



WESTERN AREA POWER ADMINISTRATION

An Agency of the U.S. Department of Energy

Desert Southwest Region

PREPAYMENT FUNDING MEETING

(December 7, 2011)

AGENDA



- | | |
|--|--------|
| ➤ Welcome | Brooks |
| ➤ Brief 10YCP Overview | Hillis |
| ➤ Approved Project Status Report | Lyles |
| ➤ Proposed/Potential Prepayment Projects | Lyles |
| ➤ FY12 Prepayment Funding Plan | Lyles |
| ➤ Vote on Prepayment Funding Plan | Brooks |
| ➤ Questions / Comments | Brooks |

10YCP Overview



Approved Project Status Report

➤ Prepayment Projects Approved in FY10:

- Thornton Road-Empire 230-kV Rebuild
- Empire-ED5 Substation 230-kV Rebuild

➤ Prepayment Projects Approved in FY11:

- ED4-ED5 Transmission Line Rebuild

Approved Projects

Approved projects include the demolition of existing 115-kV Transmission Lines, including wood H-frame support structures, 3/8-inch steel overhead groundwires, and associated hardware.

- The new replacement transmission line will be constructed on steel monopole support structures using 1272 kcmil ACSS phase conductors. One 1/2-inch steel overhead groundwire, and one fiber optic overhead groundwire, new high-temperature hardware, and new porcelain insulators.
- The new lines will be built to 230-kV standard using a double-circuit design.

Approved Projects (Cont'd)

- The phase conductors for only one circuit will be installed, and these will be operated at 115-kV.
- The existing insulators will be reinstalled on the arms of the empty circuit to eliminate the vibration risk to these arms.

Thornton Road-Empire 230-kV Rebuild

The principal components of this project include the demolition of 13.2 miles of the existing Casa Grande-Empire 115-kV Transmission Line, including 336.4 kcmil ACSR phase conductors.

- The existing line passes from Casa Grande to ED5 Substation, south of Eloy.
- The fiber optic will be terminated at the take-off structure located outside of Empire Substation.
- Costs as of Nov. 16, 2011 - \$9.3M.



Thornton Road-Empire 230-kV Rebuild (Cont'd)

Work Accomplished To Date:

- National Environmental Policy Act (NEPA) compliance has been completed.
- Design has been completed.
- All Government-furnished equipment has been purchased.
- Some Government-furnished equipment has been received.
- The laydown yard has been secured and fencing contractor has erected a temporary fence for security purposes.
- Construction work has started.

Empire-ED5 Substation 230-kV Rebuild

The principal components of this project include the demolition of 9.2 miles of the existing Empire-ED5 115-kV Transmission Line, including 336.4 kcmil ACSR phase conductors.

- The fiber optic will be terminated at the take-off structure located outside of Empire and ED5 Substations.

- Costs as of Nov. 16, 2011 - \$6.1M
 - ❖ Appropriations 3.0M
 - ❖ Prepayments 3.1M



Empire-ED5 Substation 230-kV Rebuild

Work Accomplished To Date:

- NEPA compliance has been completed.
- Design has been completed.
- All Government-furnished equipment has been purchased.
- Some Government-furnished equipment has been received.
- The laydown yard has been secured and fencing contractor has erected a temporary fence for security proposes.

ED4-ED5 Transmission Line Rebuild

The principal components of this work include the demolition of 9.1 miles of the existing Electrical District No. 4 (ED4) to Electrical District No. 5 (ED5) 115-kV Transmission Line, including 795 kcmil ACSR phase conductors

- The fiber optic will be terminated at the take-off structure located outside of ED4 and ED5 Substations.
- Costs as of Nov. 16, 2011 - \$3.9M.



ED4-ED5 Substation 230-kV Rebuild

Work Accomplished To Date:

- Biological surveying has been completed.
- An Environmental Consultant has completed Class I and Class III cultural survey reports.
- Geological boring has been completed.
- Western's construction specification review has been completed.
- The laydown yard has been secured and fencing contractor has erected a temporary fence for security proposes.
- Construction contract to be awarded in Dec. 2011.

Potential Prepayment Projects

Western has up to \$23,000,000 in prepayment funding available for Construction Projects in FY12.

