Docket No. 26-08-07

Docket No. 17-03-12RE05, Compliance Order No. 4: Required Documentation for
Innovative Energy Solutions Program Cycle 5

Introduction

On October 2, 2019, the Connecticut Public Utilities Regulatory Authority ("PURA") issued its Equitable Modern Grid Decision outlining PURA's framework for realizing an equitable modern electric grid in Connecticut.[1] On October 8, 2019, PURA initiated Docket No. 17-12-03RE05, *PURA Investigation into Distribution System Planning of the Electric Distribution Companies—Innovative Technology Applications and Programs* ("Innovation Pilots"), to investigate a prospective structure to support the ongoing development of innovative technology applications and programs.

On March 30, 2022, PURA issued its Final Decision ("Decision") in Docket No. 17-12-03RE05, establishing the Innovative Energy Solutions Program ("IES Program" or "Program") as part of its Equitable Modern Grid initiative to encourage the development of novel programs, technologies, products, and services.[2] The Decision outlines the IES Program's design, structure, and governance and established four goals for the Program:

1. Support (or remove barriers to) the growth of Connecticut's green economy;
2. Enable a cost-effective, economy-wide transition to a decarbonized future;
3. Enhance customers' access to a more resilient, reliable, and secure commodity; and
4. Advance the ongoing energy affordability dialogue in the state, particularly in underserved communities.

The Decision's Order No. 4[3] required the Electric Distribution Companies ("EDCs"), collectively, The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") and Avangrid subsidiary, The United Illuminating Company ("UI"), to submit as compliance an EDC IES Report for IES Program

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1 PURA Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies, Interim Decision (Oct. 2, 2019). Please see PURA's Framework for an Equitable Modern Grid webpage for all Equitable Modern Grid filings.

2 PURA Docket No. 17-12-03RE05, PURA Investigation into Distribution System Planning of the Electric Distribution Companies—Innovative Technology Applications and Programs, Decision (Mar. 30, 2022).

3 PURA Docket No. 17-12-03RE05, PURA Investigation into Distribution System Planning of the Electric Distribution Companies, Final Decision, March 30, 2022, Order No. 4, p. 35.

Cycle 1 by September 16, 2022.[4] Attachment B of the Decision, Figure 16—Summary of EDC Requirements, requires the EDCs to jointly file an updated EDC IES Report three months prior to the beginning of each Program cycle.[5]

On January 1, 2027, IES Program Cycle 5 will begin. The EDCs hereby submit as compliance with Order No. 4 and Attachment B of the Decision, the following IES Program Cycle 5 documentation:

- Grid needs assessment;
- Customer needs assessment;
- Existing Program inventory;
- Preferred focus areas; and
- Any other information required of the EDCs for IES Program Cycle 5.

Section One: Grid Needs Assessment

This section illustrates the current and future state of the power grid in Connecticut, as shaped by parallel efforts like Distributed Energy Resources ("DER") integration and alignment with PURA's resilience and reliability goals. For the EDCs, the integration of DERs with building and transportation electrification present both opportunities and challenges. While the EDCs agree that DERs have ample potential to support the grid, the technologies (e.g., hardware, software, algorithms, etc.) needed to accurately measure, control, and remunerate these participants remain largely open ended, as does the question of equity and impact to non-participating customers.

A notable challenge for the EDCs is to find novel tariffs and communications to encourage customer-owned assets to integrate and mitigate issues for a mutually beneficial outcome that can potentially reduce the need for costly system upgrades while achieving customer needs (e.g., vehicle departure times and acceptable thermostat settings). Ultimately, this means the EDCs must establish a way to

[4] PURA Docket No. 22-08-07, Connecticut Electric Distribution Companies' Innovation Pilots Framework, Compliance Order No. 4, Documentation for Innovative Energy Solutions Program 23-e 1, (Sep. 16, 2022).

[5] PURA Docket No. 17-12-03RE05, Innovative Energy Solutions Program Design Document, Mar. 30, 2022, Attachment B, Figure 16-Summary of EDC Requirements, p. 46.

properly obtain, analyze, forecast, and communicate data, as well as ways to quantify the various benefits of each participant's actions to the grid while prioritizing solutions that generate multiple benefits.

