

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-10 \_\_\_\_\_

EXHIBIT NO.\_\_\_\_\_(SJK-3)

SCOTT J. KINNEY

REPRESENTING AVISTA CORPORATION

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2360** (See also, Exhibit No.\_\_(SJK- 4), Schedule 1, for additional supporting documentation)

**ER Name:** Lolo 230 – Rebuild 230 kV Yard

**Pro Forma Amount:** \$1,450,000

**Expended to date:** \$1,186,880

**2010 Transfer to Plant Date:** February 2010

**Project Description:**

This project involves the rebuild of the existing Lolo substation to increase the capacity of the substation bus, breakers, and supporting equipment to match the upgraded capacity of the transmission lines that connect to the substation. The new Lolo substation design significantly improves reliability and operating flexibility. The Lolo Substation project was constructed in phases to allow operational flexibility due to system reliability concerns associated with other scheduled construction in the area. Phase 1 was completed in 2007 and the remainder of the project (\$1.45 million) was completed in February 2010. The Lolo Substation project costs were developed by the Engineering Department and approved through the capital budget process. This project is required to meet Reliability Compliance under NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, and TPL-003-0a R1-R3. There are no offsets or savings associated with the rebuild of the Lolo substation. Avista did not have any scheduled maintenance for the substation in the test period.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:** Completion date was February 2010

**Attachment Index:** (See Exhibit No.\_\_(SJK- 4), Schedule 1, for additional supporting documentation, as listed below)

- Costs through 3/15/2010 pg. 2-3
- Capital Project Request (CPR) Forms pg. 4-11
- Design Information pg. 12-20

**Note:** During the course of Avista’s pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2217 (See also, Exhibit No.\_\_(SJK- 4), Schedule 2, for additional supporting documentation)**

**ER Name: Spokane /Coeur d'Alene area relay upgrade**

**Pro Forma Amount: \$1,250,000**

**Expended to date: \$695,982**

**2010 Transfer to Plant Date: Periodically during 2010**

**Project Description:**

Spokane/Coeur d'Alene area relay upgrade: This project involves the replacement of older protective 115 kV system relays with new micro-processor relays to increase system reliability by reducing the amount of time it takes to sense a system disturbance and isolate it from the system. This is a five year project and is required to maintain compliance with mandatory reliability standards. This project is required to meet Reliability Compliance under NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, TPL-003-0a R1-R3. Any positive offsets in reduced maintenance costs associated with this replacement effort are offset by increased NERC testing requirements per standard PRC-005-1.

A summary of the projects that will be completed during 2010 follows:

	<b>Total</b>	<b>Incurred Through March 15, 2010</b>
SPO CDA 115 Spokane Ring	509,587.78	509,587.78
NE Spokane Relay Upgrades	140,000.00	130,827.08
Third Hatch Relay Upgrades	345,500.00	55,567.29
Beacon Relay Upgrades	255,000.00	-
	1,250,087.78	695,982.15

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**AVISTA UTILITIES  
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**Timeline:**

This 5-year project started in 2008 and will complete in 2011. For the 2010 jobs, all of the jobs will be completed by December 31, 2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 2, for additional supporting documentation, as listed below)**

- Historical Cost Detail pg. 3-4
- Capital Project Request (CPR) Forms, including all attachments pg. 5-9
- Scope of Work and Prioritization pg. 10-13
  - Please refer to “115 kV Relay Upgrades Spokane and Coeur d’Alene Project – 2010 Scope of Work and Prioritization Meeting & Notes – 11/17/2009”
  - Preliminary Schedule:
    - Third & Hatch 3HT A-531 and Post Street PST A-544 Spring 2010 (Work Currently in Progress)
    - Northeast NE A-252 and Beacon BEA A-603 Spring 2010
    - Third & Hatch 3HT A-530 and Ross Park ROS A-208 Fall 2010
    - Third & Hatch 3HT A-532 and Ninth & Central 9CE Fall 2010

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2318** (See also, Exhibit No.\_\_(SJK- 4), Schedule 3, for additional supporting documentation)

**ER Name:**                   **Nez Perce 115 Sub-Ins Capacitor Bank**

**Pro Forma Amount:**           **\$3,575,000**

**Expended to date:**           **\$1,734,979**

**2010 Transfer to Plant Date:**

**October 2010:**               **\$3,450,000**

**December 2010:**           **\$ 125,000**

**Project Description:**

This project involves the complete reconstruction of the Nez Perce substation based upon its degraded condition. The project also includes the addition of a shunt capacitor bank to provide voltage support to the area for critical contingencies to ensure compliance with NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, TPL-003-0a R1-R3. There are no anticipated offsets or savings associated with this substation rebuild. Avista did not have any maintenance for the substation during the test period.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no anticipated offsets or savings associated with this substation rebuild.

**Timeline:**

See attached Gantt chart. Property purchase and initial scoping started in November 2008. Engineering and procurement continued up to March 2010. Site grading started in June 2009; substation construction started in September 2009. The main 115 kV switch yard will energize in third quarter 2010. The 115 kV capacitor bank and 13 kV distribution yard are not scheduled to energize until third quarter 2011; these costs are not included in the pro forma adjustment in this case.

