



ADD-CHANGE FORM

New Project or Budget Change?

Assigned Project #

Requested by:
Project Manager / Area Manager

Date:

Project Name:

Company: Utilities Inc Pennbrooke

Business Unit: Utilities Inc of Pennbrooke W

BU Type:

Project Owner:

Budget Owner / RP: 03

Project Manager:

Region: 04

Start Date: Q1 2017

State:

Estimated End Date: Q3 2017

Project Type:

Will project replace/retire any assets:

Previously Requested:

This Request:	\$420,937
Still to be Requested:	\$0
Total Project Budget:	\$420,937

Description:

Design, CEI services, construction and permitting of a new 480V 400 amp service, breaker panel, ATS (automatic transfer switch), (3) 40HP VFDs (variable frequency drives), transformer, LP (lighting panel), grounding, outlets, lighting, AC unit, RTU, PMP (pressure monitoring panel), PCP (pump control panel), PLC, pressure transducer, GST level indicator, flow meter and SCADA integration for the Pennbrooke WTP.

Timeline Considerations:

This project is a pro forma included in the current open UIF rate case and needs to be completed by the end of 2017.

Inter-dependant Project Project Number: Project Name (If applicable)

Have engineering evaluations been performed? Engineering project number (If applicable)



JUSTIFICATION / ALTERNATIVES

Justification and Benefits:

The Pennbrooke WTP was originally constructed in 1987 and has been expanded over time to accommodate growth within the service area. Much of the electrical equipment was phased in to include additional high service capacity without regard for upgrading the main electric service to the building. The existing main service is not sized so that both of the two wells and the three HSPs can function together during periods of peak demand. The new electrical service will resolve this issue. Most of the electrical panels do not comply with today's NEC code and represent a safety hazard when troubleshooting. All power panels will be upgraded to meet code. The installation of VFD's for the high service pumps will provide for some power use efficiency, the ability to better regulate system pressures and prevent slamming of the check valves increasing the overall life of those assets. The new PLC will be connected to an RTU that will be integrated with the existing SCADA system to provide for alarm notification and 24 hour monitoring of the system by the Operator. A controls room will be constructed within the existing WTP building that will be air conditioned to protect the new electrical components from heat and moisture extending the service life of these components. The Pennbrooke system is remote and has no auxiliary water source available. By making these improvements, reliability and overall functionality will be improved.

Risk Evaluation

As a stand alone facility without any auxiliary water source, this WTP and its condition is critical to maintain to insure that water service is provided. Prolonging these upgrades subjects this facility to current and future failures that will impact the level of service and the issuance of PBWNs. Panels are without dead fronts that pose a safety hazard. The new panels will meet all current codes and provide for a safe working environment when troubleshooting or making adjustments.

Alternatives Considered:

The HSP components could be replaced with soft starts in lieu of VFDs but the benefit associated with VFDs such as power use efficiency and extending the life of the assets would not be realized.

The electric service could remain as is but would not allow for the use of both of the two wells and the three HSPs thus potentially impacting customers during peak demand periods.

Technical Review Summary:

Presented to CPRT on 1/12/2017 without comment or redirection.



Financial and Regulatory Implications

Capital Plan

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Proposed Project Spend	\$420,937				
Project Spend in Current Plan	\$420,937				
Variance	-	-	-	-	-
CIAC Collected					
Net Rate Base	420,937	420,937	420,937	420,937	420,937

(if applicable)

O&M Cost Impact B/(W)

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Financial Justification

See previous tab for justification and benefits. This project will result in O&M savings associated with repairs on obsolete electrical components. Will also avoid possible fines/costs from code violations. However, savings will be minimal between the project completion date of July 2017 and the beginning of the rate recovery period in September 2017.

Estimated Revenue Impact per Customer:

Number of Customers Impacted:

	Served	Rate Payers
	18.51	16.86
	1,355	1,488

Utility Financial Impact

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
O&M Impact on EBITDA B/(W)	-	-	-	-	-
Depreciation Impact on EBIT B/(W)	(3,508)				
Under-recovery on capital B/(W)	(21,573)				
Net EBIT Impact B/(W)	(25,081)				

Timing and Supporting Information on Rate Recovery

Estimated completion of the project is 7/1/2017 and rate recovery should begin in September of 2017.

Regulatory Plan Implications

This is a proforma project included in the 2016 UIF consolidated rate case filed in 3Q of 2016.

Assumptions

ROE: 10.25%, Cost of Debt: 6%, Equity Percentage: 50%, Tax Rate: 37.63%, Depreciation Rate: 5%
 After Tax Return on Rate Base = $10.25\% \times 50\% + 6\% \times 50\% \times (1 - 37.63\%) = 6.9961\%$
 Pretax Return on Rate Base = $6.9961\% / (1 - 37.63\%) = 11.217\%$
 Total Revenue Required = Pretax Return on Rate Base + Depreciation Rate = $11.217\% + 5\% = 16.217\%$
 Please note the under-recovery on capital includes equity, taxes, and debt portions



BID INFORMATION AND BUDGET BREAKDOWN

Have three bids been received?

If not, why? List and provide amounts below

Bid	Company	Amount	Selected
1	Chinchor Electric, Inc.	\$311,453	Yes
2	Thompson Electric, LLC	\$362,000	No
3	McMahan Construction Co., Inc.	\$342,500	No

Component:	Amount
Value Bid Elements	311,453.00
Engineering	19,900.00
Direct Purchase of Parts / Materials	
Landscaping / Site Restoration	
Other Components (specify):	
Cap Time	
ScadaOne - PCP, PMP, LIT, RTU, PLC	69,584.00
Leesburg Electric - New Underground Service	20,000.00

should match selected bid(s) above

Total Project Budget **420,937.00** should match Total Budget on General Information

Object Account(s) to which project will be closed:

Electric Pump Equip Wtp
 select from dropdown list
 select from dropdown list
 select from dropdown list
 select from dropdown list

[Go to Reference List](#)

General Comments:

ScadaOne was selected as the primary source for the PLC, panels and RTU as this vendor is the SCADA integrator for the UIF systems.



Approvals

EAM Prime Review

Review Completed by Date:
Does project align with utility plan and meet technical requirements? Yes No

Comments

This project aligns with the utility plan and meets UIF technical requirements.

Technical Peer Review

Review Sponsored by Date Held
Approval to proceed Yes No

Comments (note if feedback received in review incorporated)

No comments or redirection.

FP&A Review

Review Completed by Date:
Does Project comply with current Utility Rate and Regulatory Plan? Yes No

Comments

This project meets UIF financial requirements.

Approvals

Applicable?

Regional Manager:	<input type="text" value="Bryan K. Gongre"/>	Date: <input type="text" value="1/12/2017"/>	<input checked="" type="checkbox"/>
VP Operations:	<input type="text" value="Patrick C. Flynn"/>	Date: <input type="text" value="1/17/2017"/>	<input checked="" type="checkbox"/>
President:	<input type="text"/>	Date: <input type="text"/>	<input type="checkbox"/>

Approval or Re-Direction Comments