#	Proposed Project Name	Project Cost
1	Coolidge Substation 230/69-kV Transformer Addition	\$ 6,110,000
2	Bouse Substation 161-kV Rebuild	\$ 4,970,000
3	ED4-ED2 115-kV Transmission Line Rebuild	\$ 11,100,000
	Total Proposed Prepayment Project Plan	\$22,180,000

Alternative Prepayment Projects

#	Alternate Project Names	Project Cost
<u>4</u>	Parker 161-kV Oil Breaker Replacement	\$ 2,062,000
<u>5</u>	Black Point Mesa T-Line Reroute	\$ 2,795,237
<u>6</u>	Gila Substation 34.5/69 kV Rebuild	\$10,697,000

FY12 Proposed Prepayment Projects

Coolidge Sub 230/69-kV Transformer Addition Conceptual Cost and Schedule



- Estimated cost is approximately \$6,110,000 (\$7,710,000 less Transformer already purchased at \$1,600,000).
- Project scheduled to be energized by January 2014.

Fiscal Year	FY12	FY13	FY14
Funding	\$2,100,000	\$3,900,000	\$110,000

Coolidge Substation 230/69-kV Transformer Addition

The principal components of this work includes:

- Adding a 230-kV bay on the east side of the existing 230-kV yard. This bay includes a 230-kV breaker, disconnect switches, protection and control equipment, bus work, and support structures.
- A new control house will be built to house the protection, control, and communications panels for the new 69-kV bay, as well as other associated equipment.
- An additional bay on the west side of the existing 230-kV yard will include a 45 MVAR capacitor bank, a reactor, disconnect switches, protection and control equipment, bus work and support structures.

FY12 Proposed Prepayment Projects

Bouse Substation 161-kV Rebuild Conceptual Cost and Schedule



- Estimated cost is approximately \$4,970,000 (\$7,832,000 less \$2,862,000 costs to date).
- Project scheduled to be energized in Spring of 2014.

Fiscal Year	FY12	FY13	FY14
Funding	\$3,100,000	\$1,820,000	\$50,000

Bouse Substation 161-kV Rebuild

This project involves:

- Building a new yard with modern equipment rated to 230-kV, and a bus arrangement better suited to providing reliability in an area with old transmission lines that are prone to outages.
- A control building with new DC power, relays, controls, and communications will be constructed, as well as a new microwave tower to maintain the existing microwave communications.
- The new yard equipment, including 230-kV circuit breakers, disconnect switches, instrument transformers, and the microwave tower will be installed while the control building is being built.

FY12 Proposed Prepayment Projects

ED4–ED2 115-kV Transmission Line Rebuild

Conceptual Cost and Schedule



- Estimated cost is approximately \$11,100,000.
- Project scheduled to be energized in Spring of 2014.

