

Capital Proposal

Date: 6/15/06

Project Manager:

Proposed Start Date: 10/01/2006

Forecast Completion Date: Wood Pole
Replacement:
09/30/2007
Palisade
Goshen:
09/30/2008

Title: TBL: Wood Pole Replacements - High

Request Type: New Capital Request

Business line rank order priority of project: 10

FY07 \$ Requested (000's): \$10,709 Total \$: \$17,450

If previously approved: State % of original budget: 0 % State % of original schedule: 0 %

Change in scope (Y/N): No

If Yes, describe:

Select one: Portfolio

Consistent with BPA's Capitalization's Policy (Y/N): Yes

If applicable, is this a high, medium or low portfolio? High Portfolio

Category Proposed: System Replacements - TBL

Project description:

To replace aprox. 1,500 aging wood poles on the BPA system to ensure continued high transmission reliability. These poles are category 1 "danger poles" in critical need of replacement within the current year.

Justification:

Wood Pole Replacements:

These replacements are needed to replace wood poles that have reached the end of their useful life and will increase the reliability of our transmission system by preventing unplanned outages. Targeted poles have reduced strength due to years in service, advanced internal and external decay, bad cross-arms, and bird/insect damage. The work is also needed to maintain worker and public safety.

Palisade Goshen:

The Palisades-Goshen 115kV line has approximately 700 poles and numerous cross-arms in need of replacement due to the age and condition. The majority of the poles are of 1949 vintage. The line should be rebuilt to a 230kV standard and insulated for 161kV operation. The first couple of miles out of the palisades has limited access to the structures. Little if no access in the winter time. It is also recommended that this area be taken down off the hillside and turned into a double circuit configuration with the Palisades-Swan Valley 115kV line with is also due for pole replacements.

Operation of the Palisades Generation plant and 115kV Switching Station has not been dependable recently. There have been at least 6 unplanned outages caused by human error at the Palisades plant in the last 12-month period. Each of these outages has resulted in significant generation loss and/or the 115kV bus outage. On one occasion, the entire Southern Part of Lower Valley's system was dropped as a result of these errors. The poor condition of the wood poles on this line is known and they must be replaced to continue the reliable operation of our transmission system. If a wood pole fails, this would probably lead to continuous local outages and would jeopardize the reliable operation of our transmission system.

Project NPV (000's) (\$16,716)

Normalized NPV -1

Which Agency and BL Targets does this project support, and how?

S1: BPA policies encourage regional actions that ensure adequate, efficient and reliable transmission and power service.
S2: FCRPS performance and expansion meet availability, adequacy, reliability and cost-effectiveness standards.

Describe any additional qualitative benefits associated with the project.

Wood Pole Replacement Program qualitative benefits:

Increasing the maximum operating temperatures of wood pole lines (i.e. raise pole heights – where possible), upgrading older structures to current engineering and electrical standards, assessing and implementing line upgrades if needed, assessing other key structural components of wood pole structures and replacing if needed (guys, conductor, insulators).

Palisade Goshen qualitative benefits:

By using a 230 kV standard TLM can then maintain the line while energized which they cannot do with the present 115 kV standard. This will also eliminate vertical impairments on the line.

What other alternatives were considered?

Palisade Goshen Other Alternatives considered:

- (1) Not upgrading the line
- (2) Only replacing the wood poles

What will happen if the project is delayed by 1 year?

Delaying the replacements compresses modernizing the pole plant into a shorter time span. A risk associated with this is that the agency will have to manage the replacements in a crisis-mode -- dealing with transmission facilities on the ground (failures), unplanned outages, and customer interruptions.

Failure to replace category 1 "danger poles" in critical need of replacement within the current year will have negative impacts on system reliability, thereby effecting BPA's ability to ensure adequate, efficient and reliable transmission service.

Land, Right of way and design issues associated with the Palisade Goshen project need to begin as soon as possible, with contract and local crew construction starting in the 2007/2008 time frame. Load growth at Lower Valley and Fall River has been an average of 3% per year for the last 8 years. The forecast assumes 3% load growth per year leveling off to 1.5% in 2010.

