Project Authorization Form

General Information

Date Prepared: 01/26/15

Project Title: 2016 Infrastructure Life Cycle Program

Class(es) of Plant: Hardware, Software

Project Initiator: [redacted]

Project Owner/Manager: [redacted]

Project Sponsor: [redacted]

Project ID Number: Assigned Upon Approval

Organization: Eversource IT

Companies:

61-ES Service Co	11-CT-Distribution	21-ES East
06-NH-Distribution	41-WM-Distribution	71-YGSCO-Yankee Gas
1T-CT-Transmission	6T-NH-Transmission	4T-WM-Transmission

Authorization for additional resources? No — If so obtain required VP approval

Timing of project: Jan 2, 2016 – Dec 31 2016

Estimated in service date: Varies by effort throughout the year

Project _____ Annual X Preliminary _____

Part of Original Operating Plan? Yes

If no, offset by elimination of another budgeted amount? No

Is this PAF for a transfer (see page 4) of a significant amount? No

If yes, approval by CFO and if he deems appropriate, CEO is required to be documented below

Date of approval: _____

Documentation or explanation: _____

O&M Expenses Part of the Original Operating Plan? No O&M Expenses for this Program

If Chief Executive Officer or subsidiary board approval is required, document the review by Enterprise Risk Management (ERM) and financial evaluation completed with the designated representative of the Chief Financial Officer (CFO) organization

ERM N/A

CFO N/A

Executive Summary

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Plant Accounting approval is required on all PAFs. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budgeting and Internal Reporting.

	Prior Authorized Amount (if applicable)	Amount of This Authorization	Total Project Cost
Capital (details below)	$	$5,980,000	$5,980,000
O&M	$	$	$
Total	$	$5,980,000	$5,980,000

Provide in the table below estimated details of total Capital spending above:

Cost Components	Description of the Cost Component	Estimated Cost
Labor	Internal Labor	$ 314,000
Outside Services	Vendor Labor	$ 495,978
Software	Software and licenses	$ 320,000
Hardware	Physical Hardware	$4,778,022
Other	Transportation	$ 72,000
Total Capital Spending		**$5,980,000**

Summary Project Description

The Eversource IT computing and communications environments are composed of a significant array of platforms and networking devices which provide various terms of operational service. As these devices near or exceed their end-of-life, functional efficiency, or supportability, it is prudent to manage the phased replacement of these devices. It is the objective of this program to fund the replacement of that equipment and maintain a reliable, robust infrastructure, so that Eversource does not experience application availability problems for business critical systems. This project funds lifecycle refreshes in the following areas: Desktop (PCs and Laptops), Network Infrastructure including IP Telephony (VoIP), Security Infrastructure and Data Storage.

Components are refreshed based on their age and value and their technical relevance within the environment. The Lifecycle Program is in place to facilitate a continued responsiveness to the requirements of the business and our customers by providing reliable computing platforms and transport mechanisms.

	Total Project Costs	Amount in Operating Plan	Difference
Capital	$5,980,000	$5,980,000	$0.00
O&M	$	$	$
Total	$5,980,000	$5,980,000	$0.00

Discuss how the variances to the plan will be addressed

There is no Variance

Project Authorization

Project authorization below must be obtained from each approver listed below in accordance with the approval levels included in the Delegation of Authority Policy (DOA).

Approver	Approver Name	Approver Signature	Date
Project initiator	[redacted]	Page 11	01/27/16
Project manager		Page 11	01/27/16
Plant Accounting		Page 12	01/29/16
Budgeting and Internal Reporting*		Page 12	01/28/16
Investment Planning**			
Director IT PMO, QA, and Enterprise Architecture		Page 12	02/03/16
Director IT Infrastructure		Page 11	01/27/16
Director IT Customer Services & Network Communications		Page 11	01/27/16
CIO or VP, Supply Chain, Environmental Affairs and Property Management or their designee ***		Page 12	02/03/16
Executive Vice President and CAO		Page 12	02/08/16

* For Corporate / Shared Services projects only

** For Massachusetts Operations projects only

*** For IT or Facilities and Environmental projects only

Overall Justification

Describe the proposed project below.

Problem statement

Through the years the Eversource voice and data computing, storage, security, and networking environments have evolved into significant array of platforms and devices which provide various terms of operational service. As these devices near or exceed their end-of-life, functional efficiency, or supportability, it is prudent to manage the phased replacement of these devices. It is the objective of this project to fund the replacement of that equipment and maintain a reliable, robust IT infrastructure.