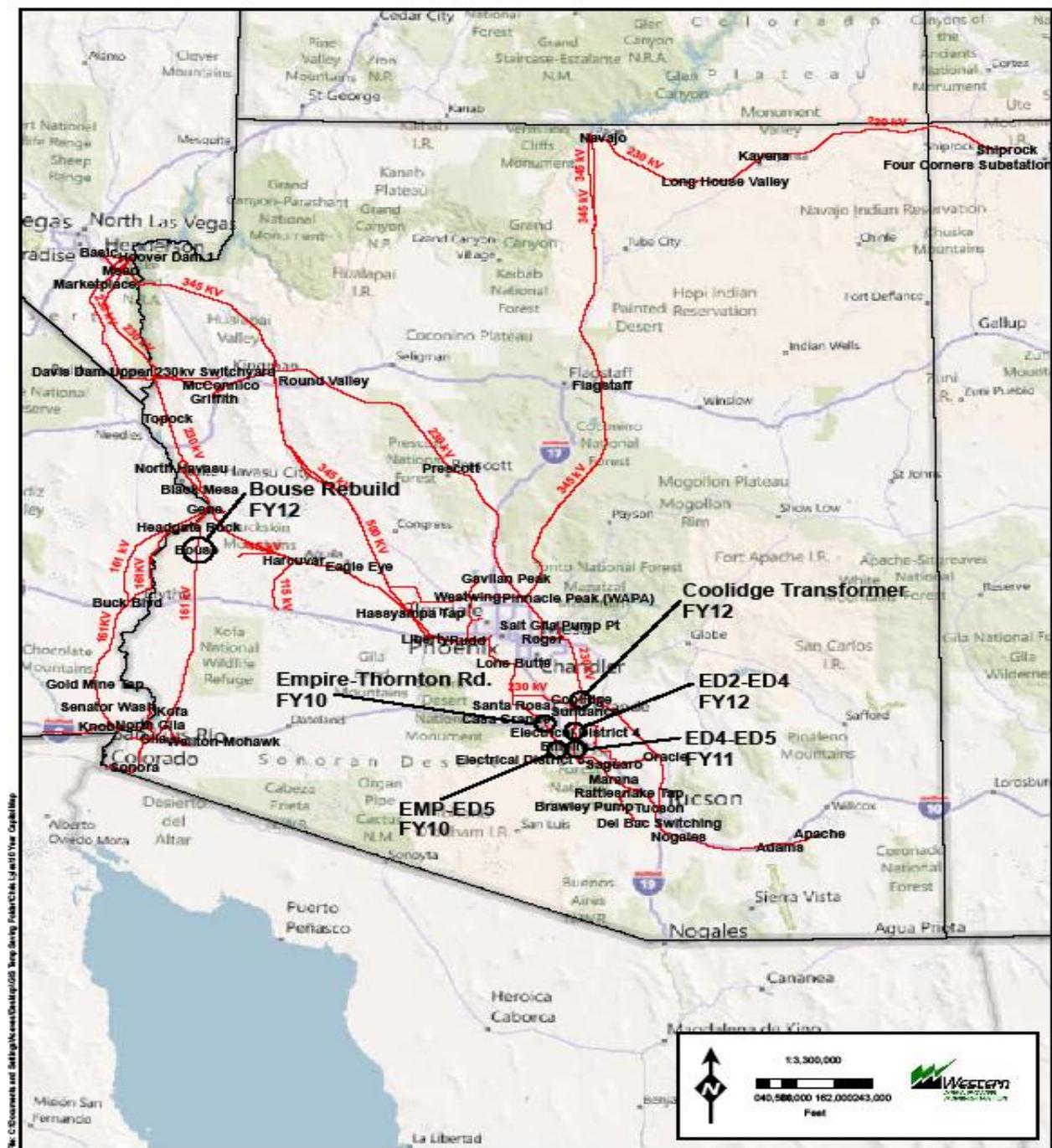
Fiscal Year	FY12	FY13	FY14
Funding	\$5,300,000	\$5,750,000	\$50,000

ED4–ED2 115-kV Transmission Line Rebuild

This project consist of:

- Completely removing 9.3 miles of conductors, insulators, hardware, and all wood structures.
- The new line will be built on double-circuit 230-kV steel monopoles.
- One circuit will be installed utilizing a 1272 kcmil ACSS conductor, polymer/porcelain insulators, and share one new optical groundwire and one new overhead groundwire.

Location of Pre-Payment Projects



File: C:\fourcorners and saltlake\newest\Design\Grid_Temp\diving\FourCorners_Upland\FY12_CapitalMap



FY12 Proposed Prepayment Funding Plan

#	Project Name	Project Cost
Recommended for Prepayment Funding		
1	Coolidge Substation 230/69-kV Transformer Addition	\$ 6,110,000
2	Bouse Substation 161-kV Rebuild	\$ 4,970,000
3	ED4–ED2 115-kV Transmission Line Rebuild	\$11,100,000
Total Prepayment Funding Proposed for FY12		\$22,180,000

Voting Process Overview

(MOU - Section 5)

- Each participant (those that signed MOU) will have one vote.
- Approval requires an affirmative vote of greater than fifty (50) percent of votes received (during the meeting, via e-mail or by proxy) by the close of the meeting.
- Multi-year projects in the Prepayment Funding Plan will be approved for the total funding of the project.
- Western shall pursue other means of funding projects not approved for Prepayment Funding, or move the project to a later fiscal year for reconsideration.

Prepayment Funding Plan Vote

- Roll call of customers that have signed the MOU.
- Identify customers that voted via proxy or e-mail.
- Provide voting results.

THANK YOU!

