

R O C K Y M O U N T A I N R E G I O N



Draft Capital Investment Program Plan 2007-2016

FY2007.1

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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 FY06 Accomplishments

CRSP Communication Facility Projects. Progress continued to replace the analog microwave system with a new digital system. Paths between Island Lake and Rifle, plus paths between Magnetic Mountain and Fontenelle Power Plant (a total of 10 hops), were replaced. In addition, the Southern Colorado Microwave Project was commissioned this year (a total of 11 hops) completing the Colorado digital microwave ring, a joint project between Western, Tri-State, and Xcel.

The CRSP VHF mobile radio system was converted to narrow-band digital operation. This effort was to meet NTIA compliance requirements for government agencies operating in the VHF Band. The dispatch console system was also replaced to coincide with the new radio system upgrade.

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 completed project planning and continued environment, lands, and design activities. A request to Tri-State was made for a new interconnection at Durango Substation and sectionalizing their Durango-Glade 115-kV line at their Hesperus Substation. The required in-service date is March 31, 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. In FY06, specifications and an award for the purchase of transformer KY2A were completed. The purchase price was \$2,385,265. Work on the design and specifications for the substation modifications were initiated. The planned in-service date is November 2007.

Great Cut Transformer. The scope of the project is to replace the failed transformer KX1A. The transformer was ordered in FY06. The purchase price was \$720,565. Work on the design and specifications for the substation modifications were initiated. The planned in-service date is November 2007.

Other Equipment Replacement Efforts. High-voltage circuit breakers were replaced at Archer and Hayden Substations. A 345-kV breaker at Ault Substation was rebuilt. Western also replaced reactors at Hayden, Curecanti, and Midway Substations.

2.1.2 CRSP FY07 Planned Activities

Animas-La Plata Project Power. In FY07, Western plans to complete environment, lands, and design activities; award the substation and transmission line contracts; and execute the contract with Tri-State for a new interconnection at Durango Substation and the sectionalizing of the Durango-Glade 115-kV line at Hesperus Substation. The required in-service date is March 31, 2007.

Flaming Gorge Transformer Uprate. Tasks planned for FY07 include design of substation modifications, awarding a construction contract for the installation of the new KY2A transformer, and commissioning by Western labor. Because the single 3-phase transformer replaces three single-phase units, new foundations and bus arrangements are required.

Great Cut Transformer. Tasks planned for FY07 include design of substation modifications, awarding a construction contract for the installation of the new KX1A transformer, and commissioning by Western labor. Because the single 3-phase transformer replaces three single-phase units, new foundations and bus arrangements are required.

Morrow Point Black Start. RMR Operations requested evaluation and development of alternatives to provide black start capabilities at Curecanti Substation for the Morrow Point generators. The scope is to provide the ability to connect the Morrow Point terminal at Curecanti directly to the transformer KZ1A. Preliminary alternatives include installing a load break line disconnect switch on the Lost Canyon 230-kV line. This project is being developed in FY07 with installation in FY08.

CRSP Communication Facility Projects. Major expenditures are nearing an end for microwave radio replacement projects, as all remaining equipment has been purchased and will be installed over the next year. Some analog microwave radio links will be replaced with fiber optic links over the next two years using funds received from the FCC 2GHz auction, also known as the 2GHz Replacement Fund. Full completion is expected in FY08 for all of these projects.

The Raspberry Creek communication building will be replaced this year.

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 Shiprock, Midway, Blue Mesa, and Curecanti Substations. Transformer dissolved gas monitors are planned for installation on the Waterflow Substation phase shifting transformers.

2.2 Loveland Area Projects (LAP) Facilities

2.2.1 LAP FY06 Accomplishments

Communication Facility Projects. Progress continued in replacing the analog microwave system with a new digital system. In FY06, analog microwave radios were replaced with digital radios from Lovell to Little Sheep Microwave sites.

The LAP VHF mobile radio system was converted to narrow-band digital operation. This effort was to meet NTIA compliance requirements for government agencies operating in the VHF Band. The dispatch console system was also replaced to coincide with the new radio system upgrade.

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 delayed the planned in-service date of these additions until December 2005. The transformer was energized on May 17, 2006.

Hoyt-Wiggins Transmission Line. In FY06, Western's crews tore out the existing 13.1 mile line and installed new structures. A contractor installed hardware, insulators and 477 ACSR conductors. The new line was energized on February 10, 2006, and will prevent a reduction in future TOT3 capacity during the planned rebuild of the Beaver Creek-Hoyt Transmission Line.

Beaver Creek-Hoyt Transmission Line. To avoid a reduction in the total transfer capability of TOT3, Western developed a project to rebuild the existing 32.4-mile line at 230-kV. In FY06, Western and Tri-State entered into an agreement for joint participation in the project. Also in FY06, tasks completed included the environmental clearance with the issuance of the Finding of No Signification Impacts (FONSI) statement, land surveys, ROW acquisition, design and award of a construction contract. The planned in-service date is May 2007.

Beaver Creek – Big Sandy Transmission Line. In FY06 the construction contract awarded for the Beaver Creek-Hoyt Transmission Line also included a reroute of 3.0 miles of the Beaver Creek-Big Sandy Transmission Line. The planned in-service is May 2007.

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. In FY06, tasks completed included the environmental clearance with the issuance of the FONSI statement; surveys; design and specifications; awarded a construction contract and continued to acquire necessary ROW easements. The planned in-service date is July 2008.

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. Furthermore, 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. In FY06, designs and specifications were completed and a construction contract was awarded. The in-service date is May 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 line. In FY06, RMR completed the environmental tasks. The planned in-service date is September 2009.

Granby Pumping Plant (GPP)-Windy Gap 69-kV Rebuild. Western is continuing to work on the environmental assessment for this project. The environmental contractor for the project is well into development of the draft environmental assessment document. Environmental and engineering studies have been completed as part of the environmental analysis. Project update letters and news letters were sent out to everyone listed in the project database.

Torrington Substation KY2A Addition: Western and the City of Torrington entered into an agreement to add a parallel transformer in Western's Torrington Substation. Load forecasts show significant new loads being served from Torrington Substation which will exceed the rating of the existing transformer. This project will 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. Development of the technical specifications for the transformer purchase began in FY06.

Eastern Plains Transmission Project. The project kick-off meeting was held on March 21, 2006, and the project charter and schedule were approved in May. The Notice of Intent to prepare an environmental impact statement (EIS) was published in the Federal Register in August. The environmental process began in September with EIS public scoping meetings to receive public comments on the project. A technical committee was also established to address design issues. The design criteria memorandum is nearing completion.

Granby Pumping Plant (GPP) Switchyard - West Portal Optical Fiber Ground Wire (OPGW). In this 8.9-mile line section, one overhead ground wire was replaced with a 48-fiber OPGW. The optical fibers are 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 completes the fiber optic backbone that already includes Valley-Estes (installed 2004), Estes-East Portal (installed 1992), and East Portal-West Portal (installed 1984).

Other Equipment Replacement Efforts. Circuit breakers were replaced at Glendo and Gering substations. The station service switchgear was replaced at Gering Substation. Motor-operated interrupters were replaced at Fleming and Haxtun Substations. Surge arrestors were replaced at Stegall Substation on the 230-kV bus. Western continued its wood pole test and treatment program.

2.2.2 LAP FY07 Planned Activities

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: In FY07, RMR plans to acquire necessary ROW easements and continue construction. The planned in-service date is September 2009.

Snowy Range Substation: In FY07, construction will continue on the 115-kV substation. The planned in-service date is May 2007. RMR will complete

planning, designs and procurement of the 230/115-kV transformation, and begin development of design data for the future 230-kV additions.

Ault-Cheyenne 115-kV: 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, design and procurement of the Cheyenne and Miracle Mile 230/115-kV transformers and the development of design data for the future 230-kV additions. The planned in-service date for each is September 2009.

Wray Substation. In FY07 Tri-State plans to complete an emergency feed from Tri-State's Wauneta-Wray 115-kV line, which will support service in the area in the event of an outage on Western's line. The project improves substation reliability as well as the electric service to the Y-W Electric Association and City of Wray. Western will be responsible for sharing 50 percent of the total emergency feed project cost.

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. FY06 saw an agreement of a joint project with Platte River Power Authority for rebuilding approximately 10 miles of transmission lines in Fort Collins, Colorado. Also in FY06, Western and Tri-State entered into an agreement for a joint project to rebuild the Beaver Creek-Hoyt and Hoyt-Erie 115-kV lines totaling 78 miles. This project also includes new 230-kV yards at Beaver Creek and Erie.

Beaver Creek – Hoyt Transmission Line. In FY07, construction will be completed. The planned in-service is May 2007.

Beaver Creek – Big Sandy Transmission Line. In FY07, construction will be completed. The planned in-service is May 2007.

Timnath – Black Hollow Line. This 4.5 mile line section will be rebuilt as a joint project between Western and Platte River Power Authority. Tasks in FY07 include the environmental clearance and the beginning of ROW, survey and design. The planned in-service is April 2008

Eastern Plains Transmission Project. The EIS process will continue throughout the year with a Record of Decision (ROD) anticipated in early 2008. Initial flights for field data gathering and surveying the rights-of-way will begin December 2006. Legal descriptions and tract plats will be completed and all easements acquired after the ROD. The project team will continue to refine project scope, complete the

Project Management Plan, and implement cost and progress tracking indicators for the project.

Granby Pumping Plant (GPP)-Windy Gap 69-kV Rebuild. Work on the environmental clearance will continue. Field data collection, ROW acquisition, and design work is planned to start once the environmental phase of the project is complete. Design work is planned to be completed late in the year. The projected in-service date for this project is early spring 2009. This project is 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 Tri-State, Northern Colorado Water Conservancy District, and Western.

Willoby Switchyard 115-kV: Western and Tri-State plan to execute the contract for this project early in 2008. Environmental work, field data collection, land acquisition and design work are planned activities for 2007. This project is to construct the Willoby Switchyard at the site of the present Prospect Valley Tap. The 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: Planned tasks for FY07 include purchase of a new transformer KY2A, design of substation additions, and award of a construction contract. Load forecasts show significant new loads being served from Torrington Substation which will exceed the rating of the existing transformer. This project will 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. The scheduled in-service date is December 2007.

Communication Facility Projects: The replacement of analog microwave radio links will be completed in FY07. Communications traffic will be moved onto all-digital links by the end of FY07. Some analog microwave radio links will be replaced with fiber optic links over the next two years using funds received from the FCC 2GHz auction, also known as the 2GHz Replacement Fund. Full completion is expected in FY08 for all of these projects.

