX Ctr (Multi)	CRSPVMF																			
Perimeter Fencing-PHX Ctr (Multi-Proj Cost Alloc.)	CRSPVMF																			
Camera Security Upgrades-PHX Ctr (Multi-Proj Alloc.)	CRSPVMF																			
DSW Programmatic Improvements SubTotal																				
RMR FY06 CRSP CIP Grand Total			**54,090**	**15,956**	**70,046**	**13,467**	**250**	**13,717**	**7,931**		**7,931**	**4,392**		**4,392**	**4,571**		**4,571**	**4,328**		**4,328**
RMR FY05 CRSP CIP Totals					**66,040**	**12,053**	**27**	**12,080**	**7,470**		**7,470**	**4,610**	**410**	**5,020**	**4,484**	**82**	**4,566**	**5,393**		**5,393**

RMR Comparison Table (2005-2014)					
			Western	*Other*	*Total*
FY06 CIP			55,705	940	56,645
FY05 CIP			55,986	814	56,800
Diff			-281	126	-155

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Transmission Lines																				
Animas-Laplata Project	CRSPWCF		5,418	447	5,865															
Shiprock - Four Corners 345-kV - Completed	CRSPWCF			1,537	1,537															
Wood Pole Replacement (CRSP) - Cancelled	CRSPWCF																			
Line Equipment Replacements - General (CRSP)	CRSPVMF		555		555	50		50	50		50	50		50	50		50	50		50
Wood Pole Testing & Treatment (CRSP)	CRSPVMF		960		960	80		80												
RMR T-Line SubTotal			**6,933**	**1,984**	**8,917**	**130**		**130**	**50**		**50**	**50**		**50**	**50**		**50**	**50**		**50**
Substations																				
Bushing Replacements (CRSP) - Expensed	CRSPVMF																			
Shiprock - Four Corners 345-kV - Completed	CRSPWCF																			
Wood Pole Replacement (CRSP) - Cancelled	CRSPWCF																			
Shiprock - Four Corners 345-kV - Completed	CRSPWCF																			
Ault 1096 & 892 Replacement - Completed	CRSPVMF																			
Ault 692 Replacement - Completed	CRSPVMF																			
Archer 2224 Replacement - Completed	CRSPVMF			78	78															
Archer 1566 Replacement	CRSPVMF		40	75	115															
Ault 696 Rebuild	CRSPVMF		272		272															
Hayden Station Service Replacement	CRSPVMF		640		640															
Waterflow KU1A Transformer Monitors	CRSPVMF		129		129															
Great Cut Replace Transformer KXIA	CRSPVMF		530		530															
Curecanti 1082 Breaker Replacement	CRSPVMF		177		177															
Substation Test Equipment (CRSP)	CRSPVMF		953		953	100		100	100		100	100		100	100		100	100		100
Battery and Charger Replacements (CRSP)	CRSPVMF		1077	203	1,280	100		100	100		100	100		100	100		100	100		100
CCVT, PT, & CT Replacements (CRSP)	CRSPVMF		541	163	704	50		50	50		50	50		50	50		50	50		50
Substation Disconnect Switch Replacements (CRSP)	CRSPVMF		523		523	50		50	50		50	50		50	50		50	50		50
Surge Arrester Replacements (CRSP)	CRSPVMF		439	67	506	40		40	40		40	40		40	40		40	40		40
Monitors for WCMO Transformers	CRSPVMF		800		800	100		100	100		100	100		100	100		100	100		100
Blue Mesa 1066, 1162, 1362, 1462 Replacement	CRSPVMF		416		416															
Collbran 362 Replacement	CRSPVMF		110		110				60		60	50		50						
Curecanti Black Start MOD	CRSPVMF		150		150															
Curecanti KV1A, KV1B Reactor Replacement	CRSPVMF			152	152															
Curecanti KZ1A Transformer Monitors - Completed	CRSPVMF																			
Flaming Gorge KY2A Replacement	CRSPVMF		2,892		2,892															
Hayden 230-kV Switch Replacements	CRSPVMF		31		31															
Hayden 2072,2272,2476 Replacement - Completed	CRSPVMF			471	471															
Hayden 2772, 2872, 2972 Replacement	CRSPVMF		130	142	272															
Hayden KV1A, KV1B, KV2A Reactor Replacement	CRSPVMF		720		720															
Midway 1866, 1562, 1662 Replacement	CRSPVMF		364		364															
Midway KW1A, KW2A Reactor Replacement	CRSPVMF		654		654	330		330	30		30									
Rifle 282, 382 Replacement	CRSPVMF		200		200							200		200						
Shiprock 3262,3362,3462 Replacement	CRSPVMF		317		317															
Shiprock KU3A Transformer Monitors	CRSPVMF		100		100															
Vernal 1372, 1576, 1672 Replacement	CRSPVMF		312		312	140		140												
Vernal 1872, 2172 Replacement	CRSPVMF		220		220	120		120	100		100									
Buffalo Pass MW Site - Replace Engine Generator	CRSPVMF		25		25															
Misc. Substation Elect. Equip. Replace. (CRSP)	CRSPVMF		5200		5,200	500		500	600		600	800		800	1,000		1,000	1,000		1,000
RMR Substation SubTotal			**17,962**	**1,351**	**19,313**	**1,530**		**1,530**	**1,230**		**1,230**	**1,490**		**1,490**	**1,440**		**1,440**	**1,440**		**1,440**

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Substations																				
DESERT SOUTHWEST REGION																				
Replace MOI 2681 at Pinnacle Peak	CRSPVMF																			
Fire Protection System at Pinnacle Peak	CRSPVMF		200		220	20		20	20		20	20		20	20		20	20		20
Video Surveillance System at Glen Canyon	CRSPVMF		1510		1,661	151		151	151		151	151		151	151		151	151		151
Upgrade Programmable Logic Controller Pinnacle Peak	CRSPVMF																			
Install Remote Lighting at Glen Canyon	CRSPVMF		1150		1,265	115		115	115		115	115		115	115		115	115		115
DSW Substation SubTotal			**2,860**		**3,146**	**286**		**286**	**286**		**286**	**286**		**286**	**286**		**286**	**286**		**286**
Communications																				
Microwave Spur Replacements (CRSP)	CRSPWCF		4450	3,074	7,524															
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Buffalo Plass Communication Bulding Replacement	CRSPVMF		200		200															
Raspberry Creek Communication Building Replacement	CRSPVMF		200		200															
FGE, VNL, GRL Comm Bldgs (CRSP) - Completed	CRSPVMF		100	712	812															
Sunlight Tower Replacement - Completed	CRSPVMF			158	158															
Sunlight Bldg Replacement - Completed	CRSPVMF			147	147															
Communications Test Equipment (CRSP)	CRSPVMF		950		950	100		100	100		100	100		100	100		100	100		100
RMR Communications SubTotal			**6,530**	**8,200**	**14,730**	**100**		**100**	**100**		**100**	**100**		**100**	**100**		**100**	**100**		**100**
DESERT SOUTHWEST REGION																				
Communication Power System Upon Testing	CRSPVMF		840		924	84		84	84		84	84		84	84		84	84		84
Replace DSW Telephone (Multi-Proj. Cost Allocation)	CRSPVMF																			
Upgrade Communication Alarm Sys. (Multi -Proj. Cost)	CRSPVMF																			
RTU Replacement-FLG, GCP, KAY, LHV, NVS	CRSPVMF																			
Microwave ELD-FLG (Back-up Path Glen Canyon PP)	CRSPVMF																			
DFR Replacement	CRSPVMF		950		1,045	95		95	95		95	95		95	95		95	95		95
DSW Communications SubTotal			**1,790**		**1,969**	**179**		**179**	**179**		**179**	**179**		**179**	**179**		**179**	**179**		**179**
Control, Protection and Metering																				
Protective Relay Replacements (CRSP)	CRSPVMF		6,794	1,958	8,752	690		690	690		690	690		690	690		690	690		690
Test Equipment Replacements (CRSP)	CRSPVMF		864		864	100		100	100		100	100		100	100		100	100		100
Relay Test Set Upgrade	CRSPVMF		88		88															
Boundary Meter Telemetry System (CRSP)	CRSPVMF		94		94															
RTU Replacements (CRSP) - Completed	CRSPVMF																			
RMR CPM SubTotal			**7,840**	**1,958**	**9,798**	**790**		**790**	**790**		**790**	**790**		**790**	**790**		**790**	**790**		**790**
DESERT SOUTHWEST REGION																				
Line Relays, NAV, LHV, KAY, GCS Facilities	CRSPVMF		1,500		1,650	150		150	150		150	150		150	150		150	150		150
Meter Replacement	CRSPVMF																			
DSW CPM SubTotal			**1,500**		**1,650**	**150**		**150**	**150**		**150**	**150**		**150**	**150**		**150**	**150**		**150**

