Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Work Classification

Category: Line
Type: NB1
Type Desc: SPECIFIC PROJECTS-NEW SRVCE
Work Type:

Ownership / Management

AWC: Cheshire
Statewide: No
Owner: [redacted]
Manager: [redacted]

Project Information

Status: Prelim Design Approved
SPS #:
AIS Score:
Associated Projects:
Assignment ID:
Patrol Find ID:

Budget Summary - Preferred Option

Install a Single-phase loop

2016

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
3	[redacted]	Prelim	0	24 %	$349,227	$349,227
6		Prelim	0	24 %	$39,599	$0
7		Prelim	0	24 %	$308,779	$0
				2016 Total:	**$697,605**	**$349,227**
				Total Project:	**$697,605**	**$349,227**

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	[redacted]	2,3,6	$349,227	$0	100 %	$0.00	$0.00	☐
O2	[redacted]	3,6,7	$349,227	$0	100 %	$0.00	$0.00	☑

Segments

ID		Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted]	$0			$0.00	$0.00
2		$0			$0.00	$0.00
3		$349,227			$0.00	$0.00
4		$357,988			$0.00	$0.00
5		$163,151			$0.00	$0.00
6		$0			$0.00	$0.00
7		$0			$0.00	$0.00

Background / Scope

Issue:

City of Meriden Housing Authority is upgrading their services to the buildings in the [redacted] area. Each two or four unit buildings will be allowed to have an Eversource master. They also propose to install PV DG's and thermal heating between the units.

Project Description:

[redacted] Housing

Meriden Housing Authority

May 22, 2015

The Meriden Housing Authority (MHA) is upgrading the existing housing and installing PV and geothermal energy facilities. There are two requests by MHA for metering the PV installations. First Request, for each four unit or two unit housing buildings, MHA wants a master meter installed. So the occupants of each unit will not have an Eversource meter. There will be one Eversource meter for each building. The other option is to install a primary metering cabinet, and MHA will install all the primary cables and transformers beyond the primary metering.

The overall project has 29 four unit buildings, 14 two unit buildings and a community center. The community center will have a three-phase service. The estimated PV for this development is an approximately 288 kW. The development is now [redacted] After reviewing the MHA's proposal with [redacted] says we cannot supply this much PV [redacted] The system stiffness is too weak to accept this much PV. We will have to convert Wall Street up past this development.

The MHA has approached PURA and received permission to have one master Eversource meter per building since Eversource requires each customer to be metered separately. The MHA has now received permission from PURA for master meter installations.

The project is moving in steps. Last year the MHA had a pilot installation to one building; [redacted]. We [redacted]

Second Step, the MHA wants to upgrade the services to six buildings with two units each and supply them underground. The final plan is to supply all units underground. The company's master plan is to install a three-phase loop with single-phase loop off the three-phase loop. When they install the community building, we will install a separate three phase service. See the attached map for the proposed design.

[redacted] See the TLM loads in the figure above. If the MHA installs a new three-phase service on this tap, the loads can possibly go over 1 MVA. Will the customer have to pay for the conversion with the loads on the three 333 kVA bank of transformers reaching its limit.

Also, if the MHA is installing all this solar energy, will it be better if the company installed a primary metering cabinet and let the MHA install all their own primary cables and padmounted transformers?

Other Considerations:

Revision / ACT Comments:

If we don't do this project, what will happen?

The MHA has requested federal money to pay for the relocation of the overhead facilities underground. Within a month MHA expects to hear if the federal funds are available for next year. If so, we will need to complete segment Two; relocation work next year. The Wall Street, beyond step up transformers, conversion will be required when they install the community center and/or the PV is to great for the system stiffness.

Environmental

Water Pollution: No Change Soil Contamination: No Change Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects Oil Spill Risks Considered? ☐

Safety Concerns With This Project? ☐

Explain:

External Stakeholders

Customer Impact / Involvement

Cust. Impacted: [redacted]
Approx. Pole Count (NU):
Crit. Cust. Impacted:
Approx. Pole Count (Other): 5
Adjoining Property Owner Consent Required: ☐
Town Hearing Required: ☐
Other Utility Pole Custodian Area: ☐
Easement Required: ☑
State Highway Permit Required: ☐

Relocation / New Service

New Srvc. Contact:
Requestor Type: Other
Customer Type: Residential-Developer
State Highway Project #:
Request Number:
Route #:

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Design Alternative

CD00551-01

General Information

Segment: [redacted]

Status: Cancelled

Segment Type: NEW SERVICE

Town: MERIDEN

Budget Year: 2015

Work Type: Other

Trimming Required: ☐

In Service Date: 12/31/2016

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Design Alternative CD00551-01

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00 %
SubTotal:	$0
Contingency Amount:	$0
Estimate:	$0
Reimbursement:	$0
Net Amount:	$0
Description:	[redacted]