Fiber Optic cables will be installed on Western transmission lines between North Cody, Buffalo Bill, and Heart Mountain Substations. This will replace two existing analog microwave links.

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. A high-voltage circuit breaker replacement is planned at Pilot Butte Substation. Power transformers will be replaced at Sidney, Garland, and Granby Pumping Plant Substations.

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 2007.

2.3 Joint Power System Projects

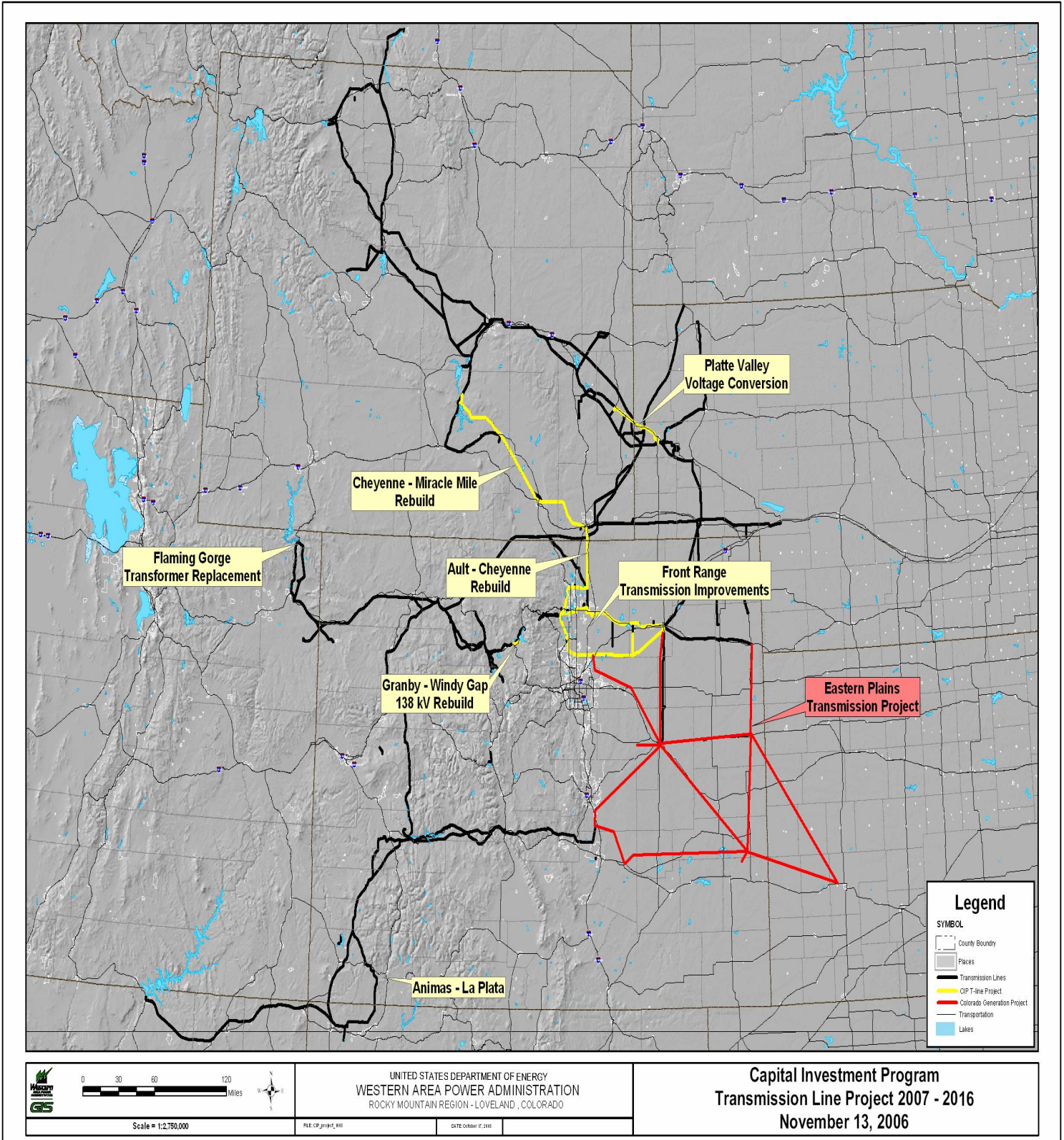
2.3.1 Joint LAP & CRSP FY06 Accomplishments

Alternate Control Center. The ACC is required to meet the North American Electric Reliability Council (NERC) standards and has been tested every six months since 2004. Each testing exercise consists of dispatching from the ACC for a four-hour period. Since the United States Bureau of Reclamation (USBR) Loveland Control Center will also utilize the ACC, they have been included in the testing since the spring of 2006.

2.3.2 Joint LAP & CRSP FY07 Planned Activities

RMR Dispatch Map Board. The manufacturer of the two large Dispatch map board display systems has given Western notice that it will no longer manufacture replacement lamp bulbs. RMR purchased enough spare bulbs to tentatively last through late 2007 or early 2008 if both wall map board displays are used.

It has been decided to extend the operating life of the larger map board display by using replacement lamps originally purchased for the smaller display. The small map board display would then be retired and replaced by Liquid Crystal Display (LCD) wall monitors in order to maintain the visibility of various RMR system-wide indicators. This should extend the life expectancy of the large map board display to September 2010 (barring any catastrophic events). The smaller map board will be replaced with a LCD display in 2007. In FY07, RMR will begin planning for the map board replacement, which is expected to occur in FY2010.



3 PROGRAM SUMMARY BUDGET

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

Rocky Mountain Region Capital Projects Ten Year Plan

Total Costs (x1000)

	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
Pick Sloan											
T-Line Improvements and Replacements		26,046	20,950	31,350	23,300	15,050	9,200	9,050	8,170	9,280	11,400
Substation Improvements and Replacements		12,213	15,057	6,708	5,390	2,060	2,060	3,410	6,560	2,060	1,860
Communication System Improvements and Replacements		649	940	2,060	3,264	3,700	2,970	1,650	1,200	900	900
Substation Control, Protection, and Metering		758	850	740	740	740	740	740	740	790	790
Mobile and Heavy Equipment Replacements		300	1,395	600	600	600	600	600	600	600	600
Buildings and Programmatic Investments	FY2006 Actuals	1,671	1,606	632	1,199	565	936	567	636	658	567
Total	*	41,637	40,798	42,090	34,493	22,715	16,506	16,017	17,906	14,288	16,117
FY2006 CIP Plan Totals		39,942	43,134	27,441	36,836	20,540	14,200	22,310	23,610	16,751	
CRSP											
T-Line Improvements and Replacements		4,993	325	50	50	50	50	50	50	50	50
Substation Improvements and Replacements		2,106	1,160	1,485	1,060	1,120	1,330	1,600	1,450	1,450	1,450
Communication System Improvements and Replacements		575	2,935	745	1,675	650	500	500	500	500	500
Substation Control, Protection, and Metering		682	790	790	790	790	790	790	790	790	790
Mobile and Heavy Equipment Replacements		185	350	500	500	500	500	500	500	500	500
Buildings and Programmatic Investments	FY2006 Actuals	980	1,253	830	969	598	1,191	579	670	615	566
Total	*	9,521	6,813	4,400	5,044	3,708	4,361	4,019	3,960	3,905	3,856
FY2006 CIP Plan Totals		13,717	7,931	4,392	4,571	4,328	3,848	4,105	3,788	3,705	

* - To be furnished in final document

Western-only Costs (x1000)

	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
Pick Sloan											
T-Line Improvements and Replacements		14,512	13,725	20,100	11,865	15,050	9,200	9,050	8,170	9,280	11,400
Substation Improvements and Replacements		10,365	13,587	6,630	5,350	2,060	2,060	3,410	6,560	2,060	1,860
Communication System Improvements and Replacements		510	300	910	2,464	3,000	2,270	1,575	1,200	900	900
Substation Control, Protection, and Metering		758	850	740	740	740	740	740	740	790	790
Mobile and Heavy Equipment Replacements		300	1,395	600	600	600	600	600	600	600	600
Buildings and Programmatic Investments	FY2006 Actuals	1,671	1,606	632	1,199	565	936	567	636	658	567
Total		38,072	28,116	31,463	29,612	22,218	15,806	15,942	17,906	14,288	16,117
FY2006 CIP Plan Totals		34,512	24,903	25,860	27,008	16,940	14,200	22,310	23,610	16,751	
CRSP											
T-Line Improvements and Replacements		4,993	325	50	50	50	50	50	50	50	50
Substation Improvements and Replacements		2,018	1,160	1,485	1,060	1,120	1,330	1,500	1,450	1,450	1,450
Communication System Improvements and Replacements		525	500	345	1,100	575	500	500	500	500	500
Substation Control, Protection, and Metering		682	790	790	790	790	790	790	790	790	790
Mobile and Heavy Equipment Replacements		185	350	500	500	500	500	500	500	500	500
Buildings and Programmatic Investments	FY2006 Actuals	980	1,253	830	969	598	1,191	579	670	615	566
Total		7,663	9,383	4,378	4,000	4,469	3,633	4,361	3,919	3,960	3,856
FY2006 CIP Plan Totals		13,467	7,931	4,392	3,571	4,328	3,848	4,105	3,788	3,705	

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.

<i>Major Projects</i>	<i>Western Investment (\$ thousands)</i>		
	FY07	FY08	FY09
Granby Pumping Plant-Windy Gap Rebuild ¹	450	1,700	
Cheyenne-Miracle Mile 230-kV Upgrade	10,850	5,900	
Gering/Gering Valley 34.5-kV T-Line	75	200	
Animas-LaPlata Project ²	4,943	275	
Beaver Creek-Hoyt ¹	1,200		
Cheyenne-Ault 230-kV Upgrade	550	5,700	16,000
Timnath – Black Hollow 230-kV Upgrade ¹	1,150	100	
Erie-Hoyt 230-kV Upgrade ¹	187	75	3,750
Flatiron-Weld 230kV Upgrade		300	500

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	Western Investment (\$ thousands)		
	FY07	FY08	FY09
Willoby Switchyard 115-kV ¹	400	1,800	
Snowy Range Substation 115-kV	500		
Lusk Rural and Podolak Substation Improvements	25	125	250
Torrington Substation Transformer (KY2A) Addition ¹	750	100	
Limestone Substation 34.5-kV Additions & Control Rpl.	422		
Miracle Mile Substation 230-kV Additions	2,400	3,250	400
Ault Substation 230-kV Additions	350	1,250	500
Cheyenne 230-kV Additions	2,400	3,250	400
Snowy Range Substation 230-kV	2,200	2,650	250
Beaver Creek 230-kV Additions	25	300	3,250
Power Transformer Replacements			
Granby PP Transformer Modifications ¹	88		
Great Cut KX1A Transformer Replacement	365	65	
Flaming Gorge KY2A & KY2B	565	65	
Sidney KY1A ¹	245	102	
Garland KZ1A ¹	124	20	
Willow Creek KZ2A			78

¹ Joint project; Western cost shown.