The following are data publications that both EDCs separately provide, containing valuable grid needs information:

- **Docket No. 17-12-03RE03.** Per Order No. 8 of Docket No. 17-12-03RE03,[6] the EDCs submit annually, for PURA's review and approval, a map of circuits that meet the grid edge criteria. Specifically, "grid edge" is defined as (1) the top 10 percent of circuits with the highest number of outages per customer during major storms since July 1, 2012, and (2) the top 10 percent of circuits with the longest outages due to major storms since July 1, 2012. This information is shared to assist potential participants and battery providers with prioritization efforts.
- **Docket No. 17-12-03RE08.** As part of this docket, the EDCs submit a detailed historical storm analysis report detailing the number of events at each event level (1-5) and costs incurred per category, in addition to other information. The EDCs also provide information on the age of various types of electrical equipment across their individual Connecticut footprints. The EDCs also collect and provide two customer-centric performance metrics by circuit: (1) Customers Experiencing Multiple Interruptions ("CEMI") and (2) Customers Experiencing Long Interruption Durations ("CELID").[7]

1.1 Eversource

Eversource currently provides a wide array of information to PURA and other stakeholders through various mechanisms. As part of the Docket No. 17-12-03RE05: Innovation Pilots docket, Eversource has

[6] PURA, Docket No. 17-12-03RE03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Electric Storage, Decision, Jul. 28, 2021, Order No. 8, p. 52.

[7] See data response Q-LF-002 to Docket No. 17-12-03RE08 that states the EDCs will provide their EDC's 2021 CEMI and CELID performance measurements by circuit.

compiled a list of information provided through each mechanism and simplified some of the information reporting formats.

- **CT DER Queue.** The CT DER Queue provides a live overview of queued DERs in Connecticut.

- **Hosting Capacity Maps.** Eversource publicly provides system information on its parcel-based Hosting Capacity Maps including substation hosting capacity, operating voltages, bulk substation rating ("MVA"), DER online, and DER in queue for each circuit.[8] Eversource shares this data with the intent of making DER providers aware of where the distribution system can accommodate further distribution generation without requiring significant infrastructure upgrades. Eversource shares this data with the intent of making DER providers aware of where the distribution system can accommodate further distribution generation without requiring significant infrastructure upgrades.

- **Transmission and Distribution Reliability Performance ("TDRP") Report.** Through its annual TDRP Report, Eversource publicly provides system reliability metrics for the preceding four years through the System Average Interruption Duration Index ("SAIDI"), the System Average Interruption Frequency Index ("SAIFI"), and the Customer Average Interruption Duration Index ("CAIDI"), as well as the target value for each metric for the running year. The SAIDI and SAIFI, inclusive of major storms, are part of the TDRP Report and attempt to quantify system resilience.

  The TDRP Report also presents the percentage of outages per cause and enumerates the planned and ongoing resilience and reliability projects employed with quantitative indicators of program completion as available (e.g., devices installed, miles addressed, budget spent year to date). As outlined below, the EDC's filed TDRP Report provides a comprehensive system overview for public information on the system.

  Attachment 1 SAIDI, SAIFI, and CAIDI (Goals and Actuals) by Area Work Center for the past five years

[8] Publicly accessible circuit-based hosting capacity maps have discontinued and replaced with parcel-based maps.

Appendix 1	Causes of outages over past five years, by cause (e.g., lightning, vehicle accident, etc.), number of interruptions, customer minutes interrupted, and total customers interrupted, by region
Appendix 8	Substation data: SAIDI, SAIFI, CAIDI, by substation, voltage, and circuit
Appendix 9	Transmission System data: 69 kilovolt ("kV") circuit miles, 115 kV circuit miles, 345 kV circuit miles, by non-tree overhead wire and underground, distribution system data: 5 kV circuit miles, 15 kV circuit miles, 25 kV circuit miles, 35 kV circuit miles, by tree overhead wire, aerial cable, spacer cable, other overhead, and underground
Appendix 11	SAIDI worst 100 circuit list, by division, circuit, and SAIDI metric for past five years
Appendix 13	SAIDI/SAIFI 4 percent worst circuit list, circuit code and rank (by SAIFI)
Appendix 14	Reliability Corrective Action Plans, for top 100 circuit list, circuit code, and descriptive action
Appendix 17	Circuits experiencing multiple outages

Eversource has also included the following documents to this filing:

ES-Attachment 1	Historic Interconnections
ES-Attachment 2	2026 TDRP Report
ES-Attachment 3	Substation Feeder List
ES-Attachment 4	CEMI and CELID Data
ES-Attachment 5	Eversource Grid Modernization Cyber Security Plan

1.2 United Illuminating

UI provides extensive system data which details the system, its performance, and ongoing improvements in order to provide critical information and in turn, uncover opportunities for participants in RE05 IES Program. The EDC's DER Queue and Hosting Capacity Maps show areas of opportunity for DER integration and highlight areas where DERs could fulfill system upgrade needs. The Underserved Communities and Load Capacity Map helps identify opportunities for investments to underserved populations, as well as helping identify prudent electric vehicle ("EV") charging stations and level 2 chargers that could be interconnected with minimal system investment.