Project objectives

It is the objective of this project to fund the replacement of Eversource IT Infrastructure End of Life components and maintain a reliable, robust infrastructure

Project scope

The Lifecycle Program Scope is Eversources computing and communications infrastructure, the network (voice and data) environment, and the storage environment. The project will identify, forecast, schedule and execute the upgrade or replacement of candidate components as they reach or exceed their end-of-life, functional efficiency, or supportability

Quantitative and qualitative project benefits, including assumptions used to estimate benefits and customer impacts; describe the changes in performance to the business process or technology performance metrics that can be expected as a result of this project

The Eversource IT computing and communications infrastructure consists of a vast array of components that have been deployed into operation over a number of years. This infrastructure supports all business applications with a very high level of availability and reliability. This Lifecycle Program addresses the age, criticality, functional effectiveness, and supportability, with the purpose of upgrading and replacement of these components in maintaining that level of availability and reliability required to support the business and our customers.

Alternatives considered

Do Nothing – Incur additional O&M charges for extending maintenance on end-of-life equipment. Risk equipment failure which could affect daily operational services.

Assessment of solutions utilized by and applicability to other Eversource Companies

Not Applicable

Safety assessments

Not Applicable

Financial Evaluation

Describe the project schedule and milestones

Each project within the program will have its own implementation schedule. Projects to be completed in 2016 include:

2016 Infrastructure Life Cycle Projects for Op Co 61-ES Service Co:

#	Manager	Group	Description	Cost
1	[redacted]	Storage	EMC Data Domain Solution +tax	$1,450,000
2		Storage	Vmax Storage Upgrade	$1,000,000
3		Compute	P-Series Memory and CPU Upgrade	
4		Compute	Data Center racks	$30,000
5		Security	Firewall Equipment replacements	$700,000
6		EUC*	Audio Visual replacements	$10,000
7		EUC	PCs replacements	$637,000
9		EUC	System Center Configuration Manager Upgrade (SCCM) Software	$400,000
10		Network	Network 4500 Switches Eversource	$165,000
11		Network	Radius Upgrade ACS V5.0 TACACS EOS	$50,000
12		Network	Riverbed Units 5 yr cycle - Core	$325,000
13		Network	Wireless System-802.11ac-ISE-Guest Access	$100,000
			Total >	$4,867,000

*EUC=End User Services

2016 Infrastructure Life Cycle Projects for Op Co 11-CT-Distribution:

#	Manager	Group	Description	Cost
1	[redacted]	EUC	PC replacements	$397,000
2		Network	Network 4500 Switches	$35,000
			Total >	$432,000

2016 Infrastructure Life Cycle Projects for Op Co 21-ES East:

#	Manager	Group	Description	Cost
1	[redacted]	EUC	PC replacements	$169,000
2		EUC	Department Vehicle for PC techs	$45,000
3		Network	Replace Foundry/ Entrasys EOL LAN Switches	$50,000
			Total >	$264,000

2016 Infrastructure Life Cycle Projects for Op Co 06-NH-Distribution:

#	Manager	Group	Description	Cost
1	[redacted]	EUC	PC replacements	$75,000
2		Network	Network 4500 Switches ES NH	$95,000
3		Network	Department Vehicle Network Engineer	$35,000
			Total >	$205,000

2016 Infrastructure Life Cycle -PC Replacements for Other Op Cos:

#	Manager	Group	Description	Company	Cost
1	[redacted]	EUC	PC replacements	41-WM-Distribution	$52,000
2		EUC	PC replacements	71-YGSCO-Yankee Gas	$109,000
3		EUC	PC replacements	1T-CT-Transmission	$13,000
4		EUC	PC replacements	6T-NH-Transmission	$31,000
5		EUC	PC replacements	4T-WM-Transmission	$7,000
				Total >	$212,000

Explain unique payment provisions, if applicable

Not Applicable

Provide the following financial information (attach additional detail if summarized items are significant or additional information is needed)