Major Projects	Western Investment (\$ thousands)		
	FY07	FY08	FY09
Circuit Breaker and Switch Replacements			
Midway 1562, 1662 Replacement	90	90	25
Blue Mesa 1066, 1162, 1362, 1462 Replacement	115	90	90
Raderville 115-kV Switch Upgrade	243		
Shiprock 3262, 3362, & 3462 Replacement	90	90	20
Alcova 462, 662, 862, 1062 Replacement		450	
Curecanti 1082 & 1092 Replacement	258		
Other Substation Work			
Hayden SS Switchgear Replacement	40	135	20
Shiprock Transformer Gas Monitors		140	140
Waterflow Transformer Gas Monitors	133		
Ault KU1B Transformer Gas Monitor			50
Curecanti Black Start Modifications		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.

<i>Major Projects</i>	<i>Western Investment (\$ thousands)</i>		
	FY07	FY08	FY09
Microwave Spur Replacements – (Wyoming, Nebraska, N.E. Colorado)	30		
Microwave Spur Replacements – CRSP	250		
Fiber Optic Multiplexer Equipment	200		
Archer Communications Building Replacement	25	200	
Peetz-Table Communications Bldg Replacement			25
Merino Communications Bldg. Replacement			25
Blue Ridge Communications Building Replacement		200	
Buffalo Pass Communications Bldg. Replace.		200	
Raspberry Creek Communications Bldg. Replace.	200		
Central PMOC Communications Loop Upgrade			905
Big Mesa-Poncha MW Replacement w/Fiber ¹	50	2,435	400
Kremmling-Grouse Mtn MW Replacement w/Fiber ¹	50	640	200
Communications Network Management System ¹			950

¹ Funded by Federal 2 Ghz frequency auction – no impact to rates

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.

<i>Major Projects</i>	<i>Western Investment (\$ thousands)</i>		
	FY07	FY08	FY09
Protective Relay Replacements	1,190	1,380	1,380
RTU Replacements	90	110	

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.

<i>Planned Replacements</i>	<i>Western Investment (\$ thousands)</i>		
	FY07	FY08	FY09
Misc Heavy Equipment Replacements	299	300	1,100
Mechanic's Svc. Truck - Casper	100		
Hot Stick Trailer – Casper & Cody	46		
JLG Trailer – Loveland	40		
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. Future enhancements will include direct access to contracts and customer information for all facilities.

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 of routine maintenance.

Major Projects	Western Investment (\$ thousands)		
	FY07	FY08	FY09
SCADA Upgrades	378	399	129
IT General Support Systems (GSS)	100	70	48
E-Scheduling/E-Tagging	821		20
Power Billing System	247	1,100	
Small Facility Projects (Civil /C&R)		500	500
Small Facility Projects (Electrical/RRADs)	115	591	500
GIS Development	287		
Alternate Control Center	59	49	
Operations Map Board Life Extension	249		
Storage Building – Casper	365		
Operations Map Board Replacement			65
Shiprock Substation Access Road Repair			200

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.

RMR CRSP Capital Investment Plan FY07-FY16 Detail

Yellow Highlight = New Project to list
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 FY Total = Sum of W Total and O Total
 MPS Split = Multiple Power System Cost Split.

PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY07			FY08			FY09			FY10			FY11		
						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																				
Line Equipment Replacements - General (CRSP)	CRSPVMF		500		500	50		50	50		50	50		50	50		50	50	50	
Animas-Laplata Project	CRSPWCF		5,218	571	5,789	4,943		4,943	275		275									
Wood Pole Testing & Treatment (CRSP) - Expensed	CRSPVMF																			
RMR T-Line SubTotal			5,718	571	6,289	4,993		4,993	325		325	50		50	50		50	50	50	
Substations																				
Substation Test Equipment (CRSP)	CRSPVMF		956		956	56		56	100		100	100		100	100		100	100	100	
Battery and Charger Replacements (CRSP)	CRSPVMF		1000	203	1,203	100		100	100		100	100		100	100		100	100	100	
CCVT, PT, & CT Replacements (CRSP)	CRSPVMF		534	163	697	29	60	89	45		45	50		50	50		50	50	50	
Substation Disconnect Switch Replacements (CRSP)	CRSPVMF		508		508	58		58	50		50	50		50	50		50	50	50	
Surge Arrester Replacements (CRSP)	CRSPVMF		410	67	477	50		50	40		40	40		40	40		40	40	40	
Misc. Substation Elect. Equip. Replace. (CRSP)	CRSPVMF		6200		6,200						800			800	500		500	500	500	
Monitors for WCMO Transformers	CRSPVMF		770		770									110			110	110	110	
Ault KU1B Transformer Gas Monitors	CRSPVMF		50		50						50			50						
Blue Mesa 1162 Replacement	CRSPVMF		25		25	25		25												
Blue Mesa 1066 Replacement	CRSPVMF		90		90	90		90												
Blue Mesa 1362 Replacement	CRSPVMF		90		90			90		90										
Blue Mesa 1462 Replacement	CRSPVMF		90		90				90		90									
Circuit Breaker Analyzers - WCMO	CRSPVMF		44		44	44		44												
Collbran 362 Replacement	CRSPVMF		110		110															
Curecanti 1082 Breaker Replacement	CRSPVMF		177		177	177		177												
Curecanti 1092 Breaker Rebuild	CRSPVMF		81		81	81		81												
Curecanti Black Start MOD	CRSPVMF		150		150				150		150									
Flaming Gorge KY2A Replacement	CRSPVMF		630		630	565		565	65		65									
Great Cut Replace Transformer KX1A	CRSPVMF		430		430	365		365	65		65									
Hayden 230-kV Switch Replacements	CRSPVMF		25		25	25		25												
Hayden Station Service Replacement	CRSPVMF		195		195	40		40	135		135	20		20						
Midway 1866 Replacement	CRSPVMF		25	4	29									25			25			
Midway 1562 Replacement	CRSPVMF		115		115	90		90						25			25			
Midway 1662 Replacement	CRSPVMF		115		115				90		90	25		25						
Rifle 282, 382 Replacement	CRSPVMF		200		200															
Shiprock 3262 Replacement	CRSPVMF		20	67	87	20		20												
Shiprock 3362 Replacement	CRSPVMF		90		90	70		70	20		20									
Shiprock 3462 Replacement	CRSPVMF		90		90				70		70	20		20						
Shiprock KU3A Transformer Gas Monitors	CRSPVMF		140		140				140		140									
Shiprock KU3B Transformer Gas Monitors	CRSPVMF		140		140						140			140						
Vernal 1372 Replacement	CRSPVMF		110		110									60			60	50	50	
Vernal 1576 Replacement	CRSPVMF		110		110													60	60	
Vernal 1672 Replacement	CRSPVMF		110		110															
Vernal 1872 Replacement	CRSPVMF		110		110													60	60	
Vernal 2172 Replacement	CRSPVMF		110		110															
Waterflow KU1A Transformer Gas Monitors	CRSPVMF		32		32	24	8	32												
Waterflow KU1B Transformer Gas Monitors	CRSPVMF		129		129	109	20	129												
Archer 1566 Replacement - Completed	CRSPVMF			155	155															
Ault 696 Rebuild - Completed	CRSPVMF			188	188															
Curecanti KV1A, KV1B Reactor Replacement - Completed	CRSPVMF			152	152															
Hayden 2772, 2872, 2972 Replacement - Completed	CRSPVMF			415	415															
Hayden KV1A, KV1B, KV2A Reactor Replacement - Cancelled	CRSPVMF																			
Midway KW1A, KW2A Reactor Replacement - Cancelled	CRSPVMF																			
RMR Substation SubTotal			14,211	1,414	15,625	2,018	88	2,106	1,160		1,160	1,485		1,485	1,060		1,060	1,120	1,120	
Substations DESERT SOUTHWEST REGION																				
Replace MOI 2681 at Pinnacle Peak	DSW-VMF																			
Fire Protection System at Pinnacle Peak	DSW-VMF		200		220	20		20	20		20	20		20	20		20	20	20	
Video Surveillance System at Glen Canyon	DSW-VMF		1510		1,661	151		151	151		151	151		151	151		151	151	151	
Upgrade Programmable Logic Controller Pinnacle Peak	DSW-VMF																			
Install Remote Lighting at Glen Canyon	DSW-VMF		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	

RMR CRSP Capital Investment Plan FY07-FY16 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY07			FY08			FY09			FY10			FY11		
						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
Communications																				
Communications Test Equipment (CRSP)	CRSPVMF		950		950	50		50	100		100	100		100	100		100	100		100
Archer MW Communication Building Replacement	CRSPVMF		225		225	25		25	200		200									
Big Mesa - Poncha 2 Gig MW Replacement with Fiber	CRSPVMF		2,885		2,885		50	50		2,435	2,435		400	400						
Buffalo Pass Communication Bulding Replacement	CRSPVMF		200		200				200		200									
Central PMOC Communications Loop	CRSPVMF	20%	220		220						195		195	25		25				
Microwave Spur Replacement (CRSP)	CRSPVMF		250		250	250		250												
Misc. Communications Facilities Replacement (CRSP)	CRSPVMF		2,800		2,800								400		400	400		400		400
Montrose - Blue Mesa OPGW	CRSPVMF		1,350		1,350						50		50	575	575	1,150	75	75	150	
Raspberry Creek Communication Building Replacement	CRSPVMF		200		200	200		200												
So. Colorado Joint Microwave Project - Completed	CRSPWCF			2,682	2,682															
VHF Mobile Radio Replacements (CRSP) - Completed	CRSPVMF			1,427	1,427															
Buffalo Pass MW Site - Replace Engine Generator - Complet	CRSPVMF																			
RMR Communications SubTotal			9,080	4,109	13,189	525	50	575	500	2,435	2,935	345	400	745	1,100	575	1,675	575	75	650
DESERT SOUTHWEST REGION																				
Communication Power System Upon Testing	DSW-VMF		840		924	84		84	84		84	84		84	84		84	84		84
Replace DSW Telephone (Multi-Proj. Cost Allocation)	DSW-VMF																			
Upgrade Communication Alarm Sys. (Multi -Proj. Cost)	DSW-VMF																			
RTU Replacement-FLG, GCP, KAY, LHV, NVS	DSW-VMF																			
Microwave ELD-FLG (Back-up Path Glen Canyon PP)	DSW-VMF																			
DFR Replacement	DSW-VMF		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		6,832	1,958	8,790	622		622	690		690	690		690	690		690	690		690
Test Equipment Replacements (CRSP)	CRSPVMF		960		960	60		60	100		100	100		100	100		100	100		100
Relay Test Set Upgrade - Completed	CRSPVMF			36	36															
Boundary Meter Telemetry System (CRSP) - Completed	CRSPVMF																			
RMR CPM SubTotal			7,792	1,994	9,786	682		682	790		790	790		790	790		790	790		790
DESERT SOUTHWEST REGION																				
Line Relays, NAV, LHV, KAY, GCS Facilities	DSW-VMF		1,500		1,650	150		150	150		150	150		150	150		150	150		150
Meter Replacement	DSW-VMF																			
DSW CPM SubTotal			1,500		1,650	150		150	150		150	150		150	150		150	150		150
Mobile & Heavy Equipment																				
Misc Heavy Equipment Replacements (CRSP)	CRSPVMF		4385		4,385	185		185	200		200	500		500	500		500	500		500
Front End Loader - Montrose	CRSPVMF	RMR1	150		150				150		150									
Motor Grader - Craig - Cancelled	CRSPVMF																			
RMR Mobile & Heavy Equipment SubTotal			4,535		4,535	185		185	350		350	500		500	500		500	500		500