See attached timeline for further detail.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 3, for additional supporting documentation, as listed below)**

- Cost pg. 3-4
- Capital Project Request (CPR) Forms pg. 5-7

**AVISTA UTILITIES  
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- Scoping memo dated 10/30/08, which contains preliminary budget discussions pg. 8-14
- Gantt chart, which details engineering and construction stages of project (Timeline) pg. 15
- List of relevant Project Purchase Orders pg. 16
- Nez Perce scoping review memo dated 7/15/08, which also contains relevant preliminary budget projections pg. 17-19
- Photos that detail completed stages of construction pg. 20-24
- Construction Agreements (Confidential) pg. 25-40

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2277** (See also, Exhibit No.\_\_(SJK- 4), Schedule 4, for additional supporting documentation)

**ER Name:** SCADA Replacement

**Pro Forma Amount:** \$510,001

**Expended to date:** \$ 23,244

**2010 Transfer to Plant Date:** Quarterly throughout 2010

**Project Description:**

SCADA Replacement: The Supervisory Control and Data Acquisition (SCADA) system is used by the system operators to monitor and control the Avista transmission system. The SCADA system will be upgraded in 2010 to a new version provided by our SCADA vendor. The current application is no longer supported by the vendor. The upgrade will ensure Avista has adequate control and monitoring of its Transmission facilities. This portion of the project is required to meet Reliability Compliance under NERC Standards: TOP-001-1, TOP-002-2a R5-R10, R16, TOP-005-2 R2, TOP-006-2 R1-R7, CIP-005, CIP-007. There are no offsets or savings associated with this upgrade project, because the Company already pays the application vendor a set annual maintenance fee for support.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

<b>Timeline:</b>	<b>Start Date</b>	<b>End Date</b>
Project Scoping	March 1, 2010	April 15, 2010
Phase 1 – Equipment procurement, configuration of EMS Servers/Clients/Active Directory/Multi-host failover	April 15, 2010	September 1, 2010
Phase 2 – e-terraTrust installation	September 1, 2010	October 31, 2010
Phase 3 – e-terraControl/e-terraComm upgrades	November 1, 2010	December 31, 2010

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 4, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Forms, including all attachments pg. 2-3

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2293** (See also, Exhibit No.\_\_(SJK- 4), Schedule 5, for additional supporting documentation)

**ER Name: SCADA II Replacement**

**Pro Forma Amount: \$289,999**

**Expended to date: \$0**

**2010 Transfer to Plant Date: June and December 2010**

**Project Description:**

SCADA Replacement: The Supervisory Control and Data Acquisition (SCADA) system is used by the system operators to monitor and control the Avista transmission system. The SCADA system will be upgraded in 2010 to a new version provided by our SCADA vendor. The current application is no longer supported by the vendor. The upgrade will ensure Avista has adequate control and monitoring of its Transmission facilities. This portion of the project is required to meet Reliability Compliance under NERC Standards: TOP-001-1, TOP-002-2a R5-R10, R16, TOP-005-2 R2, TOP-006-2 R1-R7, CIP-005, CIP-007. There are no offsets or savings associated with this upgrade project, because the Company already pays the application vendor a set annual maintenance fee for support. This is an annual System ER that replaces/upgrades SCADA systems and installs new SCADA systems in substations throughout Avista's service territory. Therefore, this project has a completion time of 12/31/10.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

The Remote Terminal Unit (RTU) at Beacon 230 kV Substation will be replaced in the Q3-Q4 timeframe. Other failed RTU's will be replaced/upgraded on an as needed basis under the annual System ER 2293.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 5, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Forms

Pg. 2

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.



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2010 CAPITAL PROJECTS**

**ER No.: 2481** (See also, Exhibit No.\_\_(SJK- 4), Schedule 6, for additional supporting documentation)

**Project Name:** System Replace/Install Capacitor Bank

**Pro Forma Amount:** \$750,000

**Expended to date:** \$195,924

**2010 Transfer to Plant Date: June 2010 - \$522,000 and November 2010 \$228,000**

**Project Description:**

System Replace/Install Capacitor Bank (\$0.750 million): This project includes the construction of a 115 kV capacitor bank at Airway Heights to support local area voltages during system outages. The project is required to meet reliability compliance with NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, TPL-003-0a R1-R3, and provide improved service to customers. The project is scheduled to be completed by July of 2010. There are no loss savings or other offsets associated with this new equipment installation. The capacitor bank is expected to be energized by August 31, 2010.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Ordering of material is expected to be completed in March 2010. Expansion of the existing substation yard to include grading, fencing and foundation work is expected to begin in May 2010. Installation of major electrical equipment is expected to begin in June 2010. Installation of control circuitry, protective relaying and communications equipment is expected to begin in July 2010 and be completed in August 2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 6, for additional supporting documentation, as listed below)**

- Costs pg. 3-4
- Capital Project Request (CPR) Form and Budget Report pg. 5-7
- Purchase Orders (Confidential) pg. 8-14
- Site Plan Avista Drawing E-35608 pg. 15

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2310** (See also, Exhibit No.\_\_(SJK- 4), Schedule 7, for additional supporting documentation)

**ER Name:** West Plains Transmission Reinforce

**Pro Forma Amount:** \$975,000

**Expended to Date:** \$4,686

**2010 Transfer to Plant Date:** December 2010

**Project Description:**

The Airway Heights-Silver Lake (North Fairchild Tap) 115kV Transmission Line is part of a 115kV loop around the West Plains area. The System Planning department has identified the need to reinforce the West Plains 115kV system by upgrading the lines in the area to a 100 MVA capacity. Approximately 8.5 miles of the Airway Heights-Silver line toward Silver Lake were constructed single-pole style in 2007 with 556 AAC conductor, carrying the desired 100 MVA capacity rating. However, the first 2.5 miles from Airway Heights were constructed H-frame style in 1942 with #2/0 ACSR conductor, carrying only a 48 MVA rating. This work is necessary to upgrade the final 2.5 miles of the ten mile long transmission line from #2/0 ACSR to 556 kcm Aluminum (100 MVA-Summer) conductor.

Due to the age of the line, and the increase in sag for the new conductor compared to the existing, this project calls for a full rebuild. The existing wood H-frame structures and wire will be removed and new steel H-frame structures and wire will be installed.

The line upgrade will meet compliance requirements associated with NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, TPL-003-0a R1-R3. Additionally, this work will increase service reliability to an essential military facility (North Fairchild Air Force Base). Using 2009 actual loads, the new conductor will reduce line losses by 71 MWh on an annual basis, establishing a yearly offset savings of \$7,100 (based on a \$100/MWh avoided energy cost); these savings have been reflected in the proposed revenue requirement.