What will happen if funding for this project is reduced by 10%?

Not all of the wood poles planned for replacement will be able to be replaced if funding is reduced. Failure to replace category 1 "danger poles" in critical need of replacement within the current year will have negative impacts on system reliability, thereby effecting BPA's ability to ensure adequate, efficient and reliable transmission service.

What will happen if funding for this project is reduced by 30%?

A significant number of the wood poles planned for replacement will not be able to be replaced if funding is reduced. Failure to replace category 1 "danger poles" in critical need of replacement within the current year will have negative impacts on system reliability, thereby effecting BPA's ability to ensure adequate, efficient and reliable transmission service.

If funding is reduced by 30% on the Palisade Goshen line upgrade the project will likely not be able to be completed.

What are the consequences if the project is terminated?

Termination of the project will result in failure of TBL to meet the objectives of the wood pole replacement program. Failure to replace category 1 "danger poles" in critical need of replacement will have negative impacts on system reliability, thereby effecting BPA's ability to ensure adequate, efficient and reliable transmission service.

What are the performance metrics for this project?

Achievement will be measured by tracking the number of replaced poles on annual basis and increased transmission reliability. Other measures of achievement will include written specifications for line upgrades, increase in operating parameters, and increased transmission capacity.

Project NPV	(\$16,716)
Normalized NPV	-1
Discount Rate	5 %

Year	NPV Period	Capital Cost (000's)	Expense Cost (000's)	Total Annual Cost (000's)	New Revenues (000's)	Avoided Lost Revenues (000's)	Measurable Expense Reductions (000's)	Total Revenue Benefits (000's)	Net Cash Flows (000's)
2007	0.5	\$10,709	\$0	\$10,709	\$0	\$0	\$0	\$0	\$10,709
2008	1.5	\$6,741	\$0	\$6,741	\$0	\$0	\$0	\$0	\$6,741
2009	2.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2010	3.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2011	4.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2012	5.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2013	6.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2014	7.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2015	8.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

2016	9.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	10.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2018	11.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	12.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2020	13.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2021	14.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2022	15.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2023	16.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2024	17.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2025	18.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2026	19.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2027	20.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2028	21.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2029	22.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2030	23.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2031	24.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2032	25.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2033	26.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2034	27.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2035	28.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2036	29.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2037	30.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2038	31.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2039	32.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2040	33.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2041	34.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2042	35.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2043	36.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2044	37.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2045	38.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2046	39.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2047	40.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2048	41.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2049	42.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2050	43.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2051	44.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2052	45.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2053	46.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2054	47.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

2055	48.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2056	49.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2057	50.5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Benefits & Costs		\$17,450	\$0	\$17,450	\$0	\$0	\$0	\$0	\$0
Total Net Cash Flow									\$17,450
Net Present Value									

Risk Analysis

Part A: Risks of Doing Project or Portfolio:

TBL: Wood Pole Replacements - High

What is the Risk Category for the PRIMARY Consequence of making the Investment ?

Briefly summarize the consequences of DOING the project

Completion of these projects is expected to require a large capital expenditure. History has shown that the wood pole program is not likely to spend more than budgeted; therefore, risk that the project will go over budget is rare. However, there is less certainty that the Palisade Goshen project will not go over budget. Given these factors, the consequences of the projects going over budget could be classified as minor.

Identify and describe the most important risks of DOING the project, grouped by primary and secondary consequences types (Reliability, Financial, etc.)

Completion of these projects is expected to require a large capital expenditure. History has shown that the wood pole program is not likely to spend more than budgeted; therefore, risk that the project will go over budget is rare. However, there is less certainty that the Palisade Goshen project will not go over budget. Given these factors, the consequences of the projects going over budget could be classified as minor.

Most of the work under the wood pole replacement project is not expected to have any significant environmental impacts. However, on the Palisade Goshen project it is expected that landings and access roads will need to be improved resulting in disturbance of crop land and forest service land.