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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
Programmatic Improvements																				
SCADA Upgrades (CRSP)	CRSPVMF	31	1268	141	1,409	127		127	132		132	64		64	180		180	65		65
RRADS Small facility Projects (CRSP)	CRSPVMF		2204	455	2,659	72		72	132		132	250		250	250		250	250		250
Small facility Projects (C&R - CRSP)	CRSPWCF		2250	615	2,865				250		250	250		250	250		250	250		250
Alt. Control Center Expansion - CH (CRSP)	CRSPVMF	31%	33	346	379	18		18	15		15									
E-Scheduling/E-Tagging (CRSP)	CRSPVMF	31	499		499	410		410				10		10	36		36			
GIS Development (CRSP)	CRSPWCF	31%	95	1,010	1,105	95		95												
IT General Support Systems (CRSP)	CRSPVMF	31	578		578	60		60	35		35	36		36	36		36	33		33
Operations Center Map Board System Life Extension	CRSPVMF	31%	77		77	77		77												
Operations Center Map Board Replacement	CRSPVMF	31%	237		237							20		20	217		217			
Power Billing System Phase 3	CRSPVMF	50%	660		660	121		121	539		539									
Shiprock Substation Access Road Repair	CRSPVMF		200		200							200		200						
WIN Router	CRSPVMF		150		150				150		150									
UPS Replacement - MOC - Completed	CRSPVMF			58	58															
Telephone Switch Upgrade - MOC - Completed	CRSPVMF			28	28															
RMR Programmatic Improvements SubTotal			8,251	2,653	10,904	980		980	1,253		1,253	830		830	969		969	598		598
DESERT SOUTHWEST REGION																				
Safety Enhancement, Fire Protection-PHX Ctr (Multi)	DSW-VMF																			
Perimeter Fencing-PHX Ctr (Multi-Proj Cost Alloc.)	DSW-VMF																			
Camera Security Upgrades-PHX Ctr (Multi-Proj Alloc.)	DSW-VMF																			
DSW Programmatic Improvements SubTotal																				
RMR FY07 CRSP CIP Grand Total			49,587	10,741	60,328	9,383	138	9,521	4,378	2,435	6,813	4,000	400	4,400	4,469	575	5,044	3,633	75	3,708
RMR FY06 CRSP CIP Totals			40,373		40,373	7,931		7,931	4,392		4,392	4,571		4,571	4,328		4,328	3,848		3,848

Western costs (2007-2015)	
FY07 CIP	42,008
FY06 CIP	40,373
Diff	1,635

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY12			FY13			FY14			FY15			FY16		
						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																				
Line Equipment Replacements - General (CRSP)	CRSPVMF		500		500	50		50	50		50	50		50	50		50	50	50	
Animas-Laplata Project	CRSPWCF		5,218	571	5,789															
Wood Pole Testing & Treatment (CRSP) - Expensed	CRSPVMF																			
RMR T-Line SubTotal			5,718	571	6,289	50		50	50		50	50		50	50		50	50	50	
Substations																				
Substation Test Equipment (CRSP)	CRSPVMF		956		956	100		100	100		100	100		100	100		100	100	100	
Battery and Charger Replacements (CRSP)	CRSPVMF		1000	203	1,203	100		100	100		100	100		100	100		100	100	100	
CCVT, PT, & CT Replacements (CRSP)	CRSPVMF		534	163	697	50		50	50		50	50		50	50		50	50	50	
Substation Disconnect Switch Replacements (CRSP)	CRSPVMF		508		508	50		50	50		50	50		50	50		50	50	50	
Surge Arrester Replacements (CRSP)	CRSPVMF		410	67	477	40		40	40		40	40		40	40		40	40	40	
Misc. Substation Elect. Equip. Replace. (CRSP)	CRSPVMF		6200		6,200	600		600	800		800	1,000		1,000	1,000		1,000	1,000	1,000	
Monitors for WCMO Transformers	CRSPVMF		770		770	110		110	110		110	110		110	110		110	110	110	
Ault KU1B Transformer Gas Monitors	CRSPVMF		50		50															
Blue Mesa 1162 Replacement	CRSPVMF		25		25															
Blue Mesa 1066 Replacement	CRSPVMF		90		90															
Blue Mesa 1362 Replacement	CRSPVMF		90		90															
Blue Mesa 1462 Replacement	CRSPVMF		90		90															
Circuit Breaker Analyzers - WCMO	CRSPVMF		44		44															
Collbran 362 Replacement	CRSPVMF		110		110	60		60	50		50									
Curecanti 1082 Breaker Replacement	CRSPVMF		177		177															
Curecanti 1092 Breaker Rebuild	CRSPVMF		81		81															
Curecanti Black Start MOD	CRSPVMF		150		150															
Flaming Gorge KY2A Replacement	CRSPVMF		630		630															
Great Cut Replace Transformer KX1A	CRSPVMF		430		430															
Hayden 230-kV Switch Replacements	CRSPVMF		25		25															
Hayden Station Service Replacement	CRSPVMF		195		195															
Midway 1866 Replacement	CRSPVMF		25	4	29															
Midway 1562 Replacement	CRSPVMF		115		115															
Midway 1662 Replacement	CRSPVMF		115		115															
Rifle 282, 382 Replacement	CRSPVMF		200		200			200		200										
Shiprock 3262 Replacement	CRSPVMF		20	67	87															
Shiprock 3362 Replacement	CRSPVMF		90		90															
Shiprock 3462 Replacement	CRSPVMF		90		90															
Shiprock KU3A Transformer Gas Monitors	CRSPVMF		140		140															
Shiprock KU3B Transformer Gas Monitors	CRSPVMF		140		140															
Vernal 1372 Replacement	CRSPVMF		110		110															
Vernal 1576 Replacement	CRSPVMF		110		110	50		50												
Vernal 1672 Replacement	CRSPVMF		110		110	60		60	50	50										
Vernal 1872 Replacement	CRSPVMF		110		110	50		50												
Vernal 2172 Replacement	CRSPVMF		110		110	60		60	50	50										
Waterflow KU1A Transformer Gas Monitors	CRSPVMF		32		32															
Waterflow KU1B Transformer Gas Monitors	CRSPVMF		129		129															
Archer 1566 Replacement - Completed	CRSPVMF			155	155															
Ault 696 Rebuild - Completed	CRSPVMF			188	188															
Curecanti KV1A, KV1B Reactor Replacement - Completed	CRSPVMF			152	152															
Hayden 2772, 2872, 2972 Replacement - Completed	CRSPVMF			415	415															
Hayden KV1A, KV1B, KV2A Reactor Replacement -Cancelled	CRSPVMF																			
Midway KW1A, KW2A Reactor Replacement - Cancelled	CRSPVMF																			
RMR Substation SubTotal			14,211	1,414	15,625	1,330		1,330	1,500	100	1,600	1,450		1,450	1,450		1,450	1,450	1,450	
Substations																				
DESERT SOUTHWEST REGION																				
Replace MOI 2681 at Pinnacle Peak	DSW-VMF																			
Fire Protection System at Pinnacle Peak	DSW-VMF		200		220	20		20	20		20	20		20	20		20	20	20	
Video Surveillance System at Glen Canyon	DSW-VMF		1510		1,661	151		151	151		151	151		151	151		151	151	151	
Upgrade Programmable Logic Controller Pinnacle Peak	DSW-VMF																			
Install Remote Lighting at Glen Canyon	DSW-VMF		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	