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RMR CRSP Capital Investment Plan FY06-FY15 Detail

Yellow Highlight = New Project to list	W Total = Western Only Costs
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Green Highlight = Generic Equipment Replace. Program	MPS Split = Multiple Power System Cost Split.

PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY11			FY12			FY13			FY14			FY15		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Mobile & Heavy Equipment																				
Brush Hog - Montrose - Completed	CRSPVMF																			
Brush Hog - Montrose - Completed	CRSPVMF																			
Tree shredder – Montrose - Completed	CRSPVMF																			
Front End Loader - Montrose	CRSPVMF	RMR1	150		150															
Motor Grader - Craig	CRSPVMF		165		165															
Misc Heavy Equipment Replacements (CRSP)	CRSPVMF		3885		3,885	500		500	500		500	500		500	500		500	500		500
RMR Mobile & Heavy Equipment SubTotal			**4,200**		**4,200**	**500**		**500**	**500**		**500**	**500**		**500**	**500**		**500**	**500**		**500**
Programmatic Improvements																				
GIS Development (CRSP)	CRSPWCF	33%	285	906	1,191															
Small facility Projects (C&R - CRSP)	CRSPWCF		5000	615	5,615	500		500	500		500	500		500	500		500	500		500
Alt. Control Center Expansion - CH (CRSP)	CRSPVMF	31%	72	346	418															
Operations Center Map Board Replacement	CRSPVMF	33%	340		340															
WIN Router	CRSPVMF		150		150															
E-Scheduling/E-Tagging (CRSP)	CRSPVMF	31	551		551							46		46						
IT General Support Systems (CRSP)	CRSPVMF	31	676		676	33		33	299		299	46		46	59		59	59		59
SCADA Upgrades (CRSP)	CRSPVMF	31	1394	141	1,535	65		65	436		436	66		66	66		66	66		66
RRADS Small facility Projects (CRSP)	CRSPVMF		1960	455	2,415	200		200	200		200	200		200	200		200	200		200
UPS Replacement - MOC	CRSPVMF		75		75															
Telephone Switch Upgrade - MOC	CRSPVMF		122		122															
RMR Programmatic Improvements SubTotal			**10,625**	**2,463**	**13,088**	**798**		**798**	**1,435**		**1,435**	**858**		**858**	**825**		**825**	**825**		**825**
DESERT SOUTHWEST REGION																				
Safety Enhancement, Fire Protection-PHX Ctr (Multi)	CRSPVMF																			
Perimeter Fencing-PHX Ctr (Multi-Proj Cost Alloc.)	CRSPVMF																			
Camera Security Upgrades-PHX Ctr (Multi-Proj Alloc.)	CRSPVMF																			
DSW Programmatic Improvements SubTotal																				
RMR FY06 CRSP CIP Grand Total			**54,090**	**15,956**	**70,046**	**3,848**		**3,848**	**4,105**		**4,105**	**3,788**		**3,788**	**3,705**		**3,705**	**3,705**		**3,705**
RMR FY05 CRSP CIP Totals					**66,040**	**5,018**		**5,018**	**4,275**		**4,275**	**3,878**		**3,878**	**3,795**		**3,795**			