Other risks associated with completion of the project include: shifting in available BPA resources, either positively or negatively. Resources include capital dollars, Agency FTE, and Agency equipment (line trucks, pole trucks, etc.).

See Risk Maps for more info. on expected and worst case consequences and likelihood.

Describe controls that are or will be in place to minimize the PRIMARY & SECONDARY risks associated with DOING the project

Risk Controls Include: (1) Red, Yellow, Green flag for identifying potential cost over-runs 2) Defined project management process- contract terms and conditions (contracting officer), technical contract review, and financial review on a quarterly/monthly basis.

Describe potential new controls that could be put in place to minimize risk, but which are not assumed in this analysis

N/A

Risk Analysis

Part B: Risks of Not Doing Project or Portfolio:

TBL: Wood Pole Replacements - High

What is the Risk Category for the PRIMARY Consequence of NOT making the Investment ?

Briefly summarize the consequences of NOT DOING the project (positive and negative)

Identify and describe the most important risks of NOT DOING the project, grouped by PRIMARY and SECONDARY consequences types (Reliability, Financial, etc.)

Wood Pole Replacement Program:

The risks to the Agency in not continuing (or de-emphasizing) the wood pole replacement program would result in a reduction in transmission and fiber optic reliability. (Note: many older wood pole lines on the BPA system now carry fiber optic communications.) BPA would see an increase in wood pole failures immediately -- many due to internal decay at the ground line or shell-rot. Failures would be more common on the west side of the Cascade Mountains where favorable conditions for deterioration of wood in service exists. Customers (power and fiber-optic) utilizing wood pole lines would be impacted by unplanned outages. Depending on the location of the line and general system conditions, there may be impacts on the overall capacity of the northwest's transmission facilities.

Generally speaking, customers relying on the wood pole portion of BPA's system have few choices or alternatives. There are few other organizations in the PNW committing to supply (build) transmission facilities. Given the costs and uncertainties it's not surprising. Also, a current trend in the generation business is the development of wind farms, generally located in remote areas. BPA's limited experience providing transmission services to these customers typically utilizes existing wood pole 115 kV lines. Many are aging facilities that will be modernized under the replacement program.

Delaying the replacements compresses modernizing the pole plant into a shorter time-span. A risk associated with this is that the Agency will have to manage the replacements in a crisis-mode – dealing with transmission facilities on the ground (failures), unplanned outages, and customer interruptions.

Palisade-Goshen:

The risks to the agency in not completing the Palisade Goshen upgrade include, possible structural failure of the line and an inability to meet load. Advancement for the need to operate Pal – Goshen at 161 kV may be required due to high load growth in the area. Construction can only begin in late spring through late fall. The line is over 50 years old and in need of replacement. Failure of the line could impact USBR operations at Palisades Dam and our customer's system configuration. Presently this is one of only 3 lines from the Goshen Substation serving a large geographic area. The opportunity exists to replace at a 230 standard for 161 kV operation in the future which will be required. Deferring or delaying will cost BPA additional dollars in the future since 115 kV standard construction cannot be reliably operated at 161 kV. Loss of the line would require the customer's transmission system to move an increased amount of generation from Palisades Dam. The poles are in need of replacement and failure to do so could result in structural failure of the line.

Describe existing controls in place to minimize risks associated with NOT DOING the project

N/A

Environmental Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case

Do Risk

Don't Do Risk

Likelihood	Almost Certain						Likelihood	Almost Certain							
	Likely							Likely							
	Possible							Possible							
	Unlikely							Unlikely		X					
	Rare	X						Rare							
		Negligible	Minor	Moderate	Major	Severe			Negligible	Minor	Moderate	Major	Severe		
		Consequence							Consequence						
		Likelihood		Consequence					Likelihood		Consequence				
		1	Rare	1	Negligible				2	Unlikely	2	Minor			
		Comments:							Comments:						
		Most of the work under the wood pole replacement program is not expected to have any significant environmental impacts.							Failure to complete the projects could negatively impact localized environmental or natural resources and require remediation or mitigative action.						