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY12			FY13			FY14			FY15			FY16		
						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
Communications																				
Communications Test Equipment (CRSP)	CRSPVMF		950		950	100		100	100		100	100		100	100		100	100		100
Archer MW Communication Building Replacement	CRSPVMF		225		225															
Big Mesa - Poncha 2 Gig MW Replacement with Fiber	CRSPVMF		2,885		2,885															
Buffalo Pass Communication Bulding Replacement	CRSPVMF		200		200															
Central PMOC Communications Loop	CRSPVMF	20%	220		220															
Microwave Spur Replacement (CRSP)	CRSPVMF		250		250															
Misc. Communications Facilities Replacement (CRSP)	CRSPVMF		2,800		2,800	400		400	400		400	400		400	400		400	400		400
Montrose - Blue Mesa OPGW	CRSPVMF		1,350		1,350															
Raspberry Creek Communication Building Replacement	CRSPVMF		200		200															
So. Colorado Joint Microwave Project - Completed	CRSPWCF			2,682	2,682															
VHF Mobile Radio Replacements (CRSP) - Completed	CRSPVMF			1,427	1,427															
Buffalo Pass MW Site - Replace Engine Generator - Complet	CRSPVMF																			
RMR Communications SubTotal			9,080	4,109	13,189	500		500	500		500	500		500	500		500	500		500
DESERT SOUTHWEST REGION																				
Communication Power System Upon Testing	DSW-VMF		840		924	84		84	84		84	84		84	84		84	84		84
Replace DSW Telephone (Multi-Proj. Cost Allocation)	DSW-VMF																			
Upgrade Communication Alarm Sys. (Multi -Proj. Cost)	DSW-VMF																			
RTU Replacement-FLG, GCP, KAY, LHV, NVS	DSW-VMF																			
Microwave ELD-FLG (Back-up Path Glen Canyon PP)	DSW-VMF																			
DFR Replacement	DSW-VMF		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		6,832	1,958	8,790	690		690	690		690	690		690	690		690	690		690
Test Equipment Replacements (CRSP)	CRSPVMF		960		960	100		100	100		100	100		100	100		100	100		100
Relay Test Set Upgrade - Completed	CRSPVMF			36	36															
Boundary Meter Telemetry System (CRSP) - Completed	CRSPVMF																			
RMR CPM SubTotal			7,792	1,994	9,786	790		790	790		790	790		790	790		790	790		790
DESERT SOUTHWEST REGION																				
Line Relays, NAV, LHV, KAY, GCS Facilities	DSW-VMF		1,500		1,650	150		150	150		150	150		150	150		150	150		150
Meter Replacement	DSW-VMF																			
DSW CPM SubTotal			1,500		1,650	150		150	150		150	150		150	150		150	150		150
Mobile & Heavy Equipment																				
Misc Heavy Equipment Replacements (CRSP)	CRSPVMF		4385		4,385	500		500	500		500	500		500	500		500	500		500
Front End Loader - Montrose	CRSPVMF	RMR1	150		150															
Motor Grader - Craig - Cancelled	CRSPVMF																			
RMR Mobile & Heavy Equipment SubTotal			4,535		4,535	500		500	500		500	500		500	500		500	500		500

RMR CRSP Capital Investment Plan FY07-FY16 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY12			FY13			FY14			FY15			FY16		
						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
Programmatic Improvements																				
SCADA Upgrades (CRSP)	CRSPVMF	31	1268	141	1,409	436		436	66		66	66		66	66		66	66		66
RRADS Small facility Projects (CRSP)	CRSPVMF		2204	455	2,659	250		250	250		250	250		250	250		250	250		250
Small facility Projects (C&R - CRSP)	CRSPWCF		2250	615	2,865	250		250	250		250	250		250	250		250	250		250
Alt. Control Center Expansion - CH (CRSP)	CRSPVMF	31%	33	346	379															
E-Scheduling/E-Tagging (CRSP)	CRSPVMF	31	499		499					10		10		33			33			
GIS Development (CRSP)	CRSPWCF	31%	95	1,010	1,105															
IT General Support Systems (CRSP)	CRSPVMF	31	578		578	255		255	13		13	94		94	16		16			
Operations Center Map Board System Life Extension	CRSPVMF	31%	77		77															
Operations Center Map Board Replacement	CRSPVMF	31%	237		237															
Power Billing System Phase 3	CRSPVMF	50%	660		660															
Shiprock Substation Access Road Repair	CRSPVMF		200		200															
WIN Router	CRSPVMF		150		150															
UPS Replacement - MOC - Completed	CRSPVMF			58	58															
Telephone Switch Upgrade - MOC - Completed	CRSPVMF			28	28															
RMR Programmatic Improvements SubTotal			8,251	2,653	10,904	1,191		1,191	579		579	670		670	615		615	566		566
DESERT SOUTHWEST REGION																				
Safety Enhancement, Fire Protection-PHX Ctr (Multi)	DSW-VMF																			
Perimeter Fencing-PHX Ctr (Multi-Proj Cost Alloc.)	DSW-VMF																			
Camera Security Upgrades-PHX Ctr (Multi-Proj Alloc.)	DSW-VMF																			
DSW Programmatic Improvements SubTotal																				
RMR FY07 CRSP CIP Grand Total			49,587	10,741	60,328	4,361		4,361	3,919	100	4,019	3,960		3,960	3,905		3,905	3,856		3,856
RMR FY06 CRSP CIP Totals			40,373		40,373	4,105		4,105	3,788		3,788	3,705		3,705	3,705		3,705			

RMR Pick Sloan Capital Investment Plan FY07-FY16 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY07			FY08			FY09			FY10			FY11		
						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																				
Line Equipment Replacements - General (PS)	PSWMF		500	35	535	50		50	50		50	50		50	50		50	50	50	
Ault-Black Hollow 230-kV Upgrade	PSWCF		1,900		1,900															
Beaver Creek-Ft Morgan West 230-kV Upgrade	PSWCF		1,050		12,050															
Beaver Creek - Hoyt 230-kV Upgrade	PSWCF		11,100	10,865	21,965	1,200	9,900	11,100												
Cheyenne-Miracle Mile 230kV T-Line Upgrade	PSWCF		16,750	18,631	35,381	10,850		10,850	5,900		5,900									
Cheyenne-Ault 230kV T-line Upgrade	PSWCF		22,250		22,250	550		550	5,700		5,700	16,000		16,000						
East Morrill Tap-Wildcat 34.5-kV line	PSWCF		650		650															
Eastern Plains Transmission Project	PSWCF		15,000		15,000							7,500		7,500	7,500		7,500	7,500	7,500	
Erie-Hoyt 230-kV Upgrade	PSWCF		31,300	700	32,000	187	563	750	75	225	300	3,750	11,250	15,000	3,815	11,435	15,250	7,500	7,500	
Flatiron-Weld 230kV Upgrade	PSWCF		24,100		24,100							300		300	500		500	7,500	7,500	
Ft Morgan West - Kiowa Creek 230-kV Upgrade	PSWCF		12,400		12,400															
Gering-Gering Valley 34.5-kV T-Line	PSWMF		275		275	75		75	200		200									
Granby Pump Plant-Windy Gap 69-kV rebuild	PSWCF		9,600	257	9,857	450	450	900	1,700	7,000	8,700									
Kiowa Creek - Willoby 230-kV Upgrade	PSWCF		12,850		13,100															
Timnath - Black Hollow 230-kV Upgrade	PSWCF		1,871		1,871	1,150	621	1,771	100		100									
Wildcat-Sievers 69-kV line	PSWCF		2,200		2,200															
Wood Pole Test and Treatment (PS) - Expensed	PSWMF																			
Hoyt-Wiggins 115-kV Uprate - Complete	PSWCF			1,863	1,863															
Ault-Willoby 230-kV - Delayed	PSWCF																			
Dixon Creek - Flatiron 230-kV Upgrade - Delayed	PSWCF																			
Erie-Longmont NW 230-kV Upgrade - Delayed	PSWCF																			
Flatiron - Longmont NW 230-kV Upgrade - Delayed	PSWCF																			
T-Line SubTotal			163,796	32,351	207,397	14,512	11,534	26,046	13,725	7,225	20,950	20,100	11,250	31,350	11,865	11,435	23,300	15,050	15,050	
Substations																				
Battery and Charger Replacements (PS)	PSWMF		954	669	1,623	54		54	100		100	100		100	100		100	100	100	
CCVT, PT, & CT Replacements (PS)	PSWMF		589		589	39		39	50		50	50		50	50		50	50	50	
Misc. Substation Elect. Equipm. Replace. (PS)	PSWMF		11,012		11,012						1,212	1,212		1,400	1,400		1,400	1,400	1,400	
Pick Sloan Transformer Gas Monitors	PSWMF		840		840									120	120		120	120	120	
Substation Test Equipment (PS)	PSWMF		960		960	60		60	100		100	100		100	100		100	100	100	
Substation Disconnect Switch Replacements (PS)	PSWMF		400		400	40		40	40		40	40		40	40		40	40	40	
Alcova 462, 662, 862, 1062 Replacement	PSWMF		450		450				450		450									
Ault 230-kV additions (AU-MM 230)	PSWCF		2,100		2,100	350		350	1,250		1,250	500		500						
Beaver Creek 230-kV additions (BC-EE 230-kV)	PSWCF		7325		7325	25		25	300		300	3,250		3,250	3,500		3,500	250	250	
Cheyenne 230-kV additions	PSWCF		6050		6050	2,400		2,400	3,250		3,250	400		400						
Garland KZ1A Replacement	PSWMF		354		354	124	180	304	20	30	50									
Granby Pumping Plant Transformer Modifications	PSWMF		175	22	197	88	87	175												
Limestone 34.5-kV additions	PSWMF		422		422	422		422												
Lingle Substation 69kV additions	PSWCF		2,650		2,650															
Lusk Rural - Podolak Improvements	PSWMF		400		400	25		25	125		125	250		250						
Miracle Mile 230-kV additions (AU-MM 230)	PSWCF		6,050		6,050	2,400		2,400	3,250		3,250	400		400						
Pilot Butte 662 Breaker Replacement (TRS)	PST&R		111		111		111	111												
Raderville 115KV Switch Upgrade	PSWMF		243		243	243		243												
Sidney KY1A Transformer Replacement	PSWMF		1,157		1,157	245	570	815	102	240	342									
Snowy Range Substation 230-kV (Laramie)	PSWCF		5,100		5,100	2,200		2,200	2,650		2,650	250		250						
Snowy Range Substation 115-kV (Laramie)	PSWCF		500	5,514	6,014	500		500												
Torrington Substation KY2A addition	PSWCF		1700		1700	750	750	1,500	100	100	200									
Torrington Substation 69-kV additions	PSWCF		4,150		4,150															
Willoby Switchyard 115-kV	PSWCF		3,450		3,450	400	150	550	1,800	1,100	2,900									
Willow Creek KZ2A Replacement	PSWMF		236		236							78	78	156	40	40	80			
Fleming Interruptor MOI 164 Replacement - Completed	PSWMF			22	22															
Replace 230kV Arrestors on Stegall E. 230 Bus - Completed	PSWMF			19	19															
Gering Station Service Switchgear - Completed	PSWMF			711	711															
Gering Breaker Replacement: 162,462,966 - Completed	PSWMF			236	236															
Glendo PCB 524 Replacement - Completed	PSWMF			90	90															
Haxtun Interruptor MOI 164 Replacement - Completed	PSWMF			23	23															
Willoby Substation 230-kV -Delayed	PSWCF																			
Yellowtail 2nd Transformer Addition - Completed	PSWCF			3,328	3,328															
Ault 230-kV terminal (AU-WBY 230-kV) - Delayed	PSWCF																			
Substations SubTotal			57,378	10,634	68,012	10,365	1,848	12,213	13,587	1,470	15,057	6,630	78	6,708	5,350	40	5,390	2,060	2,060	

