NEW TECHNOLOGIES REQUEST APPLICATION

Connecticut Energy Storage Solutions

All submitted information is public record. Do not submit any propriety or confidential information.

INSTRUCTIONS

Thank you for your interest in the Connecticut Energy Storage Solutions (Program). To have equipment reviewed for participation into the Program and inclusion on the Eligible Equipment List, complete the following.

1. Confirm that the equipment is not currently eligible in the Program by reviewing the Program Equipment List. *(Link or Drop-Down Menu)*
2. If the equipment is not listed, or requires revision, complete the following.
    a. Obtain certification from the Nationally Recognized Testing Laboratories (NRTL).
    b. Complete the *New Technologies Request Application.*
        - Eligibility will be based on your responses. Make certain to answer ALL questions.
        - A glossary of terms is located at the end of the application.
3. For equipment providers who currently participate in Connected Solutions, equipment must be able to integrate with Distributed Energy Resource Management System (DERMS) platform before projects are approved.
4. Submit the application and supporting documents via email to EnergyStorageSolutions@eversource.com (for Eversource) or EnergyStorageSolutions@uinet.com (for United Illuminating), as applicable.

BESS MANUFACTURER INFORMATION

BESS Manufacturer must submit the request.

BESS MANUFACTURER INFORMATION
BESS Manufacturer Name:
Contact Name: _____(First Name) _____(Last Name)
Address: _____(Street) _____(City), _____ (State) _____ (Zip)
Phone Number:
Email Address:

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BESS MANUFACTURER INFORMATION (CONTINUED)

Currently, the BESS Manufacturer has equipment listed on the Connecticut Energy Storage Solutions, Program Equipment List: Yes ❒ No ❒

If yes, list approved equipment.

1. _____ (Model Number) _____(Approval Date)

   Does the equipment currently have approved integration into the Electric Distribution Company's (EDC) DERMS platform?

   Yes ❒ No ❒

2. _____ (Model Number) _____(Approval Date)

   Does the equipment currently have approved integration into the EDC's DERMS platform?

   Yes ❒ No ❒

   **If needed, attach/list additional approved systems.*

Update BESS Manufacturer Name of Current Listing(s) (if different) than above name:

Yes ❒ No ❒

BESS Manufacturer (listing prior to this application): _____

Request Type: Revise ❒ Add ❒

Reason for Revision (or indicate N/A):

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BATTERY ENERGY STORAGE SYSTEM (BESS) INFORMATION

BATTERY ENERGY STORAGE SYSTEM (BESS) INFORMATION	
New or Existing? ❒ New ❒ Existing *(For Updating Purposes)*	
Residential or Commercial Class Equipment? ❒ Residential ❒ Commercial ❒ Both (Residential & Commercial)	
Is the proposed equipment commercially available? ❒ YES ❒ NO _____ (Date equipment will be commercially available)	
Complete the Section Below for BESS.	
BESS Model Number	
Description	
Nameplate Power (kW)	_____ kW
Nameplate Energy Capacity (kWh)	_____ kWh
Maximum Continuous Discharge Rate (kW)	_____ kW
Nominal Voltage (Vac)	_____ Vac
Optional: Inverter Approval* (Must be submitted in conjunction with ESS)	Model Number: _____ Single or Multi Phase: ❒ Single Phase ❒ Multi Phase Output Voltage (V): _____V Maximum Continuous Current (A): _____A Maximum Continuous Power (kVA): _____kVA * Consideration for substitution of other inverters to be approved and used with the BESS.

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ELIGIBILITY CRITERIA

It is important to determine if a BESS Manufacturer's equipment 1) transmits data to the appropriate DERMS platform and 2) meets UL 9540 Safety certification requirements.

Responses to the questions below will determine if a system meets the eligibility requirements.

Complete the questions based on the system you wish for consideration. Only submit one system per application.

Attach proof of UL 9540 Certification and if available, UL 1741 SA Certification (with reference to IEEE 1547-2018 2nd ed.).

For residential batteries that are currently eligible to move forward with DERMS integration, the BESS Manufacturer may provide secure FTP files up to July 1, 2022 if their integration process is not completed for a commercial operation date prior to July 1, 2022. If integration is not completed by July 1, 2022, no additional BESS projects using the proposed technology will be approved until existing ESS BESS are fully integrated.