Worst Case

Do Risk							Don't Do Risk							
Likelihood	Almost Certain						Likelihood	Almost Certain						
	Likely							Likely						
	Possible							Possible						
	Unlikely							Unlikely						
	Rare		X					Rare			X			
		Negligible	Minor	Moderate	Major	Severe			Negligible	Minor	Moderate	Major	Severe	
		Consequence							Consequence					
		Likelihood		Consequence					Likelihood		Consequence			
		1	Rare	2	Minor				1	Rare	3	Moderate		
		Comments:							Comments:					
		Most of the work under the wood pole replacement project is not expected to have any significant environmental impacts. Worst case scenario could mean some observable damage or impact to specific localized environmental natural resources result and corrective action is require, but this is unlikely to occur.							Failure to complete the projects could negatively impact localized environmental or natural resources and require remediation or mitigative action.					

Financial Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case

Do Risk	Don't Do Risk
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Likelihood	Almost Certain						Almost Certain		X								
	Likely						Likely										
	Possible		X				Possible										
	Unlikely						Unlikely										
	Rare						Rare										
Negligible						Minor	Moderate	Major	Severe	Negligible				Minor	Moderate	Major	Severe
Consequence						Consequence											
Likelihood			Consequence			Likelihood			Consequence								
3		Possible		2		Minor		5		Almost Certain		2		Minor			
Comments:						Comments:											
Completion of PARs 3450 and 3540 is expected to require a capital expenditure of \$13.5M (loaded capital costs in FY07). History has shown that the wood pole program is not likely to spend more than budgeted; therefore, risk that the project will go over budget is rare. However, there is less certainty that the Palisade Goshen project will not go over budget. Given these factors, the consequences of the projects going over budget could be classified as minor.						Without the wood pole replacements, within the next 2 years BPA would see an increase in wood pole failures and it could be more costly to complete the replacements in a rushed manner. Without the Palisades Goshen project, BPA will not be able to adequately serve the Lower Valley/Fall River service territories in the Future. Or BPA will have to rebuild the Line for 161 kV operation when needed in the near future. Line needs to be rebuilt presently resulting in an approx \$8M (direct costs only) expenditure. If only constructed at 115 kV Bonneville will have to come back in the future and spend additional dollars to replace or modify the line for 161 kV operation, which could be more costly.											

Worst Case																	
Do Risk							Don't Do Risk										
Likelihood	Almost Certain						Almost Certain				X						
	Likely						Likely										
	Possible						Possible										
	Unlikely					X	Unlikely										
	Rare						Rare										
Negligible						Minor	Moderate	Major	Severe	Negligible				Minor	Moderate	Major	Severe
Consequence						Consequence											
Likelihood			Consequence			Likelihood			Consequence								
2		Unlikely		3		Moderate		5		Almost Certain		3		Moderate			
Comments:						Comments:											
Completion of PARs 3450 and 3540 is expected to require a capital expenditure of \$13.5M (loaded capital costs in FY07). History has shown that the wood pole program is not likely to spend more than budgeted; therefore, risk that the project will go over budget is rare. However, there is less certainty that the Palisade Goshen project will not go over budget. The worse case scenario is that both projects do go over budget, resulting in a moderate financial impact (\$1-\$10M over budget); however, it is unlikely that will actually occur.						Without the wood pole replacements, within the next 2 years BPA would see an increase in wood pole failures and it could be more costly to complete the replacements in a rushed manner. Without the Palisades Goshen project, BPA will not be able to adequately serve the Lower Valley/Fall River service territories in the Future. Or BPA will have to rebuild the Line for 161 kV operation when needed in the near future. Line needs to be rebuilt presently resulting in an approx \$8M (direct costs only) expenditure. If only constructed at 115 kV Bonneville will have to come back in the future and spend additional dollars to replace or modify the line for 161 kV operation, which could be more costly.											