RMR Comparison Table (2005-2014)		
FY06 CIP		
FY05 CIP		
Diff		

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RMR Pick Sloan Capital Investment Plan FY06-FY15 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY06			FY07			FY08			FY09			FY10		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Transmission Lines																				
Cheyenne-Miracle Mile 230kV T-Line Upgrade	PSWCF		32,000	1,112	33,112	15,500		15,500	10,600		10,600	5,500		5,500	400		400			
Cheyenne-Ault 230kV T-line Upgrade	PSWCF		16,010		16,010	35		35	475		475	4,500		4,500	11,000		11,000			
Gering-Gering Valley 34.5-kV T-Line	PSWCF		325		325	100		100	225		225									
Granby Pump Plant-Windy Gap 69-kV rebuild	PSWCF		9,150	257	9,407	100		100	1,400	7,050	8,450	200	400	600						
Timnath - Black Hollow 230-kV Upgrade	PSWCF		1,421		1,421	650		650	150	621	771									
Ft Morgan West - Kiowa Creek 230-kV Upgrade	PSWCF		9,950		9,950															
Beaver Creek-Ft Morgan West 230-kV Upgrade	PSWCF		8,900		8,900															
Weld-Flatiron 230kV Upgrade	PSWCF		13,800		13,800													350		350
Erie-Longmont NW 230-kV Upgrade	PSWCF		14,800		14,800															
Ault-Willoby 230-kV	PSWCF		2,350		10,100															
Kiowa Creek - Willoby 230-kV Upgrade	PSWCF		250		12,350															
Beaver Creek - Hoyt 230-kV Upgrade	PSWCF		17,050	946	17,996	3,800	3,500	7,300		9,750	9,750									
Hoyt-Wiggins 115-kV Uprate	PSWCF		250	1,378	1,628	250		250												
Erie-Hoyt 230-kV Upgrade	PSWCF		27,000		27,000								1,100	1,100	3,275	9,675	12,950	3,275	9,675	12,950
Wood Pole Test and Treatment (PS)	PSWCF		915	744	1,659	435		435	480		480									
FlatIron - Longmont NW 230-kV Upgrade	PSWCF		300		10,100															
Dixon Creek - FlatIron 230-kV Upgrade	PSWCF		300		11,100															
East Morrill Tap-Wildcat 34.5-kV line	PSWCF		570		570															
Wildcat-Sievers 69-kV line	PSWCF		2,030		2,030															
Eastern Plains Transmission Project	PSWCF		15,000		15,000													7,500		7,500
Distribution Line Repair/Replacement - Cancelled	PSWCF																			
Troublesome-Colorado Pumps - Cancelled	PSWCF																			
Lovell - Thermopolis 115-kV line Rebuild - Completed	PSWCF			1,767	1,767															
Line Equipment Replacements - General (PS)	PSWMF		450	35	485				50		50	50		50	50		50	50		50
Wood Pole Test and Treatment (PS)	PSWMF		2,840		2,840							480		480	80		80			
T-Line SubTotal			**175,661**	**6,239**	**222,350**	**20,870**	**3,500**	**24,370**	**13,380**	**17,421**	**30,801**	**10,730**	**1,500**	**12,230**	**14,805**	**9,675**	**24,480**	**11,175**	**9,675**	**20,850**
Substations																				
Lusk Rural - Podolak Improvements	PSWCF		400		400				120		120	280		280						
Willoby Switchyard 115-kV	PSWCF		3,200		3,200	1,300	1,000	2,300	600	100	700	200		200						
Ault 230-kV additions (AU-MM 230)	PSWCF		2,100		2,100				350		350	1,250		1,250	500		500			
Snowy Range Substation 230-kV (Laramie)	PSWCF		4,150		4,150				1,300		1,300	2,600		2,600	250		250			
Miracle Mile 230-kV additions (AU-MM 230)	PSWCF		4,000		4,000				1,450		1,450	2,050		2,050	500		500			
Yellowtail 2nd Transformer Addition	PSWCF		75	3,023	3,098	75		75												
Limestone 34.5-kV additions	PSWMF		746		746	324		324	422		422									
Snowy Range Substation 115-kV (Laramie)	PSWCF		4,550	358	4,908	4,350		4,350	200		200									
Lingle Substation 69kV additions	PSWCF		2,425		2,425															
Torrington Substation 69-kV additions	PSWCF		4,130		4,130															
Cheyenne 230-kV additions	PSWCF		5150		5150				1,500		1,500	3,250		3,250	400		400			
Beaver Creek 230-kV additions (BC-EE 230-kV)	PSWCF		5600		5600				50		50	400		400	4,800		4,800	350		350
Torrington Substation KY2A addition	PSWCF		1500		1500	350	350	700	350	350	700	50	50	100						
Willoby Substation 230-kV	PSWCF		1800		7200															
Ault 230-kV terminal (AU-WBY 230-kV)	PSWCF		100		3200															
Wray Substation Modifications - Completed	PSWCF																			
Whiterock Substation - Completed	PSWCF			3,995	3,995															
Whitney - Completed	PSWCF			657	657															
Cheyenne 115-kV Shunt Capacitor - Cancelled	PSWCF																			
Gering Substation 69-kV additions - Cancelled	PSWCF																			
Torrington - Wildcat 69kV additions - Cancelled	PSWCF																			
Battery and Charger Replacements (PS)	PSWMF		1,324	669	1,993	424		424	100		100	100		100	100		100	100		100
CCVT, PT, & CT Replacement (PS)	PSWMF		594		594	94		94	50		50	50		50	50		50	50		50
Misc. Substation Elect. Equipm. Replace. (PS)	PSWMF		11,168		11,168										1,212		1,212	1,413		1,413
Replace 230kV Arrestors AV5A on Stegall E. 230 Bus	PSWMF		32		32	32		32												
Substation Test Equipment (PS)	PSWMF		900		900	40		40	60		60	100		100	100		100	100		100
Substation Disconnect Switch Replacements (PS)	PSWMF		360		360				40		40	40		40	40		40	40		40
Alcova 462, 662, 862, 1062 Replacement	PSWMF		450		450							450		450						
Gering Station Service Switchgear	PSWMF		25		25	25		25												

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Gering Breaker Replacement: 162,462,966	PSWMF		274		274	274		274												
Glendo PCB 524 Replacement	PSWMF		63		63	63		63												
Haxtun Interruptor MOI 164 Replacement	PSWMF		50		50	50		50												
Raderville 115KV Switch Upgrade	PSWMF		416		416	195		195	221		221									
Sidney KY1A Transformer Replacement	PSWMF		696		696	50		50	646		646									
Willow Creek KZ2A Replacement	PSWMF		236		236										78	78	156	40	40	80
Garland KZ1A Replacement	PSWMF		259		259				109	73	182	46	31	77						
Granby Pumping Plant Transformer Modifications	PSWMF		575	22	597	200	200	400	88	87	175									
Limestone Sub Control Upgrades - Merged w/34.5kv Addit	PSWMF																			
Fleming Interruptor MOI 164 Replacement	PSWMF		88		88	88		88												
Pilot Butte 662 Breaker Replacement (TRS)	PST&R		111		111					111	111									
Chappell 144 Replacement - Completed	PSWMF			93	93															
Glendale KW1A - Replace Regulators - Completed	PSWMF			159	159															
Substations SubTotal			**57,547**	**8,976**	**75,023**	**7,934**	**1,550**	**9,484**	**7,656**	**721**	**8,377**	**10,866**	**81**	**10,947**	**8,030**	**78**	**8,108**	**2,093**	**40**	**2,133**
Communications																				
Microwave Spur Replacements (PS)	PSWCF		1,025	4,458	5,483	825		825	200		200									
Archer-Cheyenne Fiber Optic Installation - Completed	PSWMF																			
Nortel Microwave Replacements	PSWMF		1,500		1,500										500		500	500		500
PMOC - Crossroads Fiber Optic Installation	PSWMF		80		80	80		80												
Communications Test Equipment (PS)	PSWMF		932		932	32		32	100		100	100		100	100		100	100		100
VHF Test Equipment	PSWMF		18	2,043	2,061	18		18												
Estes-Valley Fiber Optic Installation	PSWMF		70	425	495	70		70												
Granby-West Portal Fiber Optic Installation	PSWMF		204		204	204		204												
USBR - CBT Fiber Optic Installation	PST&R		469		469		380	380		89	89									
WAPA - Cody Area Fiber Optic Installation	PSWMF		345	12	357	345		345												
UHF Radio Replacements (PS)	PSWMF		70	506	576	70		70												
Granby-Table Mountain Fiber Optic Installation	PSWMF		150		150										75	75	150			
Peetz Table Communication Building Replacement	PSWMF		225		225							25		25	200		200			
Merino Communication Building Replacement	PSWMF		225		225							25		25	200		200			
Misc. Communications Facilities Replacement (PS)	PSWMF		4,384		4,384													514		514
Blue Ridge Communication Building Replacement	PSWMF		200		200				200		200									
Grouse Mountain Communication Building Replacement	PSWMF		200		200							200		200						
Central PMOC Communications Loop (80/20 Split)	PSWMF	80%	810		810										710		710	100		100
Airport-Weld Fiber Optic Installation - Cancelled	PSWMF																			
Horsetooth Tap - Flatiron Fiber Optic - Cancelled	PSWMF																			
Communications SubTotal			**10,907**	**7,444**	**18,351**	**1,644**	**380**	**2,024**	**500**	**89**	**589**	**350**		**350**	**1,785**	**75**	**1,860**	**1,214**		**1,214**
Control, Protection and Metering																				
Protective Relay Replacements (PS)	PSWMF		6,904	1,256	8,160	694		694	690		690	690		690	690		690	690		690
Test Equipment Replacements (PS)	PSWMF		575		575	25		25	100		100	50		50	50		50	50		50
RTU Replacements (PS)	PSWMF		1,135	203	1,338	185		185	60		60	30		30	315		315	315		315
DDI Replacements (PS) - Expensed	PSWMF																			
Glendo DCS Installation - Completed	PSWMF																			
CPM SubTotal			**8,614**	**1,459**	**10,073**	**904**		**904**	**850**		**850**	**770**		**770**	**1,055**		**1,055**	**1,055**		**1,055**
Mobile and Heavy Equipment																				
Misc Heavy Equipment Replacements (PS)	PSWMF		4,697		4,697	97		97	300		300	100		100	600		600	600		600
Versalift, 38' - Loveland	PSWMF		80		80	80		80												
Bob Cat - Loveland (replacement)	PSWMF		45		45							45		45						
Manlift, 65' - Cheyenne (replace 51928)	PSWMF		300		300							300		300						
Bucket Truck, 110' - CAS	PSWMF		600		600	600		600												
Mobile transformer – Loveland	PSWMF		950		950							950		950						
Lowboy Trailer_ CAS	PSWMF		60		60	60		60												
CDY Backhoe (replaces E51203 (CDY) - Cancelled	PSWMF																			
Backhoe/Loader - Brush (replaces E-30995) - Completed	PSWMF																			
Forklift - Loveland (replacement) - Cancelled	PSWMF																			