The transmission line estimating process uses a baseline per mile costs derived from industry averages (see attached Feasibility Cost Chart for further detail). This number is increased based on consideration of project variables including, but not limited to, project location, soil conditions, construction timing, commodity prices, overhead rates, etc. A parallel estimate is also developed based on the engineer's/designer's best judgment of what it will take to complete the project using the line items established in the Engineer Design Scoping Document (DSD: see attached for further details). These two approaches are reconciled with review of the department manager. An additional estimate check is made when the project uses the TL-Pro design software package. This program contains an estimating function based on variables provided by the user.

Steel poles and crossarms are specified for their life-cycle cost advantages.



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2010 CAPITAL PROJECTS**

**ER No.: 2455** (See also, Exhibit No.\_\_(SJK- 4), Schedule 8, for additional supporting documentation)

**ER Name: Mos230-Pullman 115 Reconductor**

**Pro Forma Amount: \$1,300,000**

**Expended to date: \$14,685**

**2010 Transfer to Plant Date: December 31, 2010**

**Project Description:**

This project will provide additional capacity to support continued growth in the Moscow and Pullman areas of Idaho and Washington. The existing transmission line is constructed with #1/0 copper conductor from structure 5/4A (North Moscow Substation) to structure 11/7 (Pullman Substation) and is the last phase of the transmission line between Moscow 230kV Substation and Shawnee 115kV substation to be upgraded to 556 ACSR "Parakeet" conductor.

The work will include replacing some wood poles and associated cross arms, cross braces, insulators, and guy/anchors as necessary along the 6.1 miles of transmission line required to accommodate the larger 556 ACSR conductor.

The line upgrade will meet compliance requirements associated with NERC Standards: TOP-004-2 R1-R4, TPL-002-0a R1-R3, TPL-003-0a R1-R3. The transmission line estimating process uses a baseline per mile costs derived from industry averages (see attached Feasibility Cost Chart for further detail). This number is increased based on consideration of project variables including, but not limited to, project location, soil conditions, construction timing, commodity prices, overhead rates, etc. A parallel estimate is also developed based on the engineer's/designer's best judgment of what it will take to complete the project using the line items established in the Engineer Design Scoping Document (DSD: see attached for further details). These two approaches are reconciled with review of the department manager. An additional estimate check is made when the project uses the TL-Pro design software package. This program contains an estimating function based on variables provided by the user.

Steel poles and cross arms are specified for their life-cycle cost advantages.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. Using 2009 actual loads, the new conductor will reduce line losses by 151 MWH on an annual basis, establishing a yearly offset savings of \$15,100 (based on a \$100/MWH avoided energy cost), which has been pro formed in the case.

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2010 CAPITAL PROJECTS**

<b>Timeline:</b>	<b>Start Date</b>	<b>End Date</b>
BI PT902: Pullman – Terre View 115 Reconductor	October 1, 2009	August 2, 2010
BI PT901: N. Moscow – Terre View 115 Reconductor	January 4, 2010	November 1, 2010

See attached timeline for further detail.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 8, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Forms pg. 3-5
- Design Scoping Document (DSD) pg. 6-7
- Timeline of Project (detailed) pg. 8

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

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2010 CAPITAL PROJECTS**

**ER No.: 2273** (See also, Exhibit No.\_\_(SJK- 4), Schedule 9, for additional supporting documentation)

**ER Name:** Environmental Regulations Projects: Beacon Storage Yard

**Pro Forma Amount:** \$750,000

**Expended to date:** \$16,010

**2010 Transfer to Plant Date:** June 2010

**Project Description:**

Beacon Storage Yard (\$0.750 million): The Beacon Storage Yard is a location where circuit breakers and power transformers are stored and staged for rotation into existing substations as replacements or for new construction. This site is near the Spokane River and this project work will provide an oil containment system to protect the local environment. In 2009, the Company constructed the bulk of the Beacon Substation Equipment Storage Yard for a total cost of \$948,000. In 2010, the remainder of the yard and a building to securely house the mobile substations and battery trailer will be completed and transferred to plant. There are no offsets for this project because it is required to eliminate environmental contamination.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

This project will complete the overall Beacon Storage Yard expansion. The plan is for this project to be completed in June 2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 9, for additional supporting documentation, as listed below)**

- Costs pg. 2
- Capital Project Request (CPR) Forms, including all attachments pg. 3-5
- Scope of Work detail pg. 6-12

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

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2010 CAPITAL PROJECTS**

**ER No.: 2214 (See also, Exhibit No.\_\_(SJK- 4), Schedule 10, for additional supporting documentation)**

**ER Name: Contractual Required Projects: Colstrip Transmission**

**Pro Forma Amount: \$503,000**

**Expended to date: \$34,988 paid by Avista to Northwestern**

**2010 Transfer to Plant Date: Monthly throughout 2010**

**Project Description:**

Contractual Required Projects:

The Colstrip Transmission System (CTS) covers 494.5 circuit miles of 500 kV transmission between Colstrip and Townsend. The CTS system also includes the Colstrip and Broadview 500 kV substations. The system is operated and maintained by NorthWestern. NorthWestern either performs or contracts out the capital work associated with the joint owned facilities. Avista, NorthWestern, Portland General Electric, PacifiCorp, and Puget Sound Energy each have an ownership share of the facilities and are parties to the Colstrip Transmission Agreement which, among other provisions, obligates the joint owners to fund necessary capital improvements for the CTS. Capital additions for 2010 and 2011 include 500 kV circuit breaker replacements at the Colstrip and Broadview switching stations. 2010 is the third year of a seven-year project to replace all of the 500 kV breakers. The original breakers are at or reaching the end of their useful lives and are considered obsolete. Also, a new communication path between Colstrip and Broadview will be constructed in 2010 and 2011 in conjunction with the replacement of an obsolete electromechanical relay system. Other 2010 and 2011 capital work includes Raptor Protection Mitigation on the Broadview-Townsend #1 & #2 lines, 500 kV breaker failure relay upgrades at Broadview and Colstrip, ATR (Colstrip Acceleration Trend Relay) Engineering/Development for necessary software and hardware upgrades, and ongoing network security upgrades so we can be compliant with NERC CIP standards. There are no offsets or savings to incorporate for this project. The work being done is due to Obsolescence. As a partner in the project we are bound to pay for capital outlays for the benefit of the project.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

All of these projects will be completed by 12/31/2010.