RMR Pick Sloan Capital Investment Plan FY07-FY16 Detail

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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
Communications																				
Communications Test Equipment (PS)	PSWMF		1,000		1,000	100		100	100		100	100		100	100		100	100	100	
Misc. Communications Facilities Replacement (PS)	PSWMF		5,184		5,184							514		514	800		800	800		
Beaver Creek Comm Tower	PSWMF		250		250									250			250	250		
Beaver Creek - Sterling OPGW	PSWMF		1,350		1,350							50		50	575		575	1,150		
Blue Ridge Communication Building Replacement	PSWMF		200		200				200		200									
Central PMOC Communications Loop (80/20 Split)	PSWMF	80%	810		810						710		710	100		100				
Comm System Network Management System	PSWMF		950		950							950		950						
Fiber Multiplex Equipment (PS)	PSWMF		1,980		1,980	180		180									600	600		
Kremmling - Grouse Mtn 2 Gig MW Replacement with Fiber	PSWMF		890		890		50	50		640	640		200	200						
Merino Communication Building Replacement	PSWMF		225		225							25		25	200		200			
Microwave Spur Replacements (PS)	PSWMF		30	4,458	4,488	30		30												
Miracle Mile - Casper OPGW	PSWMF		1,900		1,900						50		50	800	800	1,600	125	125	250	
Nortel Microwave Replacements	PSWMF		1,500		1,500									500	500	500	500	500	500	
Peetz Table Communication Building Replacement	PSWMF		225		225							25		25	200		200			
Sterling - Sidney OPGW	PSWMF		1,450		1,450												50	50		
USBR - CBT Fiber Optic Installation	PST&R		89		89		89	89												
WAPA - Cody Area Fiber Optic Installation	PSWMF		200	12	212	200		200												
VHF Mobile Radio Replacements (PS) - Completed	PSWMF			250	250															
PMOC - Crossroads Fiber Optic Installation - Completed	PSWMF																			
Estes-Valley Fiber Optic Installation - Completed	PSWMF			425	425															
Granby-West Portal Fiber Optic Installation - Completed	PSWMF			495	495															
Grouse Mountain Communication Building Replacement - Canceled	PSWMF																			
UHF Radio Replacements (PS) - Completed	PSWMF			506	506															
Granby-Table Mountain Fiber Optic Installation - Cancelled	PST&R																			
Communications SubTotal			18,233	6,146	24,379	510	139	649	300	640	940	910	1,150	2,060	2,464	800	3,264	3,000	700	3,700
Control, Protection and Metering																				
Protective Relay Replacements (PS)	PSWMF		6,778	1,256	8,034	568		568	690		690	690		690	690		690	690	690	
RTU Replacements (PS)	PSWMF		200	203	403	90		90	110		110									
Test Equipment Replacements (PS)	PSWMF		650		650	100		100	50		50	50		50	50		50	50	50	
CPM SubTotal			7,628	1,459	9,087	758		758	850		850	740		740	740		740	740	740	
Mobile and Heavy Equipment																				
Misc Heavy Equipment Replacements (PS)	PSWMF		5,014		5,014	114		114	100		100	600		600	600		600	600	600	
Bob Cat - Loveland (replacement)	PSWMF		45		45				45		45									
Casper Mechanic Service Truck	PSWMF		100		100	100		100												
Casper & Cody Hotstick Trailers	PSWMF		46		46	46		46												
Loveland - JLG Trailer	PSWMF		40		40	40		40												
Manlift, 65' - Cheyenne (replace 51928)	PSWMF		300		300				300		300									
Mobile transformer - Loveland	PSWMF		950		950				950		950									
Bucket Truck, 110' - Casper - Completed	PSWMF			567	567															
Lowboy Trailer - Casper - Completed	PSWMF			50	50															
Versalift, 38' - Loveland - Completed	PSWMF			74	74															
Mobile & Heavy Equipment SubTotal			6,495	691	7,186	300		300	1,395		1,395	600		600	600		600	600	600	

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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
Programmatic Improvements																				
RRADS Facility Small Projects (PS)	PSWMF		2,502		2,502	43		43	459		459	250		250	250		250	250		250
Small Facility Projects (C&R - PS)	PSWCF		2,250		2,250				250		250	250		250	250		250	250		250
SCADA Upgrades (PS)	PSWMF	69%	1,532	304	1,836	251		251	267		267	65		65	180		180	65		65
Alt. Control Center Expansion - CH (PS)	PSWMF	69%	75	648	723	41		41	34		34									
CAS Storage Building	PSWMF		365		365	365		365												
E-Scheduling/E-Tagging (PS)	PSWMF	69%	463		463	411		411			10		10							
GIS Development (PS)	PSWCF	67%	192	1,010	1,202	192		192												
Hanna MW Access Road	PSWCF		30		30	30		30												
IT General Support Systems (PS)	PSWMF	69%	241		241	40		40	35		35	12		12	36		36			
Operations Center Map Board Display Screen Life Extension	PSWMF	69%	172		172	172		172												
Operations Center Map Board Replacement	PSWMF	69%	528		528						45		45	483		483				
Power Billing System Phase 3	PSWMF	50%	687		687	126		126	561		561									
DAC Hardware Upgrade - Completed	PSWMF	69%																		
Virginia Smith DC Tie HVAC Replacement - Completed	PSWMF			69	69															
Loveland Maintenance Building Vehicle Lift - Completed	PSWMF			164	164															
Programmatic Improvements SubTotal			9,037	2,195	11,232	1,671		1,671	1,606		1,606	632		632	1,199		1,199	565		565
FY07 PS CIP Grand Total			262,567	53,476	327,293	28,116	13,521	41,637	31,463	9,335	40,798	29,612	12,478	42,090	22,218	12,275	34,493	22,015	700	22,715
FY06 PS CIP Totals					231,477	24,903	18,231	43,134	25,860	1,581	27,441	27,008	9,828	36,836	16,940	9,715	26,655	20,540		20,540

FY07 CIP	197,366
FY06 CIP	192,122
Diff	5,244

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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																				
Line Equipment Replacements - General (PS)	PSWMF		500	35	535	50		50	50		50	50		50	50		50	50		50
Ault-Black Hollow 230-kV Upgrade	PSWCF		1,900		1,900			50			50	250		250	1,600		1,600			
Beaver Creek-Ft Morgan West 230-kV Upgrade	PSWCF		1,050		12,050										250		250	800		800
Beaver Creek - Hoyt 230-kV Upgrade	PSWCF		11,100	10,865	21,965															
Cheyenne-Miracle Mile 230kV T-Line Upgrade	PSWCF		16,750	18,631	35,381															
Cheyenne-Ault 230kV T-line Upgrade	PSWCF		22,250		22,250															
East Morrill Tap-Wildcat 34.5-kV line	PSWCF		650		650	50		50	100		100	470		470	30		30			
Eastern Plains Transmission Project	PSWCF		15,000		15,000															
Erie-Hoyt 230-kV Upgrade	PSWCF		31,300	700	32,000															
Flatiron-Weld 230kV Upgrade	PSWCF		24,100		24,100	8,500		8,500	7,300		7,300									
Ft Morgan West - Kiowa Creek 230-kV Upgrade	PSWCF		12,400		12,400	200		200	750		750	5,250		5,250	6,000		6,000	200		200
Gering-Gering Valley 34.5-kV T-Line	PSWMF		275		275															
Granby Pump Plant-Windy Gap 69-kV rebuild	PSWCF		9,600	257	9,857															
Kiowa Creek - Willoby 230-kV Upgrade	PSWCF		12,850		13,100	250		250	500		500	500		500	1,250		1,250	10,350		10,350
Timnath - Black Hollow 230-kV Upgrade	PSWCF		1,871		1,871															
Wildcat-Sievers 69-kV line	PSWCF		2,200		2,200	150		150	300		300	1,650		1,650	100		100			
Wood Pole Test and Treatment (PS) - Expensed	PSWMF																			
Hoyt-Wiggins 115-kV Uprate - Complete	PSWCF			1,863	1,863															
Ault-Willoby 230-kV - Delayed	PSWCF																			
Dixon Creek - Flatiron 230-kV Upgrade - Delayed	PSWCF																			
Erie-Longmont NW 230-kV Upgrade - Delayed	PSWCF																			
Flatiron - Longmont NW 230-kV Upgrade - Delayed	PSWCF																			
T-Line SubTotal			163,796	32,351	207,397	9,200		9,200	9,050		9,050	8,170		8,170	9,280		9,280	11,400		11,400
Substations																				
Battery and Charger Replacements (PS)	PSWMF		954	669	1,623	100		100	100		100	100		100	100		100	100		100
CCVT, PT, & CT Replacement (PS)	PSWMF		589		589	50		50	50		50	50		50	100		100	100		100
Misc. Substation Elect. Equipm. Replace. (PS)	PSWMF		11,012		11,012	1,400		1,400	1,400		1,400	1,400		1,400	1,400		1,400	1,400		1,400
Pick Sloan Transformer Gas Monitors	PSWMF		840		840	120		120	120		120	120		120	120		120	120		120
Substation Test Equipment (PS)	PSWMF		960		960	100		100	100		100	100		100	100		100	100		100
Substation Disconnect Switch Replacements (PS)	PSWMF		400		400	40		40	40		40	40		40	40		40	40		40
Alcova 462, 662, 862, 1062 Replacement	PSWMF		450		450															
Ault 230-kV additions (AU-MM 230)	PSWCF		2,100		2,100															
Beaver Creek 230-kV additions (BC-EE 230-kV)	PSWCF		7325		7325															
Cheyenne 230-kV additions	PSWCF		6050		6050															
Garland KZ1A Replacement	PSWMF		354		354															
Granby Pumping Plant Transformer Modifications	PSWMF		175	22	197															
Limestone 34.5-kV additions	PSWMF		422		422															
Lingle Substation 69kV additions	PSWCF		2,650		2,650	100		100	850		850	1,650		1,650	50		50			
Lusk Rural - Podolak Improvements	PSWMF		400		400															
Miracle Mile 230-kV additions (AU-MM 230)	PSWCF		6,050		6,050															
Pilot Butte 662 Breaker Replacement (TRS)	PST&R		111		111															
Raderville 115KV Switch Upgrade	PSWMF		243		243															
Sidney KY1A Transformer Replacement	PSWMF		1,157		1,157															
Snowy Range Substation 230-kV (Laramie)	PSWCF		5,100		5,100															
Snowy Range Substation 115-kV (Laramie)	PSWCF		500	5,514	6,014															
Torrington Substation KY2A addition	PSWCF		1700		1700															
Torrington Substation 69-kV additions	PSWCF		4,150		4,150	150		150	750		750	3,100		3,100	150		150			
Willoby Switchyard 115-kV	PSWCF		3,450		3,450															
Willow Creek KZ2A Replacement	PSWMF		236		236															
Fleming Interruptor MOI 164 Replacement - Completed	PSWMF			22	22															
Replace 230kV Arrestors on Stegall E. 230 Bus - Completed	PSWMF			19	19															
Gering Station Service Switchgear - Completed	PSWMF			711	711															
Gering Breaker Replacement: 162,462,966 - Completed	PSWMF			236	236															
Glendo PCB 524 Replacement - Completed	PSWMF			90	90															
Haxtun Interruptor MOI 164 Replacement - Completed	PSWMF			23	23															
Willoby Substation 230-kV -Delayed	PSWCF																			
Yellowtail 2nd Transformer Addition - Completed	PSWCF			3,328	3,328															
Ault 230-kV terminal (AU-WBY 230-kV) - Delayed	PSWCF																			
Substations SubTotal			57,378	10,634	68,012	2,060		2,060	3,410		3,410	6,560		6,560	2,060		2,060	1,860		1,860