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PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY06			FY07			FY08			FY09			FY10		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Manlift, 47' - Brush (replace 51931) - Completed	PSWMF																			
Mobile & Heavy Equipment SubTotal			**6,732**		**6,732**	**837**		**837**	**300**		**300**	**1,395**		**1,395**	**600**		**600**	**600**		**600**
Programmatic Improvements																				
GIS Development (PS)	PSWCF	67%	576	1,010	1,586	192		192	192		192	192		192						
Small Facility Projects (C&R - PS)	PSWCF		4,950		4,950	500		500	450		450	500		500	500		500	500		500
E-Scheduling/E-Tagging (PS)	PSWMF	69%	1,109		1,109	268		268	501		501	248		248	46		46			
IT General Support Systems (PS)	PSWMF	69%	502		502	23		23				49		49	22		22	23		23
SCADA Upgrades (PS)	PSWMF	69%	1,774	304	2,078	240		240	320		320	267		267	65		65	180		180
DAC Hardware Upgrade	PSWMF	69%	53		53	53		53												
Alt. Control Center Expansion - CH (PS)	PSWMF	69%	168	648	816	100		100	34		34	34		34						
Operations Center Map Board Replacement	PSWMF	67%	690		690	20		20	670		670									
RRADS Facility Small Projects (PS)	PSWMF		1,439		1,439	230		230	50		50	459		459	100		100	100		100
Virginia Smith DC Tie HVAC Replacement	PSWMF		564	69	633	564		564												
Loveland Maintenance Building Vehicle Lift	PSWMF		133		133	133		133												
Gering Service Center Repairs - Expensed	PSWMF																			
Gering 2507 Router - Completed	PSWMF																			
WIN Project (PS) - Expensed	PSWMF																			
Programmatic Improvements SubTotal			**11,958**	**2,031**	**13,989**	**2,323**		**2,323**	**2,217**		**2,217**	**1,749**		**1,749**	**733**		**733**	**803**		**803**
FY06 PS CIP Grand Total			**271,419**	**26,149**	**346,518**	**34,512**	**5,430**	**39,942**	**24,903**	**18,231**	**43,134**	**25,860**	**1,581**	**27,441**	**27,008**	**9,828**	**36,836**	**16,940**	**9,715**	**26,655**
FY05 PS CIP Totals					**289,841**	**31,916**	**9,385**	**41,351**	**30,028**	**1,353**	**31,381**	**25,146**	**90**	**25,236**	**17,990**		**17,990**	**14,735**	**105**	**14,840**

Comparison Table (2005-2014)					
			Western	***Other***	***Total***
FY06 CIP			218,806	45,909	264,715
FY05 CIP			238,968	14,700	253,718
Diff			-20,162	31,209	10,997

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Transmission Lines																				
Cheyenne-Miracle Mile 230kV T-Line Upgrade	PSWCF		32,000	1,112	33,112															
Cheyenne-Ault 230kV T-line Upgrade	PSWCF		16,010		16,010															
Gering-Gering Valley 34.5-kV T-Line	PSWCF		325		325															
Granby Pump Plant-Windy Gap 69-kV rebuild	PSWCF		9,150	257	9,407															
Timnath - Black Hollow 230-kV Upgrade	PSWCF		1,421		1,421															
Ft Morgan West - Kiowa Creek 230-kV Upgrade	PSWCF		9,950		9,950	200		200	600		600	8,900		8,900	250		250			
Beaver Creek-Ft Morgan West 230-kV Upgrade	PSWCF		8,900		8,900				300		300	500		500	7,900		7,900	200		200
Weld-Flatiron 230kV Upgrade	PSWCF		13,800		13,800	6,600		6,600	6,600		6,600	250		250						
Erie-Longmont NW 230-kV Upgrade	PSWCF		14,800		14,800				600		600	1,100		1,100	6,800		6,800	6,300		6,300
Ault-Willoby 230-kV	PSWCF		2,350		10,100										500		500	1,850		1,850
Kiowa Creek - Willoby 230-kV Upgrade	PSWCF		250		12,350													250		250
Beaver Creek - Hoyt 230-kV Upgrade	PSWCF		17,050	946	17,996															
Hoyt-Wiggins 115-kV Uprate	PSWCF		250	1,378	1,628															
Erie-Hoyt 230-kV Upgrade	PSWCF		27,000		27,000															
Wood Pole Test and Treatment (PS)	PSWCF		915	744	1,659															
FlatIron - Longmont NW 230-kV Upgrade	PSWCF		300		10,100													300		300
Dixon Creek - FlatIron 230-kV Upgrade	PSWCF		300		11,100													300		300
East Morrill Tap-Wildcat 34.5-kV line	PSWCF		570		570				60		60	80		80	415		415	15		15
Wildcat-Sievers 69-kV line	PSWCF		2,030		2,030				200		200	290		290	1,450		1,450	90		90
Eastern Plains Transmission Project	PSWCF		15,000		15,000	7,500		7,500												
Distribution Line Repair/Replacement - Cancelled	PSWCF																			
Troublesome-Colorado Pumps - Cancelled	PSWCF																			
Lovell - Thermopolis 115-kV line Rebuild - Completed	PSWCF			1,767	1,767															
Line Equipment Replacements - General (PS)	PSWMF		450	35	485	50		50	50		50	50		50	50		50	50		50
Wood Pole Test and Treatment (PS)	PSWMF		2,840		2,840	400		400	480		480	480		480	480		480	440		440
T-Line SubTotal			**175,661**	**6,239**	**222,350**	**14,750**		**14,750**	**8,890**		**8,890**	**11,650**		**11,650**	**17,845**		**17,845**	**9,795**		**9,795**
Substations																				
Lusk Rural - Podolak Improvements	PSWCF		400		400															
Willoby Switchyard 115-kV	PSWCF		3,200		3,200															
Ault 230-kV additions (AU-MM 230)	PSWCF		2,100		2,100															
Snowy Range Substation 230-kV (Laramie)	PSWCF		4,150		4,150															
Miracle Mile 230-kV additions (AU-MM 230)	PSWCF		4,000		4,000															
Yellowtail 2nd Transformer Addition	PSWCF		75	3,023	3,098															
Limestone 34.5-kV additions	PSWMF		746		746															
Snowy Range Substation 115-kV (Laramie)	PSWCF		4,550	358	4,908															
Lingle Substation 69kV additions	PSWCF		2,425		2,425				100		100	2,050		2,050	275		275			
Torrington Substation 69-kV additions	PSWCF		4,130		4,130				150		150	3,550		3,550	430		430			
Cheyenne 230-kV additions	PSWCF		5150		5150															
Beaver Creek 230-kV additions (BC-EE 230-kV)	PSWCF		5600		5600															
Torrington Substation KY2A addition	PSWCF		1500		1500															
Willoby Substation 230-kV	PSWCF		1800		7200													1,800		1,800
Ault 230-kV terminal (AU-WBY 230-kV)	PSWCF		100		3200													100		100
Wray Substation Modifications - Completed	PSWCF																			
Whiterock Substation - Completed	PSWCF			3,995	3,995															
Whitney - Completed	PSWCF			657	657															
Cheyenne 115-kV Shunt Capacitor - Cancelled	PSWCF																			
Gering Substation 69-kV additions - Cancelled	PSWCF																			
Torrington - Wildcat 69kV additions - Cancelled	PSWCF																			
Battery and Charger Replacements (PS)	PSWMF		1,324	669	1,993	100		100	100		100	100		100	100		100	100		100
CCVT, PT, & CT Replacement (PS)	PSWMF		594		594	50		50	50		50	50		50	50		50	100		100
Misc. Substation Elect. Equipm. Replace. (PS)	PSWMF		11,168		11,168	1,832		1,832	1,412		1,412	1,795		1,795	1,804		1,804	1,700		1,700
Replace 230kV Arrestors AV5A on Stegall E. 230 Bus	PSWMF		32		32															
Substation Test Equipment (PS)	PSWMF		900		900	100		100	100		100	100		100	100		100	100		100
Substation Disconnect Switch Replacements (PS)	PSWMF		360		360	40		40	40		40	40		40	40		40	40		40
Alcova 462, 662, 862, 1062 Replacement	PSWMF		450		450															
Gering Station Service Switchgear	PSWMF		25		25															

