Operations Project Authorization Form

Project Title: Eversource Energy Center	**Project Number:**
Date Prepared: 05/05/2023	**Company:** Eversource CT
Organization: System Planning	**Class(es) of Plant:** Other
Project Initiator: [redacted]	**Project Category:** Annual - General
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 05/31/2028	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Choose an item	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☐ Distribution
Total Gross Capital Request: $11,250,000	**Authorization Type:** Full Funding

Executive Summary

The goal of the proposed project is to continue the Eversource Energy Center operation at the University of Connecticut and the development and operation of the UConn Predictive Storm and Outage models for Eversource Connecticut service territory for the period June 1, 2023, through May 31st, 2028, by regularly updating and improving the model integrating utility specific infrastructure and outage data from the Outage Management System (OMS). This project is part of the 2023-2028 Eversource-UConn Master Agreement for the Eversource Energy Center.

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budget and Internal Reporting.
Note: Dollar values are in thousands

Capital Costs	June 2023-May 2024	June 2024-May 2025	June 2025-May 2028	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	0	0	0	0
Outside Services	$2,250,000	$2,250,000	$6,750,000	$11,250,000
Materials	$500,000	0	0	0
Removals	0	0	0	0
Risk and Contingency	0	0	0	0
Other	0	0	0	0
Subtotal – Direct Costs	$2,750,000	$2,250,000	$6,750,000	$11,750,000
Indirect Capital Costs				
Indirect/Overheads (including benefits)	0	0	0	0
Capitalized interest or AFUDC, if any	0	0	0	0
Subtotal – Indirect Costs	0	0	0	0

Total Gross Capital Costs	$2,750,000	$2,250,000	$6,750,000	$11,750,000
Customer Contribution	0	0	0	0
Total Net Capital Project Costs	$2,750,000	$2,250,000	$6,750,000	$11,750,000

Technical Justification:

Project Need, Objective and Justification
The proposed project is needed to fund the continuation of the operations of the Eversource Energy Center at the University of Connecticut and the development and operation of the UConn Predictive Storm and Outage models for Eversource Connecticut service territory for the period June 1, 2023, through May 31st, 2028, by regularly updating and improving the model integrating utility specific infrastructure and outage data from the Outage Management System (OMS). This project is part of the 2023-2028 Eversource-UConn Master Agreement for the Eversource Energy Center.

Project Scope
The primary scope of this project is to manage and operate the Eversource Energy Center consistent with the Master Agreement between Eversource and UConn and to build upon our current success with the Eversource CT Storm Outage Prediction Model to develop the 3nd generation storm based outage prediction model for the Connecticut service territory and support the operational storm preparedness of Eversource for Connecticut.
Specific objectives include:

- Manage the Eversource Energy Center at UConn.
- Continue the operational use of OPM for the CT service territories to support storm preparedness activities.
- Enhance OPM predictions based on improved rain/wind, snow, ice, thunderstorm and hurricane models.
- Use the new WRF 8.2 numerical weather prediction version.

The following project tasks are proposed to address the scope of work:

- Task 1: Continue the operation and management of the Eversource Energy Center. Activities include: monitoring of the Eversource funded projects, financial management and reporting, organization of annual workshop and advisory and executive board meetings, community outreach activities including updates with PURA and DEEP, continue the underrepresented minority and DEI undergraduate research initiatives, issue the center annual reports and regular communications with Eversource and UConn leadership.
- Task 2: Continue research to improve OPM models through new weather variables from WRF (Version 8.2) and in association with new parameterizations and improvements resulting from the weather forecasting work of the Eversource Energy Center.
- Task 3: Improve the accuracy of snow/ice, T-storm and extreme event outage predictions by investigating new parameterizations for the corresponding OPM models and annually retraining the models with new outage data from OMS.
- Task 4: Real-time operational implementation and use of the CT OPM models for rain/wind, winter, T-storm and extreme events and dissemination of forecasts to Eversource managers through the UConn Outage Prediction Model portal to support pre-storm preparedness.

Background
The Eversource Energy Center is a research and development center that represents a long-standing collaboration between the University of Connecticut and Eversource. The initial contract ran from 2015-2019,

where Eversource committed $9,000,000. Another contract renewed the funding to the Eversource Energy Center out to 2023, with a total of $5,700,000. This project represents a second renewal term.

Alternatives Considered:

Were alternative solutions considered/applicable? Include any cost/benefit analysis.

Project is a compliance obligation - no alterntives considered - no financial benefit

Regulatory Approvals:

Are Regulatory body approvals needed for the project?
No

If yes, provide detailed regulatory approvals

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	N/A
Construction Start	N/A
Testing/Commissioning	N/A
In Service Date	05/30/2028

Risks and Risk Mitigation Plans

List top risks and mitigation plans associated with this project. Include any contingency related to each risk. (Permitting/siting; environmental; outage constraints; customer/community outreach; material delivery; constructability challenges; excavation; etc.)
No risk factors identified.

References

Appendices (One-Line Diagrams, Images, etc.)

Reference appendices items in the appropriate section of the PAF and list items in the same order as referenced in the PAF

If the project has future financial benefits, please use the following table to provide the yearly amounts.

Financial Benefits	Year 20__	Year 20__	Year 20__	Year 20__
Capital				
O&M				
Other				
Total Financial Benefits				

Describe the estimated future Capital, O&M and/or Other benefits noted above:

What functional area(s) will these benefits be reflected in?_System Planning_____

A representative from the respective functional area is required to be included as a project approver.