RMR Pick Sloan Capital Investment Plan FY07-FY16 Detail

Yellow Highlight = New Project to list
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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 FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY12			FY13			FY14			FY15			FY16		
						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
Communications																				
Communications Test Equipment (PS)	PSWMF		1,000		1,000	100		100	100		100	100		100	100		100	100	100	
Misc. Communications Facilities Replacement (PS)	PSWMF		5,184		5,184	670		670	800		800	800		800	800		800	800	800	
Beaver Creek Comm Tower	PSWMF		250		250															
Beaver Creek - Sterling OPGW	PSWMF		1,350		1,350	75	75	150												
Blue Ridge Communication Building Replacement	PSWMF		200		200															
Central PMOC Communications Loop (80/20 Split)	PSWMF	80%	810		810															
Comm System Network Management System	PSWMF		950		950															
Fiber Multiplex Equipment (PS)	PSWMF		1,980		1,980	300		300	600		600	300		300						
Kremmling - Grouse Mtn 2 Gig MW Replacement with Fiber	PSWMF		890		890															
Merino Communication Building Replacement	PSWMF		225		225															
Microwave Spur Replacements (PS)	PSWMF		30	4,458	4,488															
Miracle Mile - Casper OPGW	PSWMF		1,900		1,900															
Nortel Microwave Replacements	PSWMF		1,500		1,500	500		500												
Peetz Table Communication Building Replacement	PSWMF		225		225															
Sterling - Sidney OPGW	PSWMF		1,450		1,450	625	625	1,250	75	75	150									
USBR - CBT Fiber Optic Installation	PST&R		89		89															
WAPA - Cody Area Fiber Optic Installation	PSWMF		200	12	212															
VHF Mobile Radio Replacements (PS) - Completed	PSWMF			250	250															
PMOC - Crossroads Fiber Optic Installation - Completed	PSWMF																			
Estes-Valley Fiber Optic Installation - Completed	PSWMF			425	425															
Granby-West Portal Fiber Optic Installation - Completed	PSWMF			495	495															
Grouse Mountain Communication Building Replacement - Canceled	PSWMF																			
UHF Radio Replacements (PS) - Completed	PSWMF			506	506															
Granby-Table Mountain Fiber Optic Installation - Cancelled	PST&R																			
Communications SubTotal			18,233	6,146	24,379	2,270	700	2,970	1,575	75	1,650	1,200		1,200	900		900	900	900	
Control, Protection and Metering																				
Protective Relay Replacements (PS)	PSWMF		6,778	1,256	8,034	690		690	690		690	690		690	690		690	690	690	
RTU Replacements (PS)	PSWMF		200	203	403															
Test Equipment Replacements (PS)	PSWMF		650		650	50		50	50		50	50		100	100		100	100	100	
CPM SubTotal			7,628	1,459	9,087	740		740	740		740	740		740	790		790	790	790	
Mobile and Heavy Equipment																				
Misc Heavy Equipment Replacements (PS)	PSWMF		5,014		5,014	600		600	600		600	600		600	600		600	600	600	
Bob Cat - Loveland (replacement)	PSWMF		45		45															
Casper Mechanic Service Truck	PSWMF		100		100															
Casper & Cody Hotstick Trailers	PSWMF		46		46															
Loveland - JLG Trailer	PSWMF		40		40															
Manlift, 65' - Cheyenne (replace 51928)	PSWMF		300		300															
Mobile transformer - Loveland	PSWMF		950		950															
Bucket Truck, 110' - Casper - Completed	PSWMF			567	567															
Lowboy Trailer - Casper - Completed	PSWMF			50	50															
Versalift, 38' - Loveland - Completed	PSWMF			74	74															
Mobile & Heavy Equipment SubTotal			6,495	691	7,186	600		600	600		600	600		600	600		600	600	600	

RMR Pick Sloan Capital Investment Plan FY07-FY16 Detail

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PROJECT	Fund Power Sys	MPS Split	Estimate FY07-FY16	Actuals thru end of FY06	PROJECT TOTAL	FY12			FY13			FY14			FY15			FY16		
						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
Programmatic Improvements																				
RRADS Facility Small Projects (PS)	PSWMF		2,502		2,502	250		250	250		250	250		250	250		250	250		250
Small Facility Projects (C&R - PS)	PSWCF		2,250		2,250	250		250	250		250	250		250	250		250	250		250
SCADA Upgrades (PS)	PSWMF	69%	1,532	304	1,836	436		436	67		67	67		67	67		67	67		67
Alt. Control Center Expansion - CH (PS)	PSWMF	69%	75	648	723															
CAS Storage Building	PSWMF		365		365															
E-Scheduling/E-Tagging (PS)	PSWMF	69%	463		463				10		10	32		32						
GIS Development (PS)	PSWCF	67%	192	1,010	1,202															
Hanna MW Access Road	PSWCF		30		30															
IT General Support Systems (PS)	PSWMF	69%	241		241				59		59	59		59						
Operations Center Map Board Display Screen Life Extension	PSWMF	69%	172		172															
Operations Center Map Board Replacement	PSWMF	69%	528		528															
Power Billing System Phase 3	PSWMF	50%	687		687															
DAC Hardware Upgrade - Completed	PSWMF	69%																		
Virginia Smith DC Tie HVAC Replacement - Completed	PSWMF			69	69															
Loveland Maintenance Building Vehicle Lift - Completed	PSWMF			164	164															
Programmatic Improvements SubTotal			9,037	2,195	11,232	936		936	567		567	636		636	658		658	567		567
FY07 PS CIP Grand Total			262,567	53,476	327,293	15,806	700	16,506	15,942	75	16,017	17,906		17,906	14,288		14,288	16,117		16,117
FY06 PS CIP Totals					231,477	14,200		14,200	22,310		22,310	23,610		23,610	16,751		16,751			

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:

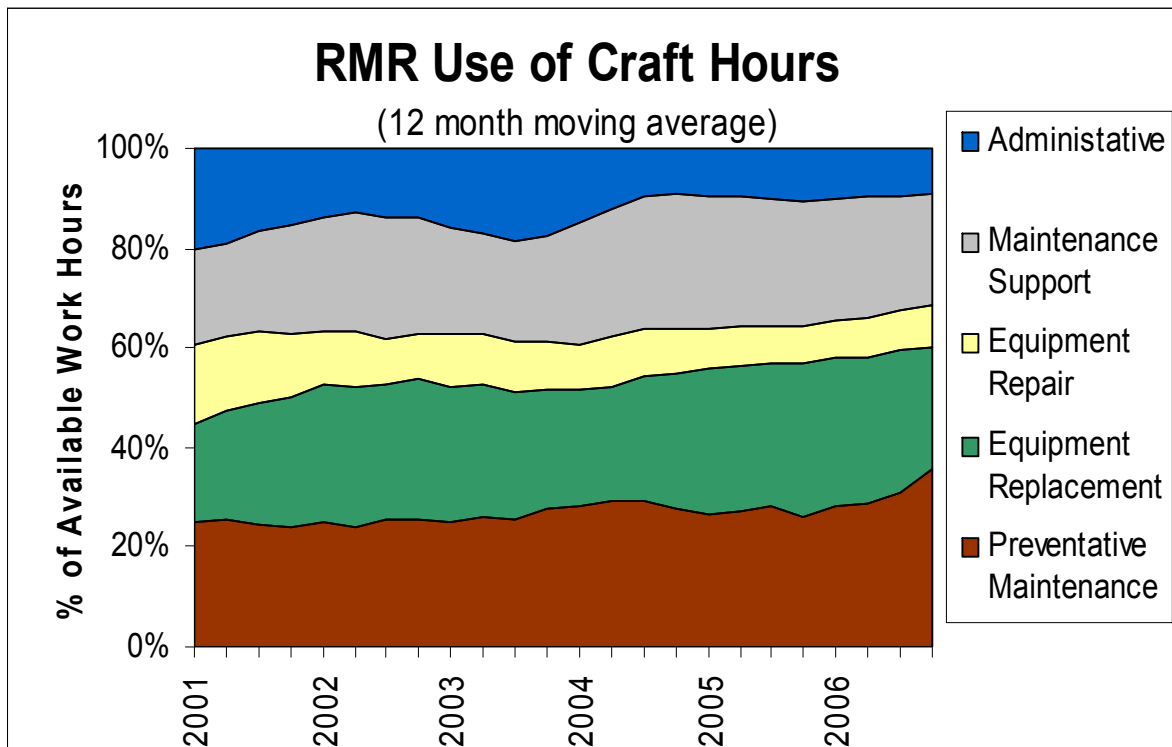
Voltage	Miles of Wood Construction	Miles of Steel Construction	Total
345-kV	0	383	383
230-kV	127	1,434	1,561
138-kV	306	24	330
115-kV	2,347	92	2,439
69-kV	243	25	268
<69-kV	301	4	305
Total	3,324	1,962	5,286

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.