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RMR Pick Sloan Capital Investment Plan FY06-FY15 Detail

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W Total = Western Only Costs
O Total = Trust and Joint Participation Costs
FY Total = Sum of W Total and O Total
MPS Split = Multiple Power System Cost Split.

PROJECT	Fund Power Sys	MPS Split	Estimate FY06-FY15	Actuals thru end of FY05	PROJECT TOTAL	FY11			FY12			FY13			FY14			FY15		
						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Gering Breaker Replacement: 162,462,966	PSWMF		274		274															
Glendo PCB 524 Replacement	PSWMF		63		63															
Haxtun Interruptor MOI 164 Replacement	PSWMF		50		50															
Raderville 115KV Switch Upgrade	PSWMF		416		416															
Sidney KY1A Transformer Replacement	PSWMF		696		696															
Willow Creek KZ2A Replacement	PSWMF		236		236															
Garland KZ1A Replacement	PSWMF		259		259															
Granby Pumping Plant Transformer Modifications	PSWMF		575	22	597															
Limestone Sub Control Upgrades - Merged w/34.5kv Addit	PSWMF																			
Fleming Interruptor MOI 164 Replacement	PSWMF		88		88															
Pilot Butte 662 Breaker Replacement (TRS)	PST&R		111		111															
Chappell 144 Replacement - Completed	PSWMF			93	93															
Glendale KW1A - Replace Regulators - Completed	PSWMF			159	159															
Substations SubTotal			**57,547**	**8,976**	**75,023**	**2,122**		**2,122**	**1,952**		**1,952**	**7,685**		**7,685**	**2,799**		**2,799**	**3,940**		**3,940**
Communications																				
Microwave Spur Replacements (PS)	PSWCF		1,025	4,458	5,483															
Archer-Cheyenne Fiber Optic Installation - Completed	PSWMF																			
Nortel Microwave Replacements	PSWMF		1,500		1,500	500		500												
PMOC - Crossroads Fiber Optic Installation	PSWMF		80		80															
Communications Test Equipment (PS)	PSWMF		932		932	100		100	100		100	100		100	100		100	100		100
VHF Test Equipment	PSWMF		18	2,043	2,061															
Estes-Valley Fiber Optic Installation	PSWMF		70	425	495															
Granby-West Portal Fiber Optic Installation	PSWMF		204		204															
USBR - CBT Fiber Optic Installation	PST&R		469		469															
WAPA - Cody Area Fiber Optic Installation	PSWMF		345	12	357															
UHF Radio Replacements (PS)	PSWMF		70	506	576															
Granby-Table Mountain Fiber Optic Installation	PSWMF		150		150															
Peetz Table Communication Building Replacement	PSWMF		225		225															
Merino Communication Building Replacement	PSWMF		225		225															
Misc. Communications Facilities Replacement (PS)	PSWMF		4,384		4,384	800		800	670		670	800		800	800		800	800		800
Blue Ridge Communication Building Replacement	PSWMF		200		200															
Grouse Mountain Communication Building Replacement	PSWMF		200		200															
Central PMOC Communications Loop (80/20 Split)	PSWMF	80%	810		810															
Airport-Weld Fiber Optic Installation - Cancelled	PSWMF																			
Horsetooth Tap - Flatiron Fiber Optic - Cancelled	PSWMF																			
Communications SubTotal			**10,907**	**7,444**	**18,351**	**1,400**		**1,400**	**770**		**770**	**900**		**900**	**900**		**900**	**900**		**900**
Control, Protection and Metering																				
Protective Relay Replacements (PS)	PSWMF		6,904	1,256	8,160	690		690	690		690	690		690	690		690	690		690
Test Equipment Replacements (PS)	PSWMF		575		575	50		50	50		50	50		50	50		50	100		100
RTU Replacements (PS)	PSWMF		1,135	203	1,338	230		230												
DDI Replacements (PS) - Expensed	PSWMF																			
Glendo DCS Installation - Completed	PSWMF																			
CPM SubTotal			**8,614**	**1,459**	**10,073**	**970**		**970**	**740**		**740**	**740**		**740**	**740**		**740**	**790**		**790**
Mobile and Heavy Equipment																				
Misc Heavy Equipment Replacements (PS)	PSWMF		4,697		4,697	600		600	600		600	600		600	600		600	600		600
Versalift, 38' - Loveland	PSWMF		80		80															
Bob Cat - Loveland (replacement)	PSWMF		45		45															
Manlift, 65' - Cheyenne (replace 51928)	PSWMF		300		300															
Bucket Truck, 110' - CAS	PSWMF		600		600															
Mobile transformer – Loveland	PSWMF		950		950															
Lowboy Trailer_ CAS	PSWMF		60		60															
CDY Backhoe (replaces E51203 (CDY) - Cancelled	PSWMF																			
Backhoe/Loader - Brush (replaces E-30995) - Completed	PSWMF																			
Forklift - Loveland (replacement) - Cancelled	PSWMF																			