- **CT DER Queue.** Provides an overview of queued DERs in Connecticut.
- **Hosting Capacity Maps.** The EDC also publicly provides system information on its Hosting Capacity Maps including substation hosting capacity, operating voltages, bulk substation rating (MVA), DER online and in queue for each circuit.[9] UI shares this data with the intent of making DER providers aware of where the distribution system can accommodate further distribute generation without requiring significant infrastructure upgrades. Similarly, the EDC also provides an Underserved Community and Load Capacity Map that lists remaining available load capacity of distribution circuits to help developers identify where Level 2 and Direct Current Fast Charging ("DCFC") stations can likely be interconnected with minimal system reinforcement.
- **2024 Clean and Renewable Energy Report.** As part of 24-08-01, the 2024 Clean and Renewable Energy Report (see UI-Attachment 2) details the rapid rate of interconnections, success of existing Connecticut DER programs, and state-specific progress toward decarbonization.
- **UI Transmission and Distribution System Annual Report for 2025**. The UI-Attachment 1 / Docket No. 86-12-03 and 24-08-09 compliance filing provides an in-depth overview of the existing system. The TDRP Report (see UI-Attachment 1) provides an official record of the EDC's system performance to shed light on further opportunities. As outlined below, the EDC's filed TDRP Report provides a comprehensive system overview for public information on the system.

[9] UI also shares a Site Hosting Map for EV chargers (last updated June 2023).

Appendix 4	Transmission and distribution system miles per construction type and voltage level
Appendix 10	Excel file of substation/circuit reliability circuit data—2024
Appendix 11	Five-year outage by cause summary
Appendix 14	Tier 1 worst performing circuits
Appendix 15	Tier 2 worst performing circuits
Appendix 17	Status of previous corrective actions

Section 2: Customer Needs Assessment

Across both EDCs, customers value power quality and reliability as well as affordability. Connecticut customers desire fewer and shorter outages, greater ability to manage and measure their usage, and improved affordability. See additional details below about each EDC's customer needs assessment.

2.1 Eversource

Eversource's "Voice of the Customer" team is tasked with regularly evaluating customer opinions and sentiments toward Eversource in a variety of areas, such as outage experiences, the billing and payment process, and views on the price of energy. The Voice of the Customer team achieves this through several channels, including standardized internal customer satisfaction surveys, on-demand quantitative and qualitative research, analysis of results gathered in the J.D. Power Electric Utility Residential study, and through the Eversource Advisory Group, the Company's online community. Through these channels, the Voice of the Customer team is able to identify potential gaps in customer needs and conduct additional specific research to develop and refine programs and offerings to fill those gaps.

Eversource leverages the J.D. Power Electric Residential Study, an independent industry-leading source of research, data, and insights, to further assess customer needs and satisfaction drivers. The study contains eight dimensions, weighted (based on derived customer importance) and calculated into an Overall Customer Satisfaction Index. The factors include: (1) Total Monthly Cost; (2) Trust; (3) Safety &

Reliability; (4) Ease of Doing Business; (5) Information Provided; (6) People; (7) Problem Resolution; and (8) Digital Channels.

Affordability concerns have been the dominant driver of satisfaction among customers for the last several years. In terms of affordability, it is important for customers to have a clear understanding of what they are paying for (supply, local delivery, transmission, and public benefits) and an ability to manage usage through energy-saving tools in order to derive value in what they are paying. There is opportunity to better help customers understand their bill and increase customer awareness of Connecticut's conservation and load management ("C&LM") programs that are designed to help lower their usage. There is a correlation between Eversource's C&LM programs and overall customer satisfaction. J.D. Power research shows customers who are aware of and have participated in C&LM programs are more satisfied with Eversource. Therefore, customers have an increasing need for more usage management capabilities to understand their usage on a timelier (daily) basis. With more real-time usage insights, customers have more control in how they use energy and would have the ability to course correct throughout the billing period to help drive down costs.

Similar to the J.D. Power results, Eversource's internal research shows that the EDC's efforts to help customers manage their monthly usage and provide fair pricing are the most correlated with overall satisfaction. There is also a correlation among Connecticut customers that during peak usage periods, their ease of understanding different charges on their bill go down. This subset of customers has a much lower overall satisfaction rating than customers who find their bill easy to understand. Therefore, presenting the opportunity to help customers understand their bill better and communicating the value-add of providing safe and reliable electric service is important in driving customer satisfaction.