ELIGIBILITY CRITERIA - COMMUNICATION		
Part 1. *Select the best statement that describes the status of the BESS' communication.*		
	Yes System currently meets the requirement	**No** System does NOT meet the requirement
Can the system receive a control signal from a remote management system or DERMS and pass that control signal to the asset at the customer site?	❒	❒
As part of the control signal, can the system at a minimum communicate on a per event basis, start time, end time, and magnitude of discharge?	❒	❒
Can the system dispatch and cancel/override an event if it receives notification from a DERMS provider?	❒	❒
Can the system measure and store 15-minute interval data (shorter intervals allowed) for all customer devices for duration of the event?	❒	❒
Does the BESS Manufacturer use API or Open ADR or acceptable protocols (as determined by DERMS)?	❒	❒
Part 2. *Fill-in a response to each question.*		
How frequently is the data measured or stored for all customer devices? _____		
What is the data retention in terms of number of days or limit on BESS? _____ What is the data retention in terms of number of days or limit on cloud data? _____		

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ELIGIBILITY CRITERIA — COMMUNICATION (CONTINUED)		
Part 3. *Select the response that best describes your commitment to BESS' communication.*		
Is the company willing to commit to developing a communication pathway at their own expense to the DERMS platform either through an API integration or via certified OpenADR 2.0b?	Yes ❒	No ❒

ELIGIBILITY CRITERIA - UL 9540 SAFETY CERTIFICATION		
Is the test lab a NRTL recognized by the Occupational Safety and Health Administration (OSHA)?	Yes ❒	No ❒
Is the UL 9540 certificate of compliance (or Authorization to Mark) from a NRTL and for the requested equipment model number(s)?	Yes ❒	No ❒
What edition of the UL 9540 standard is the equipment certified to?	Edition: _____	
Was the test equipment calibrated when the test was performed?	Yes ❒	No ❒
Is a specification sheet submitted for the requested model number?	Yes ❒	No ❒

ELIGIBILITY CRITERIA - UL 1741 SA CERTIFICATION (REF IEEE 1547-2018 2ND ED)**		
Is the test lab a NRTL whose Scope of Recognition under OSHA includes UL 1741 SA?	Yes ❒	No ❒
Identify the equipment that is certified to UL 1741 SA. Equipment: _____		
Was the Volt-Var curve tested with *reactive power priority* enabled during testing in accordance with UL 1741 SA, Volt-Var (AS13)?	Yes ❒	No ❒
In which submitted document(s) does the *NRTL verify* that the Volt-Var test (SA13) was done with *reactive power priority* enabled?	Document: _____	Page: _____
Did the testing for UL 1741 SA include Frequency-Watt (SA14) and Volt-Watt (SA15) test procedures?	Yes ❒	No ❒
Did the testing for UL 1741 SA include Disable Permit Service (SA17) and Limit Active Power (SA18) test procedures?	Yes ❒	No ❒

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ELIGIBILITY CRITERIA - UL 1741 SA CERTIFICATION (REF IEEE 1547-2018 2ND ED)** (CONTINUED)		
Was the test equipment calibrated when the test was performed?	Yes ❒	No ❒
Have test report(s) and for each model number been submitted to the EDCs?	Yes ❒	No ❒
** Include supporting UL 1741 SA Certification documentation with application.		

WHAT HAPPENS NEXT?

1. After the *New Technologies Request Application* and supporting documents are submitted, you will receive an email confirmation and status update as your application is reviewed.
2. The EDCs will provide your reviewed application to the DERMS platform providers for verification as an acceptable technology capable of the integration efforts.
3. The EDCs will inform you of the decision, along with comments, to approve or deny your system and participation as a BESS Manufacturer into the Program.
4. Application resubmittal guidelines are stated in the *Program Guidelines for Energy Storage Solutions*.
5. If you would like to obtain more information, please email EnergyStorageSolutions@eversource.com or EnergyStorageSolutions@uinet.com.

ADDITIONAL INFORMATION

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Please provide, as an attachment, any additional information you believe is required to support this application for technology approval.

This program is overseen by the Public Utilities Regulatory Authority (PURA), is paid for by ratepayers, and is administered by the Green Bank, Eversource, and UI.

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GLOSSARY

GLOSSARY OF TERMS

TERM	DEFINITION
API	Application Programming Interface, which is a software intermediary that allows two applications to talk to each other
Eligible Equipment List	The Eligible Equipment List includes equipment that is capable of integrating with the DERMS but must complete integration to be considered approved equipment.
BESS Manufacturer	Battery Energy Storage System as described in the Program Manual
DERMS	The "Distributed Energy Management System" is the platform utilized by the EDCs to notify the Operators of scheduled events requiring BESS actions
EDCs	Electric Distribution Companies (Eversource Energy and United Illuminating)
OpenADR	Open Automated Demand Response, provides a non-proprietary, open standardized DR interface that allows electricity providers to communicate DR signals directly to existing customers using a common language and existing communications
Program	Energy Storage Solutions is a new program offered through the Program Administrators
Program Administrators	Collectively the Connecticut Green Bank, Eversource Energy, and United Illuminating Company
UL 1741 SA	Supplement A for United Laboratories 1741, Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources
UL 9540	As Specified in the National Fire Protection Association (NFPA) 855, United Laboratory 9540 certifies the safety requirements for Battery Energy Storage Systems