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						W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL	W Total	O Total	FY TOTAL
Manlift, 47' - Brush (replace 51931) - Completed	PSWMF																			
Mobile & Heavy Equipment SubTotal			**6,732**		**6,732**	**600**		**600**	**600**		**600**	**600**		**600**	**600**		**600**	**600**		**600**
Programmatic Improvements																				
GIS Development (PS)	PSWCF	67%	576	1,010	1,586															
Small Facility Projects (C&R - PS)	PSWCF		4,950		4,950	500		500	500		500	500		500	500		500	500		500
E-Scheduling/E-Tagging (PS)	PSWMF	69%	1,109		1,109							46		46						
IT General Support Systems (PS)	PSWMF	69%	502		502	33		33	212		212	22		22	59		59	59		59
SCADA Upgrades (PS)	PSWMF	69%	1,774	304	2,078	65		65	436		436	67		67	67		67	67		67
DAC Hardware Upgrade	PSWMF	69%	53		53															
Alt. Control Center Expansion - CH (PS)	PSWMF	69%	168	648	816															
Operations Center Map Board Replacement	PSWMF	67%	690		690															
RRADS Facility Small Projects (PS)	PSWMF		1,439		1,439	100		100	100		100	100		100	100		100	100		100
Virginia Smith DC Tie HVAC Replacement	PSWMF		564	69	633															
Loveland Maintenance Building Vehicle Lift	PSWMF		133		133															
Gering Service Center Repairs - Expensed	PSWMF																			
Gering 2507 Router - Completed	PSWMF																			
WIN Project (PS) - Expensed	PSWMF																			
Programmatic Improvements SubTotal			**11,958**	**2,031**	**13,989**	**698**		**698**	**1,248**		**1,248**	**735**		**735**	**726**		**726**	**726**		**726**
FY06 PS CIP Grand Total			**271,419**	**26,149**	**346,518**	**20,540**		**20,540**	**14,200**		**14,200**	**22,310**		**22,310**	**23,610**		**23,610**	**16,751**		**16,751**
FY05 PS CIP Totals					**289,841**	**29,200**	**1,900**	**31,100**	**21,150**	**300**	**21,450**	**28,380**		**28,380**	**22,980**		**22,980**			

Comparison Table (2005-2014)		
FY06 CIP		
FY05 CIP		
Diff		

5.1 Success Indicators

The goal of Western's Plan is to assure the most cost-effective use of available capital resources to assure long-term electric system reliability and availability. The following sections summarize the inventory of major power system equipment and indicators for measuring the success of our capital program.

Facilities

Western operates and maintains an extensive system of interconnected substations, transmission lines, and communication sites. The Region owns and operates 118 substations in the states of Wyoming, Nebraska, Colorado, New Mexico, and Utah. The substations comprise the majority of the maintained equipment in the Region, including 460 high voltage circuit breakers and 121 power transformers.

The substations are interconnected by 5,286 miles of transmission lines operating at voltages between 12,500 and 345,000 volts. The majority of the transmission lines (3,324 miles) were built using wood pole structures, with the remainder (1,962 miles) being of steel structure construction. The breakdown of line miles by voltage and construction is shown below:

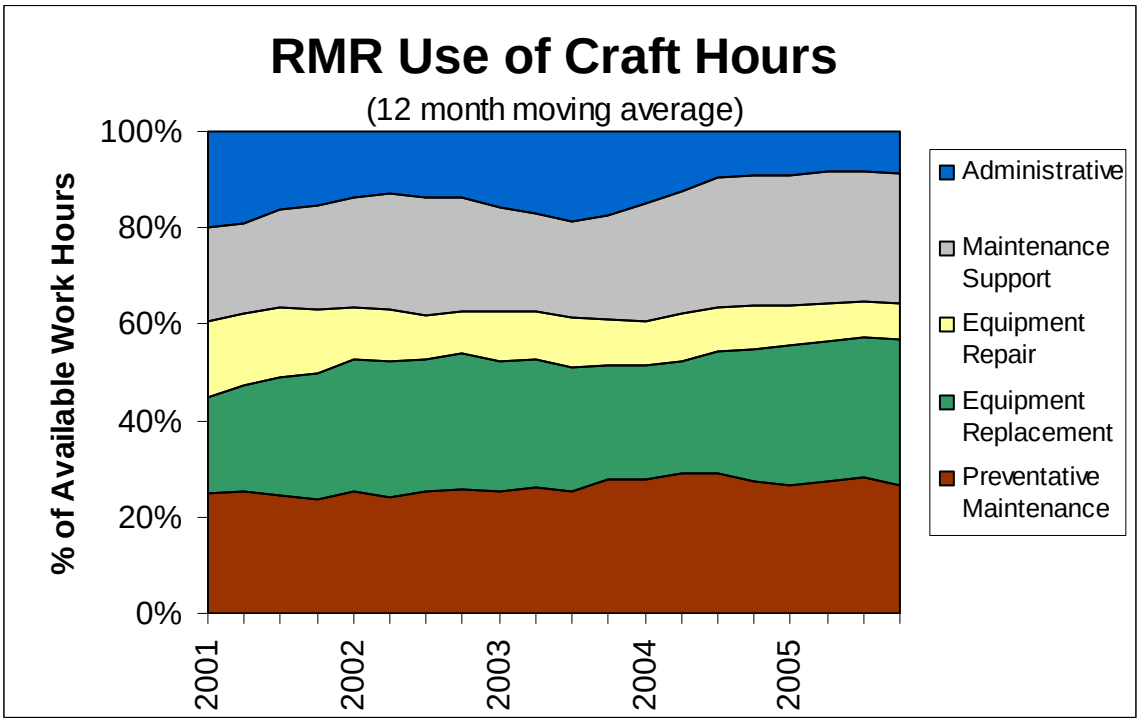
Voltage	*Miles of Wood Construction*	*Miles of Steel Construction*	*Total*
345-kV	0	383	383
230-kV	127	1,434	1,561
138-kV	306	24	330
115-kV	2,347	92	2,439
69-kV	243	25	268
<69-kV	301	4	305
Total	3,324	1,962	5,286

The electrical system is operated from the Loveland Control Center by means of an extensive communications network consisting of microwave, radio, and fiber optic links. The links are connected through 142 Western-owned communications sites.

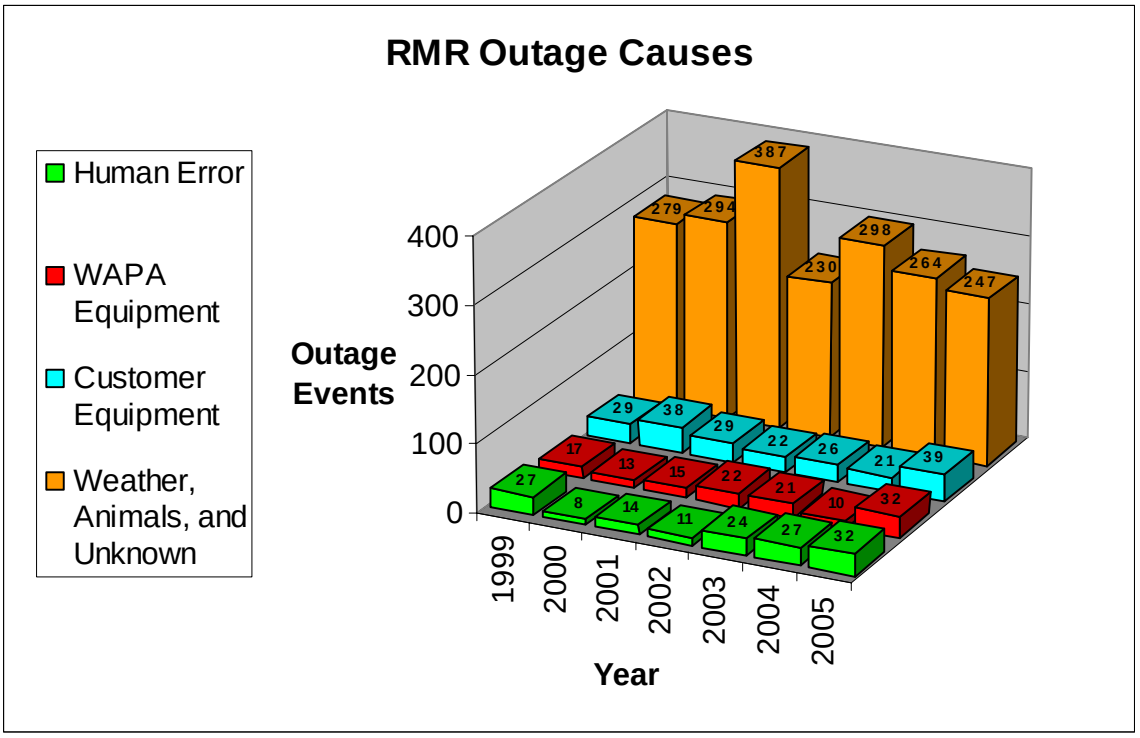
Indicators

We can measure the success of our efforts in several ways:

- ***Leading Indicators***. Measurable activities that result in positive outcomes are considered to be leading indicators. For example, increasing the amount of resources allocated to preventative maintenance activities on equipment should result in a reduction of critical equipment failures. Similarly, increasing the amount of resources allocated to equipment improvement and replacement activities should result in fewer equipment-related outages. The following chart shows Western's percentage allocation of craft labor for preventative maintenance and equipment replacement activities over the last four years as compared to other activities.