To accomplish this, Eversource has made several enhancements over recent years, such as redesigning customer bills to provide greater transparency and launching additional education campaigns to enhance bill understanding. To further assist customers, Eversource conducts extensive testing on all communications regarding assistance programs to ensure ease of understanding. Eversource also participates in the Energy Affordability Customer Communications Working Group, where further suggestions for communication enhancements are gathered from stakeholders within Connecticut.

While affordability has tended to be a dominant concern among customers, providing reliable service remains an expected responsibility of Eversource from customers. Results from internal research show that providing reliable service is the most positively impactful customer sentiment theme for customer satisfaction. Research following either blue-sky outages or storms indicates that restoring power quickly and providing proactive communications are the most important drivers of satisfaction. Eversource has implemented enhanced communication strategies, particularly for storm events, to keep customers better informed during their outage.

2.2 United Illuminating

The Customer Needs Assessment provides a view of UI's system and offerings from the perspective of the customer. Avangrid also uses J.D. Power, an independent industry-leading research, data, and analysis provider. The J.D. Power study looks at numerous utilities across the country to determine how customers perceive them. UI uses the study's information not only to compare their performance against those of their peers but also to find out what customers want. Internally at UI, they try to capture what customers want by listening to "The Voice of the Customer." This methodology allows the customers themselves to tell the EDC what they want. UI has used this information to make a number of enhancements including providing Outage Alerts, Energy Analyzer, Understand Your Usage, and Account Alerts.

Based on the research, the two largest customer needs are Power Quality & Reliability and Price. J.D. Power's research also shows Power Quality & Reliability was the top response by 25 percent of UI customers, while Price represented 20 percent of customer responses. When looking at customer's rankings for Power Quality & Reliability, the *UI Transmission and Distribution System Annual Report for 2024* (see UI-Attachment 1) provides good contextual information surrounding performance. On the topic of Price, as of the year 2020, the cost of electricity in Connecticut ranked amongst the highest in the contiguous 48 states; however, there is a correlation between customer satisfaction and use of UI's Energy Analyzer tool. This correlation shows the more customers can understand their usage, the more satisfied they are.

Power Quality & Reliability present several opportunities for innovation in the form of new devices, sensing equipment and system hardening assets. The opportunities here are infinite from communication and data devices to repurposing existing technologies to address power quality. This need also allows for customer communication in real-time activities taking place that could affect the power quality of their service as well as fellow customers located on the same feed or substation. In addition, this could present opportunities for two-way power flow to be utilized to address voltage, feeder loading, or even outages. Smart technologies could sense and call for specific needs requiring curtailment or customers to export generated or stored energy. Financial incentives could come into play based on the actions being asked.

Price is a challenging topic but offers opportunity. UI's suite of C&LM programs directly address the consumption numbers by aiding customers in conversion to more efficient equipment which lowers overall consumption. One need that could aid price sensitivity in a decoupled environment would be added load through either customer acquisition or alternative uses. To entice others to set up business in the State of Connecticut, a potential novel economic development rate tariff structure could potentially spur businesses to consider relocation of electric intensive businesses to Connecticut. In Docket 22-08-08, UI proposes a more traditional economic development incentive through the "Economic Development Rate-Rider EDR Tariffs" which provides five years of discounted rates based on dollar volume of capital investment or quantity of increased employees. Ultimately a novel tariff could offer financial incentives to use electricity to power different sectors like transportation or even for everyday needs like heat or hot water.

Section 3: Existing Program Inventory

The EDCs have developed and administered a number of programs aimed at addressing customer needs, including C&LM, electric vehicle ("EV"), and storage programs (collectively, "Existing Programs"). The EDCs' administration of C&LM programs address a wide cross section of offerings aimed at helping businesses and residents alike use energy more efficiently. The EDCs' administration of EV programs promotes EV chargers and EV Make Ready Work to drive the continued electrification of Connecticut's transportation system, including battery storage and solar.

To ensure innovators do not propose a project already completed or administered, the EDCs have compiled a list of ongoing Existing Program projects below. In cases where a proposed project touches on the items referenced, the EDCs strongly encourage innovators to look into the Existing Program offerings further and highlight how their proposed project differs from and will build on the learnings of programs/initiatives already undertaken by the EDCs. The following section lists the Existing Programs available in Connecticut.