2016 Infrastructure Life Cycle -Table 1A (continues on Page 8 as Table 1B)

Direct Capital Costs	2016 61 ES SvcCo	2016 11 CT Dist	2016 21 ES East	2016 06 NH Dist	2016 41 WM Dist	2016 71 Ynk Gas
Labor	$ 141,500	$ 1,750	$ 7,250	$ 6,500	$ 0	$ 0
Outside services	$ 360,713	$ 57,146	$ 31,607	$ 15,996	$ 7,485	$ 15,690
Materials	$4,223,287	$ 371,354	$ 256,750	$ 144,504	$ 44,515	$ 93,310
Other, including contingency amounts Transportation	$ 0	$ 0	$ 40,500	$ 31,500	$ 0	$ 0
Total	$4,725,500	$ 430,250	$ 256,750	$ 198,500	$ 52,000	$ 109,000
Indirect Capital Costs	**2016 61 ES Svc**	**2016 11 CT Dist**	**2016 21 ES East**	**2016 06 NH Dist**	**2016 41 WM Dist**	**2016 71 Ynk Gas**
Benefits						
Loaders	$ 141,500	$ 1,750	$ 7,250	$ 6,500	$ 0	$ 0
Capitalized interest or AFUDC, if any						
Other, including contingency amounts						
Total	$4,867,000	$ 432,000	$ 264,000	$ 205,000	$ 52,000	$ 109,000
Total Capital Costs	$4,867,000	$ 432,000	$ 264,000	$ 205,000	$ 52,000	$ 109,000
Total O&M Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Total Project Costs	**$4,867,000**	**$ 432,000**	**$ 264,000**	**$ 205,000**	**$ 52,000**	**$ 109,000**
Vendor software payments (indicate whether or not included in the above)*						

*Accounting for vendor software payments for SaaS or other agreements involving the right to use software is to be determined by a separate analysis, and approval by Plant Accounting and Budgeting and Internal Reporting is required. Plant Accounting maintains a checklist to aid in this analysis.

2016 Infrastructure Life Cycle - Table 1B (continued from page 7 Table 1A)

Direct Capital Costs	**2016 1T CT Tran**	**2016 6T NH Tran**	**2016 4T WM Tran**	**2017**	**2018**	**Total Includes info from Table 1A on Page 7**
Labor	$ 0	$ 0	$ 0	$ 0	$ 0	$ 157,000
Outside services	$ 1,871	$ 4,462	$ 1,008	$ 0	$ 0	$ 495,978
Materials	$ 11,129	$ 26,538	$ 5,992	$ 0	$ 0	$ 5,098,022
Other Transportation	$ 0	$ 0	$ 0	$ 0	$ 0	$ 72,000
Total	$ 13,000	$ 31,000	$ 7,000	$ 0	$ 0	$ 5,823,000
Indirect Capital Costs	**1T CT Tran**	**6T NH Tran**	**6T NH Tran**	**2017**	**2018**	**Total Includes info from Table 1A on Page 7**
Benefits						
Loaders	$ 0	$ 0	$ 0	$ 0	$ 0	$ 157,000
Capitalized interest or AFUDC, if any						
Other, including contingency amounts						
Total	$ 13,000	$ 31,000	$ 7,000	$ 0	$ 0	$ 5,980,000
Total Capital Costs	$ 13,000	$ 31,000	$ 7,000	$ 0	$ 0	$ 5,980,000
Total O&M Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Total Project Costs	**$ 13,000**	**$ 31,000**	**$ 7,000**	**$ 0**	**$ 0**	**$ 5,980,000**
Vendor software payments (indicate whether or not included in the above)*						

*Accounting for vendor software payments for SaaS or other agreements involving the right to use software is to be determined by a separate analysis, and approval by Plant Accounting and Budgeting and Internal Reporting is required. Plant Accounting maintains a checklist to aid in this analysis.

Provide below and describe the estimated future costs that will result from the project

Future Costs	2016	2017	2018	Total Future Project Costs
O&M				
Capital				
Other (describe)				
Total				$0

Compare these future costs to amounts that are in the approved Operating Plan

Not Applicable

Provide below and describe the estimated financial benefits (reductions from current year Operating Plan) that will result from the project

Financial Benefits	2016	2017	2018	Total Financial Benefits
O&M				
Capital				
Revenues				
Other (describe)				
Total				$0

Include the benefits going forward using current year Operating Plan amounts

Not Applicable

What is the project's IRR? -$5,980,000

What is the project's NPV? -100.00%

What is the project's payback period? N/A

Use appropriate discount rate by company (can be provided by Budgeting and Internal Reporting).

If the above items are not applicable, explain why (e.g., if negative but there are other reasons to proceed)

Technology based systems have limited useful life spans. If these systems are not replaced at the end of their lifespans then they become outdated, leading to vendor support issues, degradation in performance, security vulnerabilities and outages due to equipment failure. Extending the maintenance agreements on outdated equipment will add additional O&M costs to the IT budget.