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**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 10, for additional supporting documentation, as listed below)**

These are all done by invoice:

- 500 kV plan Spreadsheet attached pg. 3
- 2010 500 kV Capital Budget Item Explanation prepared by Northwestern pg. 4-7
- Colstrip Project Transmission Agreement pg. 8-131

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.



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**ER No.: 2301 (See also, Exhibit No.\_\_(SJK- 4), Schedule 11, for additional supporting documentation)**

**ER Name: Contractual Required Project: Tribal Permits**

**Pro Forma Amount: \$519,000**

**Expended to date: 33,254.50 (Project Task Summary Attached)**

**2010 Transfer to Plant Date: Quarterly during 2010**

**Project Description:**

Contractual Required Projects: Tribal Permits: The Company has approximately 300 right-of-way permits on tribal reservations that need to be renewed. The costs include labor, appraisals, field work, legal review, GIS information, negotiations, survey (as needed), and the actual fee for the permit. This work is required to maintain right of ways, therefore there are no additional offsets or savings that will be achieved.

This is an ongoing project which requires individual negotiations on each parcel and ultimate approval by the Bureau of Indian Affairs. The amount included above is for 2010 only and will be updated for each succeeding year depending upon progress in the budget year. The Company estimates spending the following amounts as listed in attached CPRs:

<b>Project</b>	<b>Description</b>	<b>Amount</b>
02805430	Colville Tribe DE Permits	50,000
02805431	Spokane Tribe DE Permits	40,000
03805113	Nez Perce Distribution	150,000
03805207	Coeur d'Alene Tribe DE Permits	20,000
29905074	Spokane Tribe TE Permits	10,000
34505000	Coeur d'Alene Tribe 230kV Permits	50,000
39905017	Nez Perce Easements	44,610
39905043	Coeur d'Alene Tribe Permits	30,000
-	Other misc. projects	124,390
<b>Total</b>		<b>519,000</b>

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

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**Timeline:**

The timeline is completely dependent on the speed at which negotiations are completed. While there is not specific timeline, it is in the best interest of Avista to complete this work as soon as possible to avoid potentially increasing costs.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 11, for additional supporting documentation, as listed below)**

- Project Task Summary pg. 3-4
- Capital Project Request (CPR) Forms, including all attachments. pg. 6-13
- Memo from Teri Patton to Debbie Deubel indicating \$600,000 budget. pg. 14-15  
Budget was later reduced to \$519,000.
- Labor costs for Pole inventories on all Reservations pg. 16  
(based on similar 2007 inventories)

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

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**ER No.: 2307 (See also, Exhibit No.\_\_(SJK- 4), Schedule 12, for additional supporting documentation)**

**ER Name: Idaho Road Sub - Boulder Rathdrum 115kV Transmission Line (Phase 2)**

**Pro Forma Amount: \$1,500,000**

**Expended to date: \$138,544**

**2010 Transfer to Plant Date: December 31, 2010**

**ER Description:**

Growth has brought the need to construction the Idaho Road 1 15kV/13kV distribution substation, located at the northeast corner of Idaho Road and Prairie Avenue near Rathdrum, Idaho. Idaho Road Substation is located approximately five (5) miles southwest of Avista's existing Rathdrum 230kV/115kV/13kV station. The Boulder to Rathdrum (BLD-RAT) 115kV transmission line runs in an east/west path approximately one-half (1/2) mile south of the Idaho Road Substation location.

Phase 2 of the Substation Integration Project will connect the Idaho Road Substation directly to the Rathdrum Substation with a new transmission line, providing a four (4) mile loop (increased reliability) feed, and allowing the removal of approximately three and one-half (3-1/2) difficult access transmission line. Presently the substation is fed off the twenty (20) mile long BLD-RAT line via a ½ mile tap. An outage anywhere along the BLD-RAT will interrupt service to the Idaho Road Substation.

Additionally, approximately two (2) miles of double circuit transmission line will be reframed to single circuit, improving the structural integrity of the line. Phase 2 is scheduled to construct in FY2010. The route is designed to be constructed on private easements adjacent to the Union Pacific Railroad property running SW/NE.

The transmission line estimating process uses a baseline per mile costs derived from industry averages (see attached Feasibility Cost Chart for further detail). This number is increased based on consideration of project variables including, but not limited to, project location, soil conditions, construction timing, commodity prices, overhead rates, etc. A parallel estimate is also developed based on the engineer's/designer's best judgment of what it will take to complete the project using the line items established in the Engineer Design Scoping Document (DSD: see attached for further details). These two approaches are reconciled with review of the department manager. An additional estimate check is made when the project uses the TL-Pro design software package. This program contains an estimating function based on variables provided by the user. Steel poles and crossarms are specified for their life-cycle cost advantages.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. In addition, using 2009 actual loads, the new conductor will

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reduce line losses by 100 MWh on an annual basis, establishing a yearly offset savings of \$10,000 (based on a \$100/MWh avoided energy cost), which was pro formed in the case.