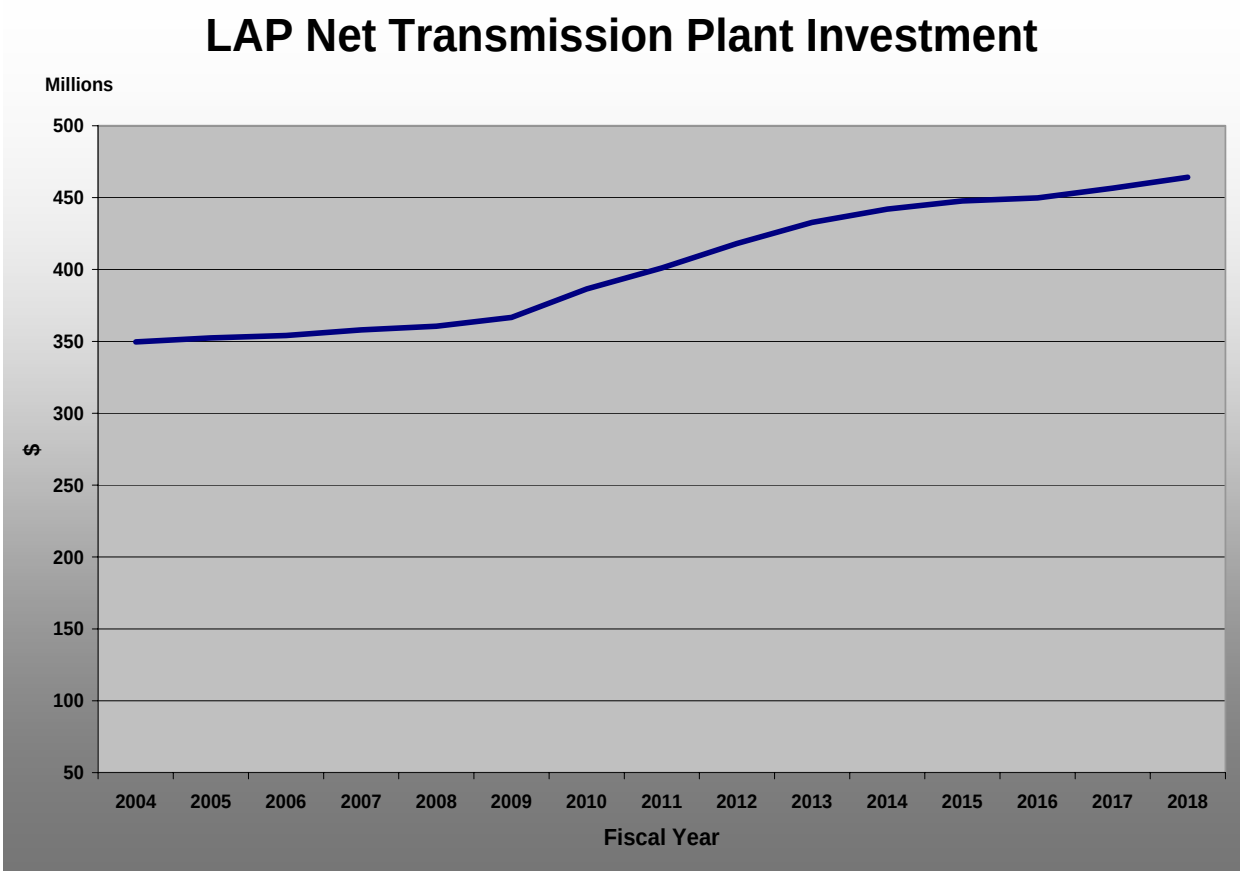


- ***Lagging Indicators***. The ultimate goal of the Capital Investment Program is to assure electric system reliability. Therefore, the result of an effective program should be fewer power outages due to equipment failures. Since the results of a poorly maintained or managed power system would not be apparent for several years, equipment outage rates tend to be a lagging performance indicator. The following chart shows the annual number of outages in the control system due to all causes including weather, equipment failures, and human error.