Legal/Regulatory Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case													
Do Risk						Don't Do Risk							
Likelihood	Almost Certain						Almost Certain						
	Likely						Likely						
	Possible						Possible						
	Unlikely	X					Unlikely		X				
	Rare						Rare						
		Negligible	Minor	Moderate	Major	Severe			Negligible	Minor	Moderate	Major	Severe
Consequence						Consequence							
Likelihood			Consequence			Likelihood			Consequence				
2		Unlikely		1	Negligible		2		Unlikely	2		Minor	
Comments:						Comments:							
In performing the work, BPA will use an appropriate standard of care to avoid interruptions and/or damage; therefore, no legal impacts are expected as a result of completing these projects.						Failure to complete these projects may impact BPA's ability to adequately serve loads in the future.							

Worst Case													
Do Risk						Don't Do Risk							
Likelihood	Almost Certain						Almost Certain						
	Likely						Likely						
	Possible						Possible						
	Unlikely						Unlikely						
	Rare		X				Rare			X			
		Negligible	Minor	Moderate	Major	Severe			Negligible	Minor	Moderate	Major	Severe
Consequence						Consequence							
Likelihood			Consequence			Likelihood			Consequence				
1		Rare		2	Minor		1		Rare	3		Moderate	
Comments:						Comments:							
In performing the work, BPA will use an appropriate standard of care to avoid interruptions and/or damage; therefore, no legal impacts are expected as a result of completing these projects. Worst case scenario could mean that minor change in operations or administrative flexibility occurs, but this not likely to occur.						Failure to complete these projects may impact BPA's ability to adequately serve loads in the future. BPA could be out of compliance with NERC/WECC criteria.							

Regional Accountability Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case										
Do Risk						Don't Do Risk				
Likelihood	Almost Certain					Almost Certain				
	Likely					Likely		X		
	Possible					Possible				
	Unlikely					Unlikely				
	Rare	X				Rare				
Negligible Minor Moderate Major Severe Consequence Likelihood Consequence 1 Rare 1 Negligible Comments: In performing the work, BPA will use and appropriate standard of care to avoid interruptions; therefore, minimal impacts to regional accountability are expected as a result of completion of these projects.						Negligible Minor Moderate Major Severe Consequence Likelihood Consequence 4 Likely 2 Minor Comments: Customers may be upset if they are impacted by failures, unplanned outages, and customer interruptions due to pole failures. Without the Palisades Goshen project BPA will not be able to adequately serve loads in the future potentially resulting in voltage instability with loss of another line. These impacts would likely result in a spike of local media attention and/or internal complaints.				

Worst Case										
Do Risk						Don't Do Risk				
Likelihood	Almost Certain					Almost Certain				
	Likely					Likely				
	Possible					Possible		X		
	Unlikely					Unlikely				
	Rare		X			Rare				
Negligible Minor Moderate Major Severe Consequence Likelihood Consequence 1 Rare 2 Minor Comments: In performing the work, BPA will use and appropriate standard of care to avoid interruptions; therefore, minimal impacts to regional accountability are expected as a result of completion of these projects. The worst case scenario might mean something unexpected occurs that negatively impacts customers, resulting in a spike of local media attention and/or internal complaints.						Negligible Minor Moderate Major Severe Consequence Likelihood Consequence 3 Possible 3 Moderate Comments: Customers may be upset if they are impacted by failures, unplanned outages, and customer interruptions due to pole failures. Without the Palisades Goshen project BPA will not be able to adequately serve loads in the future potentially resulting in voltage instability with loss of another line. It is possible that this impact would result in a regional spike or ongoing local media, Fed, customer or constituent attention and criticism requiring damage control.				

Reliability Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case													
Do Risk						Don't Do Risk							
Likelihood	Almost Certain						Likelihood	Almost Certain					
	Likely							Likely		X			
	Possible							Possible					
	Unlikely							Unlikely					
	Rare	X						Rare					
Negligible Minor Moderate Major Severe						Negligible Minor Moderate Major Severe							
Consequence						Consequence							
Likelihood			Consequence			Likelihood			Consequence				
1	Rare		1	Negligible		4	Likely		2	Minor			
Comments:						Comments:							
Completion of these projects does not adversely impact reliability; rather, they will actually enhance reliability. Work on the Palisade Goshen project will allow local TLM crews to do hot line maintenance.						Delaying the replacements could lead to failures, unplanned outages, and customer interruptions. Depending on the location of the line and general system conditions, there may be impacts on the overall capacity of the northwest's transmission facilities. Not completing the upgrade of the Palisade-Goshen line for 161kV operation in the future will impair BPA's ability to adequately serve the area. The line will have to be taken out of service for maintenance activities since the local TLM crews will not be able to do hot line work. Could effect operations at Palisades Powerhouse depending on system configuration.							