The Lifecycle Program is in place to facilitate a continued responsiveness to the requirements of the business and our customers by providing reliable computing

platforms and transport mechanisms. It is the objective of this program maintain a reliable, robust infrastructure, so that Eversource does not experience application availability problems for business critical systems.

Regulatory Approvals

Indicate what regulatory approvals are needed for the project

None

Risks and Risk Mitigation Plans

Describe the applicable risks and associated risk mitigation plans: e.g., construction, customer, reputational, schedule, financial, regulatory, environmental and IT risks. Indicate discussions with relevant subject matter experts.

This is an annual program to support the upgrade or replacement of infrastructure components that have either a history of failure, are out of support, or are no longer functionally effective. Eversource relies heavily on computer systems and networks in support of business functions. If the technology systems fail, business operations are immediately impacted. Technology based systems have limited useful life spans. As a support organization it is imperative for IT to provide, within appropriate cost structures, the best and appropriately new technologies for business operations. The primary risk of not supporting the replacements is that the infrastructure would become physically older as well as technologically outdated which would lead to running systems without support from our vendors, degradation in performance, and increase the risk of extended system outages due to equipment failure. This program is the mitigation for such risk.

Authorization Criteria Specific to IT Projects

Describe the applications that are impacted and include information regarding the interfaces and interdependencies related to this IT project (diagrams may be considered to assist in review and approval)
This program addresses the replacement of platforms and devices across Eversource locations that support numerous applications within the corporate computing network

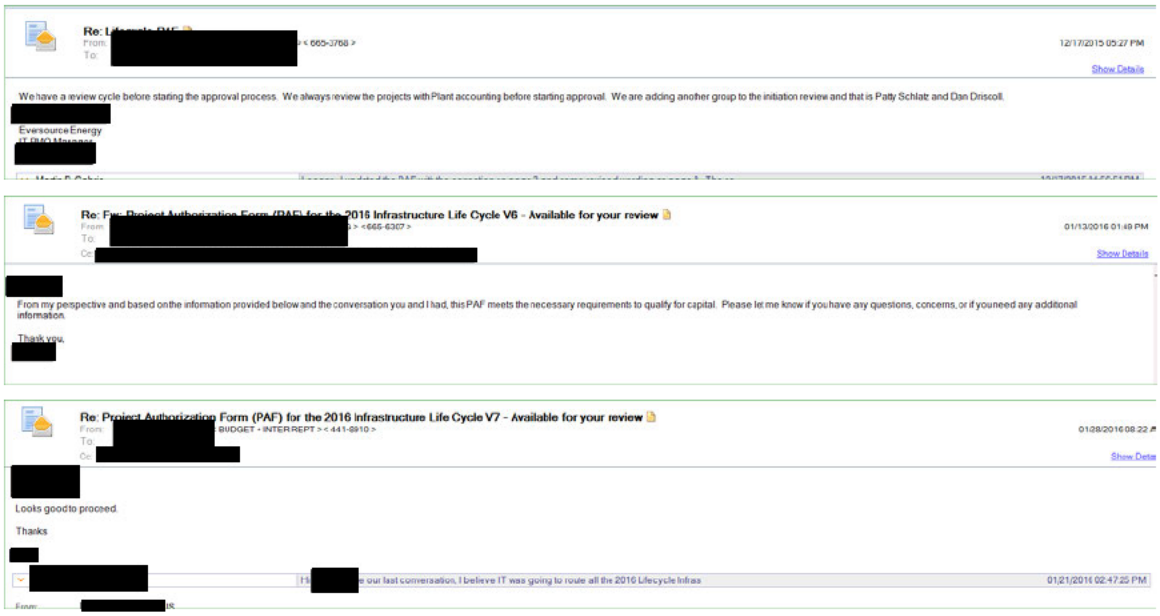
Assess the fit of this IT project with the overall IT strategy

This project is in alignment with the overall IT strategy

Describe control matters, such as the processes for data migration, change management plan including impacts to business processes, data maintenance controls, whether or not this IT project will be or impacts a Sarbanes-Oxley critical application, and the business continuity plan

This program will follow IT's project management methodology and change control for implementations.