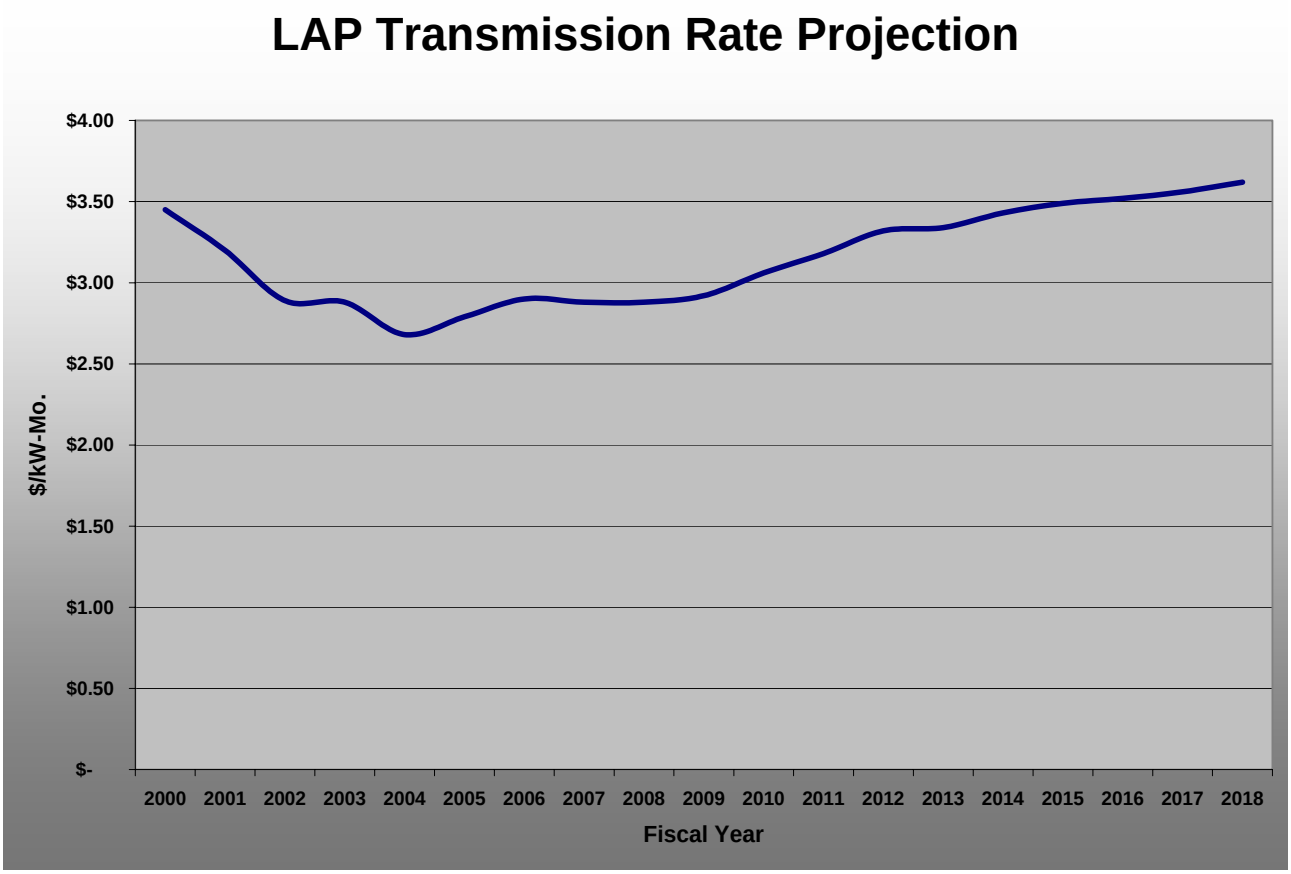


- ***Financial Indicators.*** Western has identified two financial measures that reflect a cost-effective investment program: Net Plant Investment and Rate Impact. Western does not believe that it is possible to maintain system reliability under current load and generation growth conditions without increasing Net Plant Investment. A flat or declining Net Plant Investment is an indicator of a deteriorating system. Conversely, Western must consider the impact on the transmission rate of increasing the Net Plant Investment too rapidly, which result in an unacceptable growth in the rate. As the following graphs indicate, Western's proposed Plan seeks to successfully balance these issues.

  The Plan results in an annual growth rate in plant investment for the LAP system of approximately 2% from 2004 through 2018.



The rate impact of these investments also shows an annual growth rate of 2% per year. However, the estimated rate in 2018 is only slightly higher than the rate that Western initiated in FY00.



In determining the estimated rate impact, Western used an average load growth rate of 2% per year.

Western will continue to update its Plan and will collaborate with CRSP to develop similar financial indicators for the CRSP transmission system.

Customer Comments on the 2006 Draft Capital Investment Program Plan

Western received thirteen letters commenting on RMR's draft 2006 Capital Investment Plan. The joint Eastern Plains Transmission Project (EPTP) with Tri-State Generation and Transmission Association was specifically addressed in every letter.

The following is a summary of each set of comments received.

1. Arkansas River Power Authority (ARPA) stated its support for Western's participation in the EPTP referencing benefits of potential saving in transmission costs and reduced losses.

2. Kansas Electric Power Cooperative, Inc., stated its support for Western's participation in the EPTP referencing benefits in lowering transmission costs, increasing transmission sales and, most importantly, lowering purchase power costs. The $15 million cost in participation is more than offset by the estimated savings and additional revenue to Western. They also recommended that Western hold the line on the $15 million contribution to the Project.

3. Lamar Light and Power stated its support for Western's participation in the EPTP. Western's participation in the project will make delivery of federal allocation more economical with lower transmission fees and power supply costs. They also noted that all the communities of the ARPA will benefit.

4. Sunflower Electric Power Corporation stated its support for Western's participation in the EPTP.

5. The Town of Holly stated its support for Western's participation in the EPTP referencing the benefit of lower transmission costs.

6. The Town of Springfield sent two letters stating its support for Western's participation in the EPTP referencing benefits in transmission cost savings and reduced losses. As a member of the Arkansas River Power Authority, The Town of Springfield recognizes that the increases in transmission capacity will benefit ARPA's 1.5 MW wind turbine southwest of Springfield. This project could be the mechanism that allows more wind development to take place in its county.

7. The City of Trinidad stated its support for Western's participation in the EPTP referencing benefits of saving in construction costs, wheeling expenses and system losses. They noted that ARPA will also realize benefits from the Project.

8. Platte River Power Authority stated its support for Western's participation in the EPTP. The capacity that Western will have after the Project is completed will more than pay for the modest investment by Western. Specifically connecting a

345-kV line from Big Sandy into Story and rebuilding Western's 115-kV line into Erie will help provide support for Platte River's loads into the Longmont area.

9. The City of Fountain stated its support for Western's participation in the EPTP referencing the benefit of lower transmission costs, transmission losses and elimination of augmentation credits. The Project will strengthen Western's transmission system in eastern Colorado and improve system reliability. The proposed interconnection at Midway Substation will provide specific opportunities for the City of Fountain to receive its federal allocation without using intervening transmission systems.

10. Wyoming Municipal Power Agency (WMPA) supports Western's involvement in this project because it allows for opportunities to enhance transmission deliveries to existing LAP customers in the Midway Substation area and reduces costs for transmission access to Mt. Elbert Pumped Storage generation resource. WMPA pointed out several areas of concern for the EPTP: (a) that Western has no inherent utility responsibility nor obligation to increase transmission capacity beyond that necessary to convey CROD capacity and energy to its designated delivery points; (b) the long lead time between execution of the contract and the realization of any system enhancements makes economic analysis speculative at best; (c) that RMR did not give customers a long lead time to comment on our intent to participate in this project; (d) that Western maintain the ability to terminate involvement and financial obligations if sufficient "off ramps" are not realized. This includes access into Midway Substation, allowing for the expansion of delivery rights at Midway; (e) that final contract language should provide sufficient compensation to RMR for all actual work performed in all phases of the project; (f) that RMR should be able to have appropriate rights to the communication system that will be a part of this project; and (g) that Western not pursue this project to the exclusion of more cost effective solutions to CROD delivery and enhanced transmission opportunities that may arise in the future. WMPA expressed its appreciation for Western's willingness to discuss plans for transmission augmentation, solicit input on such projects, and modify plans based on customer input.

11. The Municipal Energy Agency of Nebraska (MEAN) made specific comments on the draft copy of RMR's Capital Improvement Plan. Their first comment addressed the Platte Valley 34.5 to 69-kV Conversion. MEAN supports Western's most recent approach to stabilizing the low power factors in this area and to minimizing major impacts to MEAN members. MEAN also supports the Miracle Mile-Cheyenne-Ault Improvements. MEAN appreciates increasing transmission on the TOT 3 interface and has requests in the cue for additional TOT 3 capacity rights. The Front Range Improvements project is also supported by MEAN. MEAN requests that Western construct the lines in a double circuit, 230-kV line on one side and 115-kV line on the other. This will allow Western and MEAN customers time to develop transition plans for future 230-kV operation. MEAN supports the EPTP but asks that Western ensure that its Open

Access Transmission Tariff principles be adhered to for allocation and contribution to facility construction costs. MEAN appreciates Western considering innovative approaches to project planning as it pertain to interconnecting transmission facilities at the Midway Substation.

12. Colorado Springs Utilities (CSU) supports Western's participation in the EPTP, especially the plan to extend new transmission into Midway Substation, and suggests that Western's participation in the EPTP be contingent on completing the full Midway interconnection. CSU asks that Western include reasonable estimates of future transmission revenues in the annual power repayment study to mitigate added transmission cost impacts on the firm power rate. CSU encourages Western to continue share common project facilities with other participants to reduce capital and maintenance costs and suggests that Western seek equitable compensation for its involvement in the project.