3.1 Connecticut Programs

3.1.1 Financing and Rates

Flexible Payment Plans	The EDCs each have an extended payment plan allowing several months to pay a past due balance, a Matching Payment Program[10] ("MPP"), and arrearage forgiveness programs where qualifying customers can reduce and/or eliminate their past due balances by making their monthly payments.
Energy Conservation Loan Program	These emergency loans are available for the purchase of high efficiency boilers and furnaces.
Micro Loan Program	The program offers zero percent interest loans for customers who install high efficiency measures recommended through the Home Energy Solutions^{SM} program. Measures include high efficiency insulation, heat pumps, and hot water heater equipment.
Smart-E Loans	Smart-E Loans help customers upgrade their home's energy performance including installation of high efficiency HVAC, solar photovoltaic ("PV"), EV recharging stations, and insulation.

[10] Eversource's Flexible Payment Plans include the Matching Payment Program, New Start (Eversource's arrearage forgiveness program), and an explanation of Eversource's Flexible Payment Plans. UI's Flexible Payment Plans include the Matching Payment Program and UI Bill Forgiveness Program.

3.1.2 Upfront C&LM Discounts, Incentives, and Rebates[11]

Advanced power strip rebates	Rebates offered for purchasing Tier 2 advanced power strips
Air purifier rebates	Rebates offered for purchasing ENERGY STAR® certified air purifiers
Air source heat pump incentives	Rebates offered for purchasing eligible high efficiency air source heat pumps
Electronically Commutated Motor (ECM) Boiler Circulator Pump,	Instant discount at participating distributors
Ground source heat pump rebates	Incentives for installations of qualifying ground source heat pumps
Heat recovery ventilator (Heating Fuel Type Gas, Oil, or Propane)	Instant discount for qualifying products
Home Energy Solutions - Core Services program	The rebates listed below are only available when recommended by a Home Energy Solutions program contractor: • **Advanced Duct Sealing**. Rebate offered to a Home Energy Solutions contractor for duct sealing • **Insulation.** Rebate offered (per square foot) for the installation of high efficiency insulation

[11] All C&LM programs, incentives, and rebates administered by the EDCs can be found on EnergizeCT.com.

Home Energy Solutions - Income Eligible program	No-cost home audit and incentives for comprehensive home energy upgrades for income-qualified homeowners and renters including insulation (for Home Energy Solutions-Income Eligible participants)
Multifamily Initiative	Various incentives are available for residential buildings with 5+ or more units through the Multifamily Initiative
Residential heat pump water Heater incentive	Rebate offered for the installation of qualifying ENERGY STAR certified heat pump water heater units
Residential New Construction program	Offers guidance from energy specialists and rebates based on home's Home Energy Rating System ("HERS") Index
Residential pool pump rebate	Rebates offered for the installation of ENERGY STAR certified variable-speed pool pumps
Residential triple pane window incentive	Offered for the installation of ENERGY STAR certified triple pane windows
Smart thermostats	Rebates and instant discounts are offered to residential customers for the purchase of smart thermostats at retail stores or through Eversource Savings Center or UI Smart Solutions

3.1.3 Electric Vehicle, Solar, and Battery Storage

- **CT Solar Lease.** Lease offered to reduce upfront costs of installing solar PV systems;
- **Low- and Moderate-Income Solar Energy**. Financing for installation of solar PV systems;
- **Residential Solar Hot Water**. Leases and loans available for installation of solar hot water systems;

- **Tax Credits**. Solar energy systems may qualify for tax credits that can reduce tax liability;
- **Energy Storage Solutions.** Upfront rebates and ongoing performance incentives for behind-the-meter ("BTM") battery storage systems; and
- **CT EV Program.** Upfront rebates for electric vehicle supply equipment ("EVSE") and ongoing incentives for participation in the Managed Charging Program.[12]

3.1.4 Pay for Performance

- **Demand Response.** Incentives earned for reduction of energy consumption during peak events using connected devices or through load curtailment.

3.2 Analysis and Evaluation

Independent evaluation, measurement, and verification ("EM&V") is an integral component of the Companies' energy efficiency, demand management and EV charging programs.[13] The EM&V process allows the Companies to verify program savings, estimate future savings, identify ways to improve program delivery and results, and expand the reach of program by identifying barriers to participation. EM&V studies include impact evaluations, process evaluations and market studies in the residential and commercial and industrial sectors. Final evaluation reports can be accessed using the following links:

- C&LM Program Evaluations
- Connecticut EV Infrastructure Program Cycle 1 2022-2024 EM&V Report
- Connecticut Energy Storage Solutions—Final Evaluation Report

[12] Eversource Managed Charging Program and UI's Managed Charging Program.
[13] Energy Efficiency Board website for final reports of C&LM program evaluations.

