Project Authorization Form

Date Prepared:	6/5/2017	Project Title: T-IEC 61850 Simulator Lab	
Company:	EE-CT	Project ID Number:	CS00203
Organization:	Strategy&Perform	Class(es) of Plant:	Distribution
Project Initiator:	[redacted]	Project Category:	Gen Mod
Project Owner/Manager:	[redacted]	Project Type:	Specific
Project Sponsor:	[redacted]	Project Purpose:	Gen Mod
Estimated in service date:	3/31/2018	If Transmission Project:	N/A
Supplement to Existing Authorization?	ENG	Capital Investment Part of Original Operating Plan?	Yes
Eng./Constr. Resources Budgeted?	Yes	O&M Expenses Part of the Original Operating Plan?	No

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

IEC 61850 is a communication standard for electrical substation automation systems. CT Protection and Controls Engineering has conducted preliminary investigations into the feasibility of implementing IEC 61850 in future distribution substations designs. These investigations have sparked interest in other operating companies and discussions are ongoing in the Substation Design Standardization working group around standardizing on IEC 61850 for Transmission and Distribution portions of green field substations. IEC 61850 creates a significant shift in the way substations are designed and as a result, several stakeholders are impacted including; Engineering, Construction, Test, SCADA, Substation Operations, System Operations, and Training. Transmission lessons point out that companies that have been successful in implementing IEC 61850 started with a simulator prior to implementing IEC 61850 in the field. In advance of future green field projects, CT Engineering plans to commission an extension of the Transmission IEC 61850 simulator to incorporate Distribution relaying. This project will help iron out issues specific to distribution equipment, as well as design and implementation issues associated with the Transmission-Distribution interface.
Distribution will build out and commission a distribution IEC 61850 simulator in existing space in the Transmission IEC 61850 lab in the Berlin NU-East Building that has been reserved for this purpose. The simulator will include all relays typical of a 6 feeder double-bus switchgear lineup.

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized*	2017	2018	2019+	Total
Capital Additions Direct	261	592	97	0	$689
Less Customer Contribution		0	0	0	$0
Removals Net of Salvage		0	0	0	$0
Total - Direct Spending	$261	$592	$97	$0	$689
Capital Additions - Indirect	93	134	114	0	$247
Subtotal Request	$354	$725	$211	$0	$936
AFUDC	2	5	8	0	$14
Total Request	$356	$731	$219	$0	$950

Financial Evaluation

Direct Capital Costs	2017	2018	2019+	Total
Straight Time Labor	38	97	0	$135
Overtime Labor	0	0	0	$0
Outside Services	304	0	0	$304
Materials	250	0	0	$250
Other, including contingency amounts	0	0	0	$0
Total	$592	$97	$0	$689

Indirect Capital Costs	2017	2018	2019+	Total
Indirects/Overheads (including benefits)	134	114	0	$247
Capitalized interest or AFUDC, if any	5	8	0	$14
Total	$139	$122	$0	$261

Total Capital Costs	$731	$219	$0	$950

Less Total Customer Contribution	0	0	0	$0

Total Capital Project Costs	$731	$219	$0	$950

Total O&M Project Costs	$0	$0	$0	$0