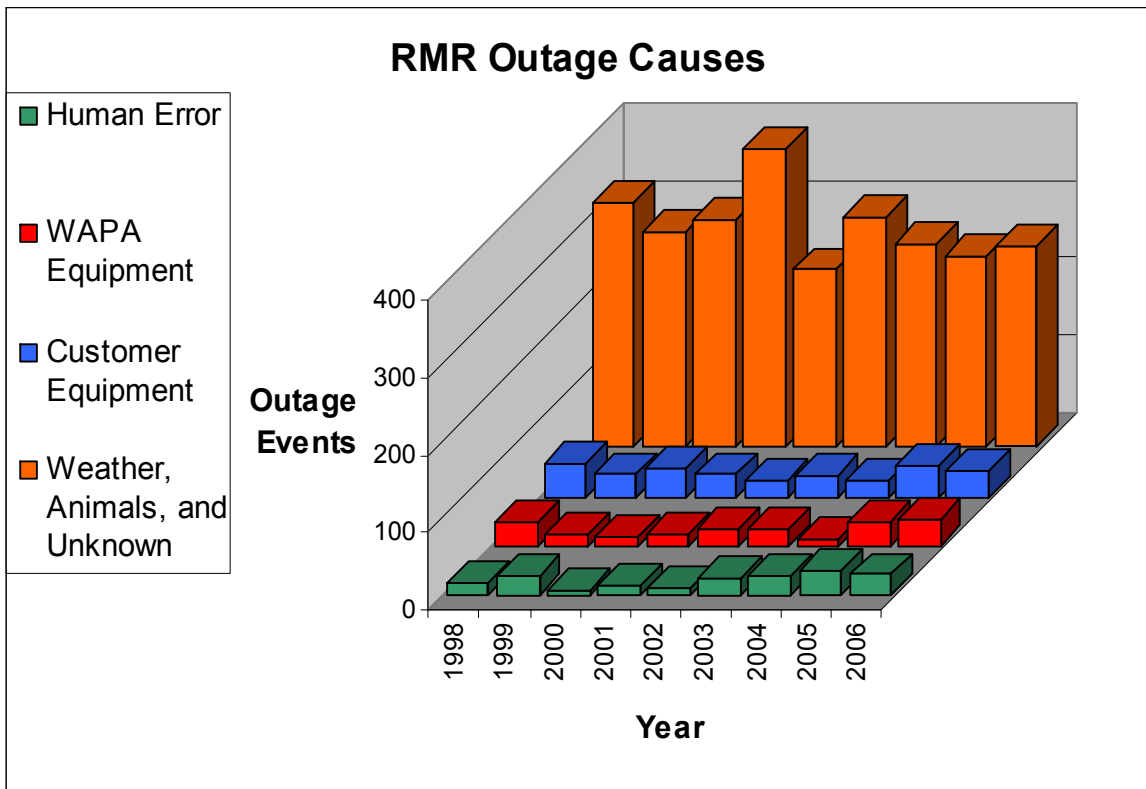
Indicators

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 six years as compared to other activities.

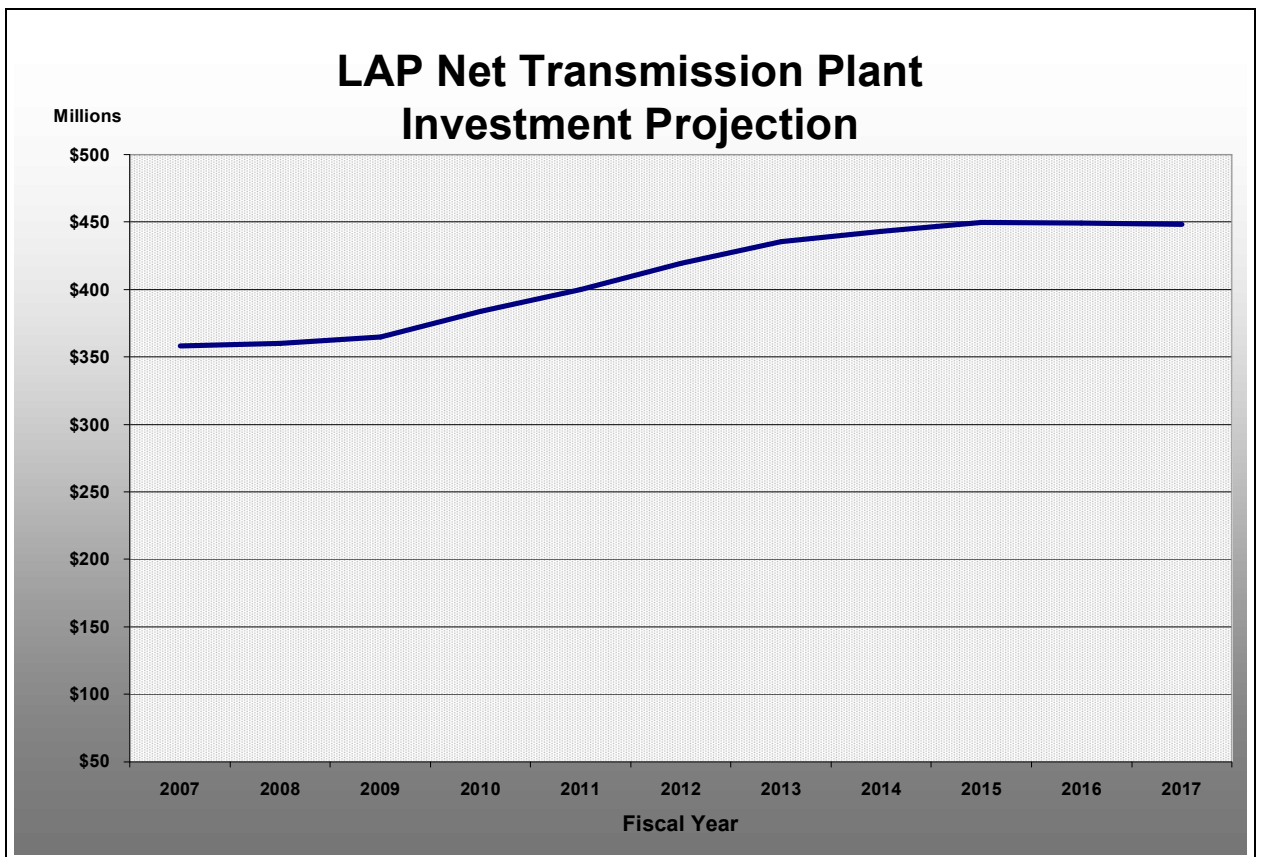


- Lagging Indicators.** The ultimate goal of the Capital Investment Program is to assure electric system reliability. Therefore, the result of an effective program should be fewer power outages due to equipment failures. Since the results of a poorly maintained or managed power system would not be apparent 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.

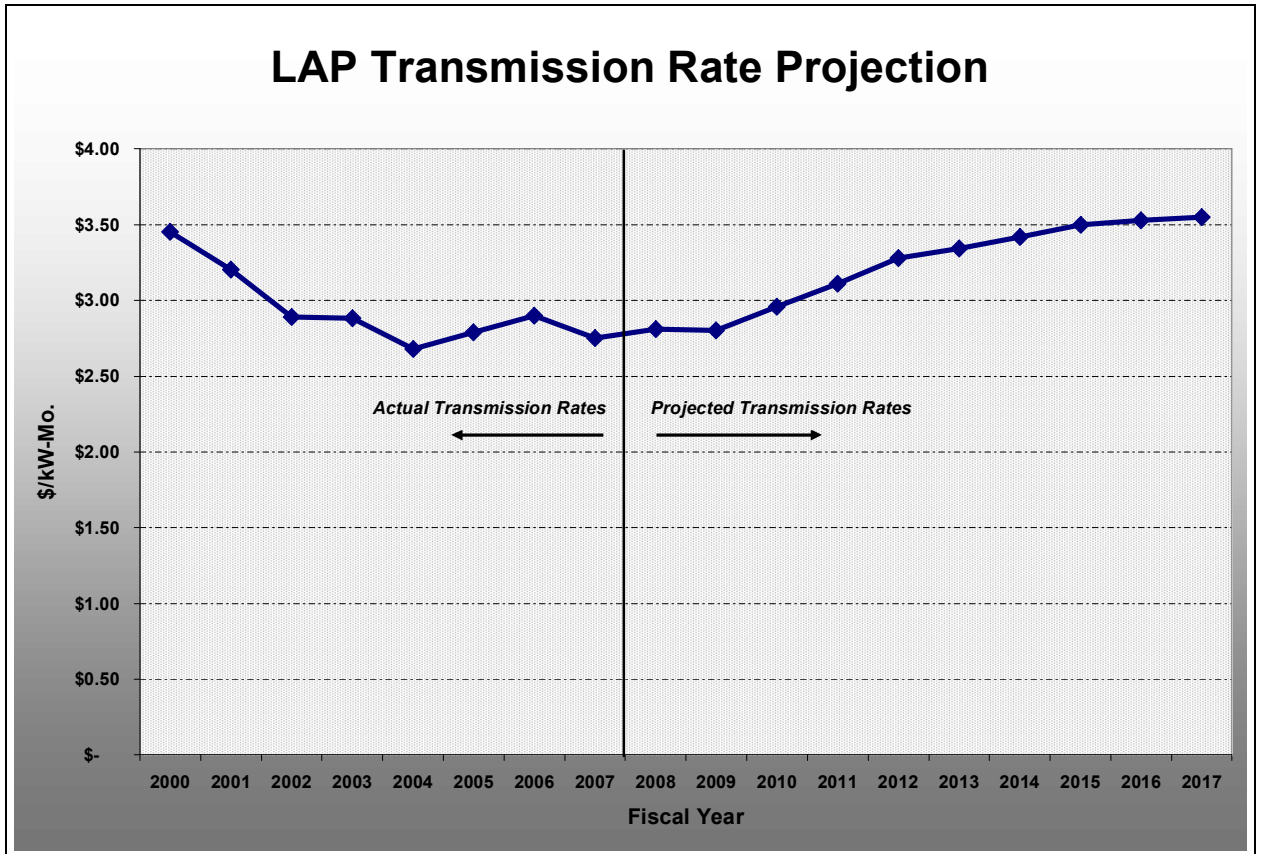


- **Financial Indicators.** Western has identified two financial measures that reflect a cost-effective investment program; 1) Net Plant Investment (NPI) and 2) Rate Impact. Western does not believe that it is possible to maintain system reliability under current load and generation growth conditions without increasing its NPI. A flat or declining NPI is an indicator of a deteriorating system. However, Western must also consider the impact on the transmission rate of increasing the NPI too rapidly, which results in an unacceptable growth in the rate. As the following graphs indicate, Western's proposed CIP plan seeks to successfully balance these issues.

This CIP Plan results in an annual growth rate in NPI for the LAP system of approximately 2.1% from 2007 through 2017.



The projected transmission rate impact of these investments results in an average rate increase of approximately 2.15% per year from 2007 through 2017. However, the estimated rate for FY 2017 is only slightly higher than the rate that Western initiated in FY 2000.



In determining the estimated transmission rate impact, Western used the proposed CIP plan to estimate the annual transmission revenue requirement and used an average load growth rate of 2% per year to calculate the estimated network load growth.

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