<b>Timeline:</b>	<b>Start Date</b>	<b>End Date</b>
BI CT906: Boulder Rathdrum 115kV Transmission	January 5, 2009	November 9, 2010

See attached timeline for further detail.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 12, for additional supporting documentation, as listed below)**

- Cost pg. 3
- Capital Project Request (CPR) Forms, including all attachments pg. 4-6
- Design Scoping Document pg. 7-8
- Timeline of Project (detailed) pg. 9

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

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**ER No.: 2051 (See also, Exhibit No.\_\_(SJK- 4), Schedule 13, for additional supporting documentation)**

**ER Name: Noxon - Pine Creek 230 kV Ready Fiber Optic**

**Amount: \$500,000**

**Expended to date: \$166,519**

**2010 Transfer to Plant Date: \$42,000 monthly**

**Project Description:**

These projects include minor transmission rebuilds as a result of age or damage caused by storms, wind, fire, and the public. These smaller projects are required to operate the transmission system safely and reliably. Facilities will need to be replaced when damaged in order to maintain customer load service. In 2009 the Company spent \$2.206 million on these minor rebuild projects as a result of damage caused by weather or the public. Due to the cyclical nature of these projects, and the lack of conductor capacity increases, there are no offsets or savings associated with these minor rebuild efforts.

The current spend through March 16, 2010 is \$166,519. The Company has spent an average of approximately \$922,000 per year on these minor transmission rebuilds.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

This project will begin in January and end in December 2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 13, for additional supporting documentation, as listed below)**

ER Historical Cost Detail

pg. 2-3

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2057 (See also, Exhibit No.\_\_(SJK- 4), Schedule 14, for additional supporting documentation)**

**ER Name:                   Transmission Minor Rebuild**

**Pro Forma Amount:     \$750,000**

**Expended to Date:     \$509,570**

**2010 Transfer to Plant Date:     December 31, 2010**

**Project Description:**

These projects include minor transmission rebuilds resulting from age or damage caused by storms, wind, fire and the public. To a significant degree, they are planned projects resulting from inspection information (aerial patrols and groundline test & treat projects) conducted the prior year. These projects are necessary to operate the transmission system safely and reliably. In 2009, the Company spent \$2.206 million on these minor rebuild projects. Due to the cyclical nature of these projects, and the lack of conductor capacity increases, there are no offsets or savings associated with these minor rebuild efforts.

The Minor Rebuild projects scheduled for 2010 include:

- Dry Creek – Talbot 230kV Minor Rebuild
- Hatwai – Moscow 230kV Minor Rebuild
- Lind – Shawnee 115kV Minor Rebuild

The transmission line estimating process uses a baseline per mile cost derived from industry averages (see attached Feasibility Cost Chart for further detail). This number is increased based on consideration of project variables including, but not limited to, project location, soil conditions, construction timing, commodity prices, overhead rates, etc. A parallel estimate is also developed based on the engineer's/designer's best judgment of what it will take to complete the project using the line items established in the Engineer Design Scoping Document (DSD: see attached for further details). These two approaches are reconciled with review of the department manager. An additional estimate check is made when the project uses the TL-Pro design software package. This program contains an estimating function based on variables provided by the user.

Steel poles and crossarms are specified for their life-cycle cost advantages.

The total cost of these three projects is \$1,393,600. The actual amount incurred to date is \$509,570. The pro forma adjustment includes on \$750,000, due to an inadvertent error that was identified after the revenue requirement was finalized.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

<b>Timeline:</b>	<b>Start Date</b>	<b>End Date</b>
BI AMT13: Dry Creek - Talbot 230kV Rebuild	November 1, 2009	April 30, 2010
BI AMT13: Hatwai – Moscow 230kV Rebuild	March 1, 2010	September 30, 2010
BI AMT13: Lind - Shawnee 115kV Minor Rebuild	July 1, 2009	March 30, 2010

See attached timeline for further detail.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 14, for additional supporting documentation, as listed below)**

- Historical Cost Detail pg. 3
- Capital Project Request (CPR) Forms, including all attachments pg. 4-6
- Design Scoping Documents pg. 7-12

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.





**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2215 (See also, Exhibit No.\_\_(SJK- 4), Schedule 16, for additional supporting documentation)**

**ER Name: Power Circuit Breakers**

**Pro Forma Amount: \$225,000**

**Expended to date: \$797,928**

**2010 Transfer to Plant Date: April 2010 (\$100,000) and November 2010 (\$125,000)**

**Project Description:**

Power Circuit Breakers are transferred to plant upon receipt under ER 2001.

The replacement of the three 115 kV Circuit Breakers at Benawah 230 kV Substation was officially completed in Q1 2010 and just recently placed into service and transferred to plant. Engineering for this project began in 2008 and total costs incurred through 2009 construction total \$674,000; these costs were inadvertently omitted from the pro forma plant adjustment.

Breakers purchased in 2010 will be installed at Otis Orchards (WA) Switching Station. Other planned replacements in 2010 include a 115 kV breaker at Stratford (WA) Switching Station and a 230 kV breaker at Noxon Rapids Switchyard. Avista performs breaker maintenance on a 15-year cycle. Neither of these breakers was scheduled for maintenance in the pro forma period, nor during the test period, so there are no cost savings associated with these replacements.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

The Stratford (WA) 115 kV Breaker is presently being replaced and expected to be in service by April 2010. The Noxon 230 kV Breaker is planned for fall replacement. Any other breaker replacements to be charged to this ER would be unplanned.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 16, for additional supporting documentation, as listed below)**

- |  |           |
|--|-----------|
| • Cost                                     | pg. 3-4   |
| • Capital Project Request (CPR) Forms      | pg. 5-7   |
| • Copies of Purchase Orders (Confidential) | pg. 8-14  |
| • Benawah 115 kV Breaker Work Pictures     | pg. 15-20 |

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2342 (See also, Exhibit No.\_\_(SJK- 4), Schedule 17, for additional supporting documentation)**