3.3 Digital Customer-Facing Offers

The Connecticut Energy Efficiency Dashboard provides high-level information regarding the C&LM programs and customer participation. The Companies offer rebates and instant discounts for the online purchase of advanced power strips, appliances, electronics, and smart thermostats (Eversource Savings Center or UI Smart Solutions).

3.4 Electric Efficiency Partners Offers

The Connecticut Electric Efficiency Partners ("EEP") program, which PURA stated has now evolved into the IES program[14], was established by Section 16-243v of the Connecticut General Statutes.[15] The primary goal of the statutory EEP program was to reduce electricity consumption through the use of demand-side technologies. By a Decision dated June 4, 2008, PURA's predecessor, the Connecticut Department of Public Utility Control, established the EEP program rules and guidelines for issuance of a certificate of public convenience and necessity to recognize eligibility as a partner, the processes for recognition of eligible technologies, and grant application.[16] The EEP program focused on enhanced demand-side management technologies that conserve electricity and reduce electric distribution customers' electric demand in the state, specifically, peak electric demand. Past approved EEP technologies included:

- Away mode setback
- Building automation control systems
- Direct digital control for HVAC systems
- Duty cycle optimization controllers for Heating, ventilating, air conditioning, and refrigeration systems ("HVACR")

[14] PURA Docket No. 17-12-03RE05, PURA Investigation into Distribution System Planning of the Electric Distribution Companies—Innovative Technology Applications and Programs, Decision (Mar. 30, 2022) at 5-6.

[15] Conn. Gen. Stat. 16-243v codified Public Act No. 07-242, An Act Concerning Electricity and Energy Efficiency, signed by Governor M. Jodi Rell on Jun. 4, 2007.

[16] Docket No. 07-06-59, DPUC Review of the Connecticut Electric Efficiency Partners Program.

- HVACR systems
- Energy saving algorithms
- Gas chillers
- Ice based thermal storage (direct expansion)
- Real-time electric meter data acquisition system (Wattifi Connect)
- Real-time energy feedback
- Real-time water use feedback
- Solar assisted air conditioning
- Water use occupancy sensed thermostat setback / away mode setback

3.5 References

- Current Energize Connecticut[SM] Residential C&LM programs
- Current and previous C&LM plans
- Previous evaluations of the C&LM programs (including market saturation and potential studies)
- Statewide Energy Efficiency Dashboard, which provides high-level program information
- EEP offerings (currently suspended)

Section 4: Preferred Focus Areas

Based on the EDCs' grid and customer needs, here are a sample of focus areas that the EDCs and developers may consider for the IES Program in the future. These are not meant to be limiting or exclusive and do not represent proposals by the EDCs.

- Clean renewable energy projects:
    - Building renewable generation utilization
    - Hot water technologies
- Beneficial building electrification projects (not already covered by C&LM programs, see section 3.1) including:
    - High efficiency heating and cooling technologies (e.g., residential air and ground source heat pumps)
    - High efficiency hot water technologies (e.g., residential heat pump water heaters)
    - Insulation and air sealing
    - Whole home energy use optimization
    - Building management systems
    - Decarbonization strategies for manufacturing and commercial processes
- Transportation electrification projects (not already covered by other Connecticut programs, see section 3) including:
    - Co-located EV charging with battery storage
    - Electrified ride share
    - Fleet electrification technologies
    - Solutions around uptime and reliability
    - Innovative managed charging solutions beyond single-family residential

Section 5: Market Outreach Plan

During each IES cycle initiation, the EDCs will conduct outreach to attract third-party developers. The EDCs have two key roles with market outreach:

1) Support the IES Program Administrator in general market outreach; and

2) Conduct market outreach to develop Pathway 3/Phase 1 proposals.

The EDCs expect that the Program Administrator will be generally responsible for the market outreach for the IES Program. The EDCs will support the Program Administrator by leveraging existing EDC channels. This includes the Announcements section and IES Program page, the IES Program page on the respective EDC websites, Energize CT social media accounts, and EDC contractor newsletters, as available.