Pre-Approval:



Re: [redacted] 12/17/2015 05:27 PM
Show Details
We have a review cycle before starting the approval process. We always review the projects with Plant accounting before starting approval. We are adding another group to the initiation review and that is Patty Schlatz and Dan Driscoll.
[redacted]
Eversource Energy
[redacted]

Re: Fw: Project Authorization Form (PAF) for the 2016 Infrastructure Life Cycle V6 - Available for your review
01/13/2016 01:49 PM
Show Details
[redacted]
From my perspective and based on the information provided below and the conversation you and I had, this PAF meets the necessary requirements to qualify for capital. Please let me know if you have any questions, concerns, or if you need any additional information.
Thank you.
[redacted]

Re: Project Authorization Form (PAF) for the 2016 Infrastructure Life Cycle V7 - Available for your review
01/28/2016 08:22
Show Details
[redacted]
Looks good to proceed.
Thanks
[redacted]
01/21/2016 02:47:25 PM

Approval:

Project Authorization

Project authorization below must be obtained from each approver listed below in accordance with the approval levels included in the Delegation of Authority Policy (DOA).

Approver	Approver Name	Approver Signature	Date
Project initiator	[redacted]		1/27/16
Project manager			1/27/16
Plant Accounting			
Budgeting and Internal Reporting*			
Investment Planning**			
Director IT PMO, QA, and Enterprise Architecture			
Director IT Infrastructure			1/27/2016
Director IT Customer Services & Network Communications			1/27/16
CIO or VP, Supply Chain, Environmental Affairs and Property Management or their designee ***			

* For Corporate / Shared Services projects only
** For Massachusetts Operations projects only
*** For IT or Facilities and Environmental projects only

[redacted]
Date: 01/28/2016 05:46 PM
Subject: Re: Project Authorization Form (PAF) for the 2016 Infrastructure Life Cycle V8 - Available for your review

approved
[redacted] 01/28/2016 11:24:06 AM--[redacted] Thank you for the update. I just sent a separate email for a formal paper approval before ent

From: [redacted]
To: [redacted]
Cc: [redacted]
Date: 01/28/2016 11:24 AM
Subject: Re: Project Authorization Form (PAF) for the 2016 Infrastructure Life Cycle V8 - Available for your review

Re: Project Authorization Form (PAF) for the 2016 infrastructure Life Cycle V8 - Available for your review and approval
From: [redacted] FIN REDESIGN-FIN REPORTING > < 665-2414 >
To: [redacted]
Cc: [redacted]
01/29/2016 12:51 PM
Show Details

I approve of the 2016 Infrastructure Life Cycle PAF.
Thank You
[redacted]
Eversource
[redacted] Accounting Services
[redacted]

[redacted] he latest version of the 2016 Infrastructure Life Cycle program V8 Project Authoriz 01/28/2016 10:57:59 AM

From: [redacted]
To: [redacted]
Cc: [redacted]
Date: 01/28/2016 10:57 AM
Subject: Project Authorization Form (PAF) for the 2016 infrastructure Life Cycle V8 - Available for your review and approval

Re: Project Authorization Form (PAF) for the 2016 infrastructure Life Cycle V8 - Available for your review and approval
From: [redacted] IT VP > < 441-3300 >
To: [redacted]
Cc: [redacted]
02/03/2016 04:23 PM
Show Details

[redacted]
"I approve of the 2016 Infrastucture Life Cycle PAF V8"
[redacted]

[redacted] 01/29/2016 02:01:27 PM

From: [redacted]
To: [redacted]
Cc: [redacted]
Date: 01/29/2016 02:01 PM
Subject: Project Authorization Form (PAF) for the 2016 infrastructure Life Cycle V8 - Available for your review and approval

[redacted]
The latest version of the 2016 Infrastructure Life Cycle program V8 Project Authorization Forms (PAF) is available for your review and approval at the link below.

---- Forwarded by [redacted] on 02/03/2016 05:00 PM ----

From: [redacted]
To: [redacted]
Date: 02/03/2016 04:59 PM
Subject: Re: Project Authorization Form (PAF) for the 2016 infrastructure Life Cycle V8 - Available for your review and approval

I approve

Sent from my iPhone

On Feb 3, 2016, at 4:58 PM, [redacted] wrote:

----- Forwarded by [redacted] on 02/08/2016 02:36 PM -----

From: [redacted]
To: [redacted]
Cc: [redacted]
Date: 02/08/2016 01:58 PM
Subject: Re: 2016 Lifecycle Program PAF - Approval Request

Okay. I approve and will sign when I return to the office Wednesday (unless you need it sooner).

[redacted] ~ Executive Vice President & CAO
Eversource Energy
[redacted]

Executive Assistant: [redacted] ~ 860-728-4511 [redacted]