Item Description	CU	$ / Per	Qty	Amount

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Install	[redacted]	[redacted]		[redacted]			New Pole

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Design Alternative CD00551-02

General Information

Segment: [redacted] Status: Prelim Design Submitted

Segment Type: NEW SERVICE Town: MERIDEN Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2016

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00 %
SubTotal:	$276,628
Contingency Amount:	$66,391
Estimate:	$343,019
Reimbursement:	$343,019
Net Amount:	**$0**
Description:	[redacted]

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	15-ALL17	[redacted]		$17,548.00
OH WIRE OH - Line Extension - 3ph (336 kcmil)	15-OH33			$26,000.00
OH WIRE OH - Line Extension - 3ph (336 kcmil)	15-OH33			$13,000.00
DB CABLE DB - #1 - 4CT (3ph) Al	15-UG112			$40,650.00
POLE DB/UG - Riser - 3ph	15-UG146			$26,986.00
ENCLOSURE DB - Fiberglass Enclosure - 3ph - Doghouse	15-UG148			$38,830.00
UG CABLE DB - Splice Box	15-UG154			$8,784.00
XF DB/UG-Padmnt, Submersible, Network XF or Protector	15-UG155			$0.00
DB CABLE DB - #1 - 1/C (1ph) Al Building #'s 15, 30 -- 34.	15-UG111			$12,210.00

Design Alternative CD00551-02

DB CABLE DB - #1 - 1/C (1ph) Al Building #'s 4, 5 & 6.	15-UG111	[redacted]	$4,180.00
DB CABLE DB - #1 - 1/C (1ph) Al Building #'s 9 -14.	15-UG111		$15,840.00
DB CABLE DB - #1 - 1/C (1ph) Al Elizabeth Road	15-UG111		$41,250.00
DB CABLE DB - #1 - 1/C (1ph) Al Gilbert Road	15-UG111		$31,350.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]	[redacted]					

Reliability Projection

Title:

Outage Start Date: 01/01/2007 Outage End Date: 09/17/2015 Years History: 8.72

[redacted]

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Segment CD00551-03

General Information

Segment: [redacted]

Status: Prelim Design Approved

Segment Type: NEW SERVICE

Town: MERIDEN

Budget Year: 2016

Work Type: BB-Rehab+Recond

Trimming Required: ☐

In Service Date: 12/31/2016

Description:

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CD00551-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00 %
SubTotal:	$281,635
Contingency Amount:	$67,592
Estimate:	$349,227
Reimbursement:	$0
Net Amount:	**$349,227**
Description:	

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	14-ALL17	[redacted]		$8,520.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph(any gauge) Cottage Conversion	14-OH25			$12,750.00
XF OH - OH XF - 1ph Cottage Conversion	14-OH45			$2,075.00
EQUIPMENT OH - Conversion Prep Work - 1ph Cottage Conversion	14-OH56			$1,500.00
EQUIPMENT OH - Conversion - CUTOVER Cottage Conversion	14-OH58			$1,300.00
XF OH - Stepdowns, 3-1ph - on one POLE [redacted]	14-OH50			$21,060.00
XF OH - Stepdown - 1ph - on POLE [redacted].	14-OH49			$14,350.00
XF OH - Stepdown - 1ph - on POLE [redacted].	14-OH49			$14,350.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph(any gauge) [redacted]	14-OH25			$18,000.00

Segment CD00551-03

EQUIPMENT OH - Conversion Prep Work - 1ph [redacted]	14-OH56	[redacted]	$12,000.00
EQUIPMENT OH - Conversion Prep Work - 3ph [redacted]	15-OH57		$30,900.00
XF OH - Stepdown - 1ph - on POLE [redacted]	14-OH49		$14,350.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -336 k [redacted] Replace the 336 AAC spacer cable.	14-OH26B		$110,500.00
EQUIPMENT OH - Conversion - CUTOVER [redacted] .	14-OH58		$5,200.00
XF OH - Stepdown - 1ph - on POLE [redacted]	15-OH49		$14,780.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]	[redacted]					
Existing	[redacted]						

Segment CD00551-03

Reliability Projection

Title:

Outage Start Date: 01/01/2007 Outage End Date: 09/17/2015 Years History: 8.72

[redacted]

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Design Alternative CD00551-04

General Information

Segment: [redacted] Status: Cancelled

Segment Type: NEW SERVICE Town: MERIDEN Budget Year: 2016

Work Type: BB-Rehab+Recond Trimming Required: ☐ In Service Date: 12/31/2016

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed
1	[redacted]	[redacted]	[redacted]

Design Alternative

CD00551-04

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00 %
SubTotal:	$288,700
Contingency Amount:	$69,288
Estimate:	$357,988
Reimbursement:	$0
Net Amount:	**$357,988**
Description:	[redacted]

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	14-ALL17	[redacted]		$8,520.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	14-ALL18			$20,000.00
POLE OH - POLE - 3ph (CL&P custodian)	14-OH14			$22,700.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph(any gauge)	14-OH25			$36,000.00
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -336 k	14-OH26B			$85,000.00
SECTIONALIZE OH - Recloser - 3ph	14-OH38			$116,480.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Design Alternative

CD00551-05

General Information

Segment: [redacted]

Status: Cancelled

Segment Type: NEW SERVICE

Town: MERIDEN

Budget Year: 2016

Work Type: Other

Trimming Required: ☐

In Service Date: 12/31/2016

Description: [redacted].