Pathway 3 Market Outreach includes communications to and for groups and associations most likely to attract third-party developers proposing IES projects as well as some broader outreach to maximize reach. Broad outreach channels to be used for recruitment and submission of innovation technologies, ideas and partners may include:

- Notice on EnergizeCT.com and EDC websites
- Posts on EnergizeCT.com and EDC social media accounts, as well as the UI newsletter
- A joint press release pitched to both broad and energy industry publications
- Public notice advertisements

In addition to the outreach channels above, the EDCs will conduct outreach to groups and associations that the target audience is likely to follow and/or subscribe to with a request to disseminate information regarding the program including webinar details. The EDCs will provide these organizations with newsletter and social media copy that they can easily share with their constituents and members via their preferred, available channel(s). These groups and associations may include

- American Council for an Energy-Efficient Economy ("ACEEE")
- American Public Power Association
- Association of Energy Engineers ("AEE")

- Association of Energy Service Professionals ("AESP")
- Chambers of Commerce
- Connecticut Green Bank
- Connecticut Green Building Council
- Connecticut Innovations
- Energy Efficiency Board
- Grid Forward
- GridWise Alliance
- IRENA
- National Commission on Grid Resilience
- New England Women in Energy
- Northeast Energy Efficiency Partnership ("NEEP")
- Organizations that have submitted Research, Development and Demonstration ("RD&D") proposals via the Energy Efficiency Board
- Smart Electric Power Association
- UCONN Sustainability
- Yale University Climate Connections

The EDCs will also consider posting on RFP Bid Boards, as available, relevant, and applicable. For Pathway 3, the EDCs will select partnerships with developers for Phase 1 proposals. The process will include:

- **Outreach to developers**. Through channels and with lists described above, the EDCs will inform developers of opportunities to propose ideas to Eversource for Pathway 3 projects.
- **Request for information**. Through this outreach, the EDCs will issue a streamlined Request for Information ("RFI") for developers to submit basic proposal information to the EDCs including the developer's firm name, a description of the proposed idea, the anticipated value to Connecticut customers, rationale for its alignment with the IES Program framework, and the expected roles of both the developer, and EDC.
- **Meetings**. Based on the RFI, the EDCs will schedule meetings with developers that submit ideas within scope of the IES Program framework and are potentially feasible for an EDC/developer partnership (e.g., the EDC can conduct its defined role, the idea is specific enough to move forward to Phase 1). The EDCs may request written follow-up information and/or additional meetings to evolve or adjust the idea into a feasible Pathway 3 project.
- **Scoring.** EDC staff will score the ideas and feasibility based on multiple metrics including quality of the idea, value to the EDCs and customers, feasibility of implementation for the EDC, qualifications of the proposing company/team.
- **Decision**. Based on the above scoring, the EDCs will decide whether to move forward in the current cycle with each developer. The EDCs prefer to move forward with multiple Pathway 3 projects into Phase 2.

Section 6: Project Integration Plan

The EDCs will support the integration and interconnection of appropriate projects deemed safe for deployment within the IES Program. All pilot proposals or projects requiring interconnection will be required to follow the PURA-approved process. For example, on April 8, 2018, Eversource and UI jointly

submitted guidelines in Docket No. 03-01-15RE04 to assist power-generating customers wishing to interconnect with the Electric Power System ("EPS"). These guidelines are designed to ensure that all generator interconnections to the EPS do not adversely impact the reliability of the EPS.

The EDCs are bound by the PURA-approved Guidelines for Interconnection, which state that "all customers will be treated fairly and uniformly, on a first-come, first-serve basis, without preferential treatment and in a non-discriminatory manner." Based on this requirement, all interconnection applications are to be reviewed in the order in which they are received. During the IES Market Outreach, PURA, the Innovation Advisory Council, and the EDCs will remind developers to be cognizant of the utility interconnection process timelines, so that the developers can plan their project timelines accordingly.

For the IES application process, each EDC will have a separate intake process to facilitate these pilot projects through a review and approval process, which may include coordination across multiple established programs and processes (e.g., procurement, IT security, interconnection, C&LM, etc.). The EDCs' existing interconnection process is designed to facilitate standard generator projects and equipment as best as possible; however, this process could be cumbersome for any non-standard projects and equipment proposed in pilot projects. The pilot project process will be tailored where necessary, which will enable the EDCs to remain flexible and best provide prioritization when appropriate without disrupting or conflicting with existing operational processes.

While the EDCs anticipate that some innovative projects can be evaluated through the existing processes and other may need a distinct evaluation, the EDCs plan to follow existing processes in place for initial submission and approval of projects proposing to interface with their control systems. During the solicitation phase, third-party developers must be made aware that any project or asset proposing to connect to the EDC's control systems must meet all North American Reliability Corporation ("NERC") compliance requirements and conform to all cybersecurity needs prior to such interface. Those requirements will be identified using existing processes to determine integration needs.

6.1 Eversource

Eversource anticipates that project integration will be an iterative process that, depending on the pathways selected, begins during the initial project development or review phase to assess the innovation's potential impacts on and interactions with the existing electric grid or company systems and plan accordingly.