**ER Name: Pine Creek 230 Substation Replacement Circuit Switch & Relays**

**Pro Forma Amount: \$570,000**

**Expended to date: \$320,467**

**2010 Transfer to Plant Date: October 2010**

**Project Description:**

The project scope and preliminary engineering design work for this project was started in 2008 and included replacing the circuit switcher and one 13 kV recloser due to equipment age. After further investigation the project was expanded to replace the other two 13 kV reclosers, the cap bank, deteriorated station control wiring, and removal of the small panel house including the obsolete RTU. A total of \$0.57 million directly related to Transmission (115 kV circuit switcher, Capacitor Bank, control wiring, Remote Terminal Unit) will be transferred to plant in 2010. No specific maintenance associated with the replaced equipment was performed in the test period. Therefore, no additional offsets are available for this replacement work.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

The original scope of this project increased from 2008. Engineering design is 90% complete and the project will be transmitted for fall construction to coordinate with a Mobile Substation installation in order to eliminate necessary outages.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 17, for additional supporting documentation, as listed below)**

- Costs pg. 3
- Capital Project Request (CPR) Forms pg. 4-5
- Detail of projected costs/Budget report pg. 6-8
- Work Authorization Forms pg. 9-16

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2390 (See also, Exhibit No.\_\_(SJK- 4), Schedule 18, for additional supporting documentation)**

**ER Name: Otis Orchards - 115 kV Breaker and Line Relay Replacements**

**Pro Forma Amount: \$650,000**

**Expended to date: \$3,217**

**2010 Transfer to Plant Date: November 2010**

**Project Description:**

This project will replace the 115 kV breakers and associated 115 kV line relays at the existing Otis Orchards substation. Four of the breakers are over 50 years old and have reached the end of their useful lives. The line relaying must be replaced with new microprocessor relays to provide the high speed tripping required for mandatory reliability standards. The relay replacements are part of the Spokane/Coeur d'Alene area relay upgrade project previously discussed. The breakers that are being replaced were not scheduled for maintenance during the test period. Therefore, no offsets or savings are available for this project in the near term.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Engineering for this project is underway presently. Construction transmittal is expected by early summer 2010. Construction will begin in summer and last through fall 2010 in coordination with outage scheduling. Project will be staged into plant over the fall as new breakers and relaying are commissioned into service.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 18, for additional supporting documentation, as listed below)**

- ER Cost Detail pg. 3
- Capital Project Request (CPR) Forms pg. 4
- Scope of work and other notes-email pg. 5-6
- Work authorization pg. 7
- HDR Cost Estimate pg. 8-10
- Projected Schedule – email pg. 11

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

- Reference Drawings

pg. 12-14

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2254 (See also, Exhibit No. \_\_ (SJK- 4), Schedule 19, for additional supporting documentation)**

**ER Name: Replacement Programs – Air Switch Upgrade**

**Pro Forma Amount: \$165,000**

**Expended to Date: \$111,306**

**2010 Transfer to Plant Date: December 2010**

**Project Description:**

Replacement Programs (\$2.044 million - Total):

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include **transmission and substation air switch upgrades**, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

ER 2254 funds the Transmission Line Air Switch Upgrade Program (TLASUP).

The projects associated with the TLASUP replace aging and malfunctioning air switches. Air switches are utilized to sectionalize the 115kV Transmission System. They are also used to isolate a fault and restore power to customers or to isolate a portion of line when performing maintenance. This program is designed to insure that the air switches operate in a safe and reliable manner.

The specific projects TLASUP projects scheduled for 2010 include:

<b>Project Name</b>	<b>CPR Amount</b>	<b>Spent Prior to 2010</b>	<b>To be Spent in 2010</b>
Switch A295 on the St. Maries Tap @ Ogara (Benewah – Pine Creek 115kV Line)	\$99,500		\$99,500
Switch A23 on the Spirit Lake Tap (Pine Street – Rathdrum 115kV Line)	\$38,600		\$38,600
Switch A334 on the Cottonwood Tap (Grangeville – Nez Perce #1 115kV Line)	\$98,000	\$107,006	(\$9,006)
Switch A328 on the Colbert Tap (fed from BPA system)	\$38,600		\$38,600
<b>Totals</b>	<b>\$274,700</b>	<b>\$107,006</b>	<b>\$167,694</b>

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

As noted above, the company has 4 projects that are to be completed during 2010. The requested pro forma amount is the amount to be spent in 2010, amounting to approximately \$165,000, although the total estimated amount to be put into service during 2010 may exceed \$274,700.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

<b>Timeline:</b>	<b>Start Date</b>	<b>End Date</b>
BI AMT10: Switch A295 on the St. Maries Tap	Fall, 2010	Fall, 2010
BI AMT10: A23 on the Spirit Lake Tap	Fall, 2010	Fall, 2010
BI AMT10: Switch A334 on the Cottonwood Tap	Fall, 2010	Fall, 2010
BI AMT10: Switch A328 on the Colbert Tap	Spring, 2010	Spring, 2010

See attached timeline for further detail.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 19, for additional supporting documentation, as listed below)**

- ER Costs pg. 3
- Capital Project Request (CPR) Forms, including all attachments pg. 4-7
- Design Scope Document pg. 8-9

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.