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Design Alternative

CD00551-05

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00 %
SubTotal:	$131,573
Contingency Amount:	$31,578
Estimate:	$163,151
Reimbursement:	$0
Net Amount:	**$163,151**

Description:

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	15-ALL17	[redacted]		$4,387.00
UG CABLE UG - 4/0 - 4CT (3ph) Al	15-UG113C			$12,600.00
SWITCHGEAR DB/UG - Switchgear up to 25kV - Auto Type 5 (pair)	15-UG125			$175,100.00
POLE DB/UG - Riser - 3ph	15-UG146			$26,986.00
OTHER Credit Adjustment Value Primary Metering Installation is a quarter of the PMH-5 automatic pair.	15-ALL20			($87,500.00)

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Segment CD00551-06

General Information

Segment: [redacted] Status: Prelim Design Approved

Segment Type: NEW SERVICE Town: MERIDEN Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2016

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CD00551-06

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00 %
SubTotal:	$31,935
Contingency Amount:	$7,664
Estimate:	$39,599
Reimbursement:	$39,599
Net Amount:	$0
Description:	

Item Description	CU	$ / Per	Qty	Amount
OH WIRE OH - Remove circuit wire (3 phase)	15-OH37A	[redacted]		$4,000.00
EQUIPMENT OH - Conversion Prep Work - 1ph	15-OH56			$20,085.00
OH WIRE OH - Remove circuit wire (1 phase) [redacted].	15-OH37			$3,000.00
UG CABLE UG - Cable Removal - all cables DB Cable to pilot pad transformer	15-UG117			$1,250.00
OH WIRE OH - Remove circuit wire (1 phase) [redacted]	15-OH37			$2,400.00
OH WIRE OH - Remove circuit wire (1 phase) [redacted]	15-OH37			$1,200.00

Associated / Impacted Devices

Status	Type / SysID		Notes
Existing	[redacted]	[redacted]	

Segment CD00551-06

Reliability Projection

Title:

Outage Start Date: 01/01/2007 Outage End Date: 09/17/2015 Years History: 8.72

[redacted]

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Segment CD00551-07

General Information

Segment: [redacted]

Status: Prelim Design Approved

Segment Type: RELOCATION - UG

Town: MERIDEN

Budget Year: 2016

Work Type: Other

Trimming Required: ☐

In Service Date: 12/31/2016

Description:

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CD00551-07

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00 %
SubTotal:	$249,015
Contingency Amount:	$59,764
Estimate:	$308,779
Reimbursement:	$308,779
Net Amount:	**$0**
Description:	

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	15-ALL17	[redacted]		$17,548.00
OH WIRE OH - Line Extension - 1ph (any gauge)	15-OH32			$15,000.00
OH WIRE OH - Line Extension - 3ph (336 kcmil)	15-OH33			$13,000.00
DB CABLE DB - #1 - 4CT (3ph) Al	15-UG112			$9,000.00
POLE DB/UG - Riser - 3ph	15-UG146			$13,493.00
XF DB/UG-Padmnt, Submersible, Network XF or Protector	15-UG155			$0.00
POLE DB/UG - Riser - 1ph [redacted]	15-UG145			$18,426.00
UG CABLE DB - Splice Box [redacted]	15-UG154			$17,568.00
DB CABLE DB - #1 - 1/C (1ph) Al [redacted]	15-UG111			$51,480.00

Specific Project Proposal - Project #: CD00551

[redacted] Housing Service Upgrade

Segment			CD00551-07
POLE DB/UG - Riser - 1ph [redacted]	15-UG145	[redacted]	$18,426.00
ENCLOSURE DB - Fiberglass Enclosure - 1ph - Doghouse [redacted]	15-UG147		$7,652.00
UG CABLE DB - Splice Box [redacted]	15-UG154		$4,392.00
DB CABLE DB - #1 - 1/C (1ph) Al [redacted]	15-UG111		$63,030.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]	[redacted]	[redacted]	[redacted]			

Reliability Projection

Title:

Outage Start Date: 01/01/2007 Outage End Date: 09/17/2015 Years History: 8.72

[redacted]