Worst Case										
Do Risk						Don't Do Risk				

Likelihood	Almost Certain						Likelihood	Almost Certain					
	Likely							Likely					
	Possible							Possible			X		
	Unlikely							Unlikely					
	Rare		X					Rare					
Negligible						Negligible							
Minor						Minor							
Moderate						Moderate							
Major						Major							
Severe						Severe							
Consequence						Consequence							
Likelihood			Consequence			Likelihood			Consequence				
1			Rare			2			Minor				
3			Possible			3			Moderate				
Comments:						Comments:							
Completion of these projects is not expected to adversely impact reliability; rather, they will actually enhance reliability. Work on the Palisade Goshen project will allow local TLM crews to do hot line maintenance. The worst case scenario might mean something unexpected occurs resulting in momentary interruptions to customers and negatively impacting reliability, but the likelihood of such an occurrence is rare.						Delaying the replacements could lead to failures, unplanned outages, and customer interruptions. Depending on the location of the line and general system conditions, there may be impacts on the overall capacity of the northwest's transmission facilities. Not completing the upgrade of the Palisade-Goshen line for 161kV operation in the future will impair BPA's ability to adequately serve the area. The line will have to be taken out of service for maintenance activities since the local TLM crews will not be able to do hot line work. Could effect operations at Palisades Powerhouse depending on system configuration. Worst case scenario could mean moderate impact to reliability is possible.							

Safety Risk Analysis

Risks of Doing and Not Doing Project or Portfolio

Investment Name: TBL: Wood Pole Replacements - High

Expected Case												
Do Risk							Don't Do Risk					
Likelihood	Almost Certain											
	Likely											
	Possible											
	Unlikely											
	Rare		X									
Negligible						Negligible						
Minor						Minor						
Moderate						Moderate						
Major						Major						
Severe						Severe						
Consequence						Consequence						
Likelihood			Consequence			Likelihood			Consequence			
1			Rare			1			Negligible			
Comments:						Comments:						
BPA will apply its standard policies and procedures to assure safe construction, commissioning, testing, and operations; therefore, no impacts to safety are expected as a result of completing these projects.												

Likelihood	Almost Certain					
	Likely					
	Possible			X		
	Unlikely					
	Rare					
		Negligible	Minor	Moderate	Major	Severe
Consequence						
Likelihood			Consequence			
3			Possible		3	
Comments:						
If nothing is done, safety could be negatively impacted by aging wood poles that begin to fail. If the Palisades Goshen project is not completed line patrol and repair in darkness and under adverse weather conditions will continue to be required, which increases the likelihood of an accident resulting in injuries.						

Worst Case												
Do Risk						Don't Do Risk						
Likelihood	Almost Certain											
	Likely											
	Possible											
	Unlikely								X			
	Rare		X									
		Negligible	Minor	Moderate	Major	Severe		Negligible	Minor	Moderate	Major	Severe
Consequence						Consequence						
Likelihood			Consequence			Likelihood			Consequence			
1			Rare		2		Minor		2		Unlikely	
Comments:												
BPA will apply its standard policies and procedures to assure safe construction, commissioning, testing, and operations; therefore, no impacts to safety are expected as a result of completing these projects. Worst case scenario could mean an unexpected injury results requiring first aid, or delayed medical treatment, but this is unlikely.						If nothing is done, safety could be negatively impacted by aging wood poles that begin to fail. If the Palisades Goshen project is not completed line patrol and repair in darkness and under adverse weather conditions will continue to be required, which increases the likelihood of an accident resulting in injuries. Worst case scenario, failure to complete these projects could result in a serious injury or severe disability; however, this is not expected.						