**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2260 (See also, Exhibit No.\_\_(SJK- 4), Schedule 20, for additional supporting documentation)**

**ER Name: Replacement Programs: Upgrade Surge Protection**

**Pro Forma Amount: \$100,000**

**Expended to date: \$0**

**2010 Transfer to Plant Date: April 2010 (\$50,000) and October 2010 (\$50,000)**

**Project Description:**

Replacement Programs (\$2.044 million):

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

We expect to complete Arrester installations at Davenport and Marengo Substations in spring 2010. In addition, we expect to install new Arrestors at Palouse or Spangle Substation in the fall.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Later this spring we will coordinate with transmission line work at Davenport to install Arrestors at Davenport Substation. An outage will be coordinated at Marengo Substation later in the spring/summer. In the fall we intend to install arrestors at either, or both, Palouse and Spangle Substations depending on crew resource and mobile substation availability.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 20, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Form pg. 3-4

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2275 (See also, Exhibit No.\_\_(SJK- 4), Schedule 21, for additional supporting documentation)**

**ER Name: Replacement Programs: System-Rock/Fence Restore**

**Pro Forma Amount: \$53,000**

**Expended to date: \$8,271**

**2010 Transfer to Plant Date: December 2010**

**Project Description:**

Replacement Programs (\$2.044 million-Total):

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, **restoration of substation rock and fencing**, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

This is an annual System Budget ER that has projects completed throughout the year. Therefore, the expected completion is 12/31/10.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

All of these projects are likely to be completed over the summer months.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 21, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Forms, including all attachments pg. 3
- Work Authorization Form pg. 4

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

- Consultant Proposal

pg. 5

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2278 (See also, Exhibit No.\_\_(SJK- 4), Schedule 22, for additional supporting documentation)**

**ER Name:      Replace Obsolete Reclosers**

**Pro Forma Amount:   \$361,000**

**Expended to date:    \$1,537**

**2010 Transfer to Plant Date: Periodically throughout 2010**

**Project Description:**

Replacement Programs:

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, **recloser replacements**, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment. This is an annual System ER as reclosers are replaced over the course of the year on a planned and unplanned basis. Therefore, the completion date for this ER is 12/31/10.

<b>Project</b>	<b>Project Number</b>	<b>\$ Amount</b>
Ford	FOR08A	\$75,000
Long Lake	LL08A	\$50,000
Palouse	PAL08A	\$50,000
Spangle	SPA08A	\$75,000
Other	-	\$111,000
<b>Total</b>		<b>361,000</b>

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Timeline**

We have projects for planned recloser replacements at Ford, Palouse, Spangle, and Long Lake Substations for 2010. In addition, we will be installing various distribution line reclosers on the system throughout the year. Schedule will be based on crew resource and mobile substation availability.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 22, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Forms pg. 3-6

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2280 (See also, Exhibit No.\_\_(SJK- 4), Schedule 23, for additional supporting documentation)**

**ER Name: Replacement Programs: Replace Obsolete Circuit Switch**

**Pro Forma Amount: \$215,001**

**Expended to date: \$45,591**

**2010 Transfer to Plant Date: Throughout 2010**

**Project Description:**

Replacement Programs:

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of **obsolete circuit switchers**, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

This is an annual System ER for the planned installations and planned/unplanned replacements of 115 kV Circuit Switchers throughout the system. Therefore, this has a completion date of 12/31/10.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

We will be replacing the 115 kV Capacitor Bank Circuit Switcher at North Lewiston 230 kV Substation sometime in Q2 depending on resources. We have also transmitted a project to replace the 115 kV Circuit Switcher at Lee & Reynolds (Othello, WA) which is planned for fall.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 23, for additional supporting documentation, as listed below)**

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

- Cost to 3/15/2010 pg. 3
- Capital Project Request (CPR) Forms, including all attachments pg. 4-6

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.



**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2294 (See also, Exhibit No.\_\_(SJK- 4), Schedule 24, for additional supporting documentation)**

**ER Name: Replacement Programs -Batteries**

**Pro Forma Amount: \$250,001**

**Expended to date: \$180,856**

**2010 Transfer to Plant Date: Periodically during 2010**

**Project Description:**

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

The bulk of the substation battery replacement work in 2010 will be at four substations: Lolo, Moscow 230 kV, Otis Orchards, and Burke Substation. In addition, we will also be replacing a smaller battery at Spokane Industrial Park.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Seven suppliers were queried as part of an RFP for the 125V batteries for Lolo, Moscow 230 kV, Otis Orchards, and Burke Substations. Enersys was chosen to supply these batteries. The batteries (and other accessories, including chargers) have been purchased and received.

Crews are on-site and preparing to install Lolo's battery in March/April. Moscow 230 kV will follow in April. Otis Orchards/Burke will be installed in the May/June timeframe.

The Spokane Industrial Park battery will be energized in March.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 24, for additional supporting documentation, as listed below)**

- Costs pg. 3-4
- CPR forms for four projects pg. 5-8
- Copies of purchase orders (Confidential) pg. 9-13
- Evaluation sheet and quotes from suppliers, detailing total costs from RFP (Confidential) pg. 14-30

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2425 (See also, Exhibit No.\_\_(SJK- 4), Schedule 25, for additional supporting documentation)**

**ER Name: High Voltage Fuse Upgrades**

**Pro Forma Amount: \$225,000**

**Expended to date: \$0**

**2010 Transfer to Plant Date: August 2010 (\$125,000) and September 2010 (\$100,000)**

**Project Description:**

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, **high voltage fuse upgrades**, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs is usually not maintained on a set schedule. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

This is an annual System ER for replacement and upgrades of High Voltage Fuses throughout Avista's system territory. Therefore, this project completion is 12/31/2010.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

We have two projects that we will complete in 2010. We will replace the High Voltage Fuses at both Palouse and Spangle Substations. The timeline/completion of these two projects will depend on crew resource and mobile substation availability. We expect to be completed with these upgrades by the end of the year, 12/31/2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 25, for additional supporting documentation, as listed below)**

- Budget Entry Form

pg. 3-5

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2449 (See also, Exhibit No.\_\_(SJK- 4), Schedule 26, for additional supporting documentation)**

**ER Name:     Replace Substation Air Switches**

**Pro Forma Amount:   \$165,000**

**Expended to date:    \$97,494**

**2010 Transfer to Plant Date: Throughout 2010**

**Project Description:**

Replacement Programs:

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, substation air switch replacements, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

This annual System ER includes planned and unplanned Substation Air Switch Replacements over the course of every year. Replacements occur upon receipt of new Air Switches (if not already in stock) and the scheduling of both Electric Shop crew resource availability and line or bus outage windows.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 26, for additional supporting documentation, as listed below)**

- Cost pg. 3-4
- Capital Project Request (CPR) Forms pg. 5-7
- Substation Infrared Inspection and Substation Design correspondence pg. 8-9

**Note:**

During the course of Avista’s pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2482 (See also, Exhibit No.\_\_(SJK- 4), Schedule 27, for additional supporting documentation)**

**ER Name: Replacement Programs: SIP Sub Replace HP fuses with Circuit Switcher**

**Pro Forma Amount: \$285,000**

**Expended to date: \$156,832**

**2010 Transfer to Plant Date: November 2010**

**Project Description:**

Replacement Programs (\$2.044 million):

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, **replacement of obsolete circuit switchers**, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and voltage regulator replacements. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Project should be completed by November 2010. All materials were ordered in 2009 and have been received as of 1/13/2010. Construction should begin Summer 2010 with completion by November 2010. Project construction must be coordinated with large industrial customer's operating schedule

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 27, for additional supporting documentation, as listed below)**

- ER Cost Detail

pg. 3

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

- Capital Project Request (CPR) Forms, including all attachments pg. 4
- Scoping Document pg. 5-6
- Copies of Purchase Orders (Confidential) pg. 7-10

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.



**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2493 (See also, Exhibit No.\_\_(SJK- 4), Schedule 28, for additional supporting documentation)**

**ER Name: Replacement Program: Voltage Regulators**

**Pro Forma Amount: \$100,001**

**Expended to date: \$216,576 worth of regulators is on order, but has not been received or invoiced as of yet**

**2010 Transfer to Plant Date: Periodically during 2010**

**Project Description:**

Replacement Programs (\$2.044 million):

Avista has several different equipment replacement programs to improve reliability by replacing aged equipment that is beyond its useful life. These programs include transmission and substation air switch upgrades, arrester upgrades, restoration of substation rock and fencing, recloser replacements, replacement of obsolete circuit switchers, substation battery replacement, interchange meter replacements, high voltage fuse upgrades, replacement of fuses with circuit switchers, and **voltage regulator replacements**. All of these individual projects improve system reliability and customer service. The equipment under these replacement programs are usually not maintained on a set schedule. The equipment is replaced when useful life has been exceeded. Maintenance is not conducted on this equipment on an annual basis. The equipment did not fail during the test period and there was no specific identifiable maintenance on this equipment during the test period. Therefore there are no specific O&M offsets related to this investment. This work will be completed in the second and third quarters of 2010.

Please note that we are doing about four times as many regulator replacements as our annual budgeted block estimate is meant to take into account. All replacements are justifiable based on regulator condition, age, PCB content, historical operations, hot-spot surveys, known failed components, etc.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**Timeline:**

An RFP (36500) was issued in late December 2009 for the 18 single-phase step-voltage regulators required for the six feeder regulator replacements noted in the attached CPR forms. Cooper was awarded the RFP based on cost and quality of product. PO 73913 was issued on 1/19/2010. Delivery is expected in early May. These regulators will be installed throughout the months of June, July, and August.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 28, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Form attached pg. 3-7
- Purchase Order Number 73913 (Confidential) pg. 8

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2397 (See also, Exhibit No.\_\_(SJK- 4), Schedule 29, for additional supporting documentation)**

**ER Name: System-Install Metering Ancillary Services**

**Pro Forma Amount: \$125,000**

**Expended to date: \$1,067 as of 3/15/2010**

**2010 Transfer to Plant Date:**

**February 2010: \$60,000**

**November 2010: \$65,000**

**Project Description:**

This project is to upgrade the metering at the Mead 115kV substation to move Avista loads into Avista balancing area. In accordance with the agreement contract (o7TX-12603), we are obligated to upgrade metering at Mead to meet with Avista's and BPA's specification. The next substation we intend to complete is Noxon 230-13 kV Substation in the fall.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

Expected timeline is summer and fall as resources become available. The Mead project will be transmitted late spring.

**Attachment Index: (See Exhibit No.\_\_(SJK- 4), Schedule 29, for additional supporting documentation, as listed below)**

- Capital Project Request (CPR) Form pg. 2
- BPA Agreement pg. 3-8

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.

**AVISTA UTILITIES  
2010 CAPITAL PROJECTS**

**ER No.: 2492 (See also, Exhibit No.\_\_(SJK- 4), Schedule 30, for additional supporting documentation)**

**Project Name: Other Small Transmission Projects: System Install Autotransformer Diagnostic Monitor**

**Pro Forma Amount: \$102,000**

**Expended to date: \$31,555**

**2010 Transfer to Plant Date: June 2010 (\$50,000) and November 2010 (\$52,000)**

**Project Description:**

This project provides for the installation of a Serveron dissolved gas analysis monitor on autotransformer #1 at Beacon 230kV Substation. Dissolved gas analysis is a key tool in evaluating the health of the transformer. This monitor allows for gas sampling to be made multiple times per day and the data is a key tool in evaluating the health of the transformer. In addition, alarms are provided for set points which permit a high degree of protection before a failure typically occurs. The recent CS2 transformer replacement is an example of this technology application.

**Offsets:**

This transmission plant investment is included in the production property adjustment, which adjusts rate year costs to match test year loads. There are no other identifiable O&M cost reductions for 2010 investments.

**Timeline:**

The monitor has been purchased and has been received. The engineering and installation is expected to be completed by July 2010.

**Additional Information: (See Exhibit No.\_\_(SJK- 4), Schedule 30, for additional supporting documentation, as listed below)**

- Costs pg. 2
- Capital Project Request (CPR) Form pg. 3
- Purchase Orders (Confidential) and remaining costs pg. 4-7

**Note:**

During the course of Avista's pending general rate case, updated information will be available for audit.