The Eversource representative on the Innovation Advisory Council will serve as the primary liaison between innovators and the Company, helping connect project teams with appropriate documentation, guidance materials, and subject matter experts necessary for successful integration planning. Depending on the complexity and risk of the innovation, an initial pilot phase within a limited test environment may be required prior to deployment at scale. Testing of the innovation in a limited environment in advance of at-scale deployment will help minimize unintended impacts to existing systems or processes.

6.2 United Illuminating

The UI Project Integration Plan will follow pre-established procedures to allow customers to integrate their innovations with the electric grid or company systems. The Manager – Clean Energy Policy will act as a liaison to connect innovators with the correct documentation, guides, and subject matter experts to ensure efficient and timely integration. While it is unknown what innovations will arise from the IES Program, UI will have a streamlined process to integrate the innovation for piloting. If the innovation is electric system hardware intended to go onto the UI grid, the UI Guidebook of Requirements (Integration Plan Appendix A) will clearly lay out and define standards and policies that would need to be followed. To interconnect a generator, UI has a pre-established PURA approved Interconnection process (Integration Plan Appendix B).

If the innovation is intended to work with UI's billing or software systems, the EDC would intend to minimize the cost and impact on rate payers by utilizing a testing environment. This testing environment would look, feel, and operate identically to UI's system of record. The testing environment would protect against negative disruption to the systems of record should the innovation "fail (fast)" or have an unintended consequence. The UI Data Privacy and Security Programs will provide guidance to ensure

safe and secure integration that keeps the EDC's customers and systems safe, while allowing UI to test the innovations. Similar to interconnection guidelines, the EDC recommends sharing information regarding their Data Privacy and Security frameworks early in the process to ensure potential submitters are aware of potential considerations in the development of their proposals.

UI has included the following documents as attachments:

- UI-Attachment 3: **UI Guidebook of Requirements**
- UI-Attachment 4a: **Guidelines for Generator Interconnection**
- UI-Attachment 4b: **Generator Interconnection Technical Requirements**

Section 7: Data Privacy and Security Plan

For Docket No. 17-12-03RE02, *PURA Investigation into Distribution System Planning of the Electric Distribution Companies - Advanced Metering Infrastructure's Data Access and Privacy Policy*, the EDCs created a Joint Connecticut Electric Distribution Companies Cybersecurity and Privacy Framework ("Framework").[17] The Framework focuses on ensuring adequate attention is given to cybersecurity and customer privacy challenges to address new and emerging threats. This Framework provides a common language for understanding and managing cybersecurity risk and incorporates cybersecurity best practices and industry standards consistent with leading cybersecurity authorities.

The Framework consists of six main parts:

- Information security management;
- Risk methodology;
- Security design principles;

[17] See Docket No. 17-12-03RE02, UI Correspondence dated Dec. 17, 2021, Attachment 1 – Joint Privacy Framework for CT; Docket No. 17-12-03RE02, Eversource Correspondence dated Dec. 17, 2021, Joint Privacy Framework for CT.

- Cybersecurity capabilities to manage risk;
- Privacy management; and
- Vendor assurance.

Section 2.6 of the Framework outlines the importance of protecting against supply chain threats to information systems and assets. A comprehensive strategy for protecting against supply chain risks includes:

- Performing adequate due diligence and risk assessment of potential new vendors;
- Validation of vendor security controls to ensure the design and operating effectiveness to mitigate the risks identified appropriately by the respective EDC;
- Periodic monitoring of the vendor contract to ensure compliance to the EDC agreed terms and conditions;
- Enforcing policy and procedure compliance;
- Ensuring the protection of customer information at rest and in motion;
- Providing methods for allowing customer opt-in prior to releasing any customer information unrelated to the normal delivery of energy; and
- Appropriate security terms within legal agreements with third parties that require that the third parties have adequate security and privacy controls to protect the EDCs' customer information.

In terms of data compilation and transfer, the EDCs have a variety of tools used to provide suppliers with energy-related data. Where possible, we use a combination of customer authorization and Electronic Data Interface ("EDI") transfers. For developers that require access to customer energy data, they would enter into a Supplier Services Agreement with each Company that specifies all required protocols and security measures. Due to the Connecticut General Assembly's recent passage of consumer protection

law legislation,[18] the EDCs will continue to review their Framework to ensure the protection of customer information at rest and in motion.

7.1 Eversource

In addition to the above, referenced information, Eversource created a Grid Modernization Cyber Security Plan (Docket No. 17-12-03RE02).[19] The plan summarizes how Eversource's Cybersecurity Program enhances the security of grid modernization technologies and data. Eversource's overall approach to cybersecurity follows in principle, the National Institute of Standards and Technology ("NIST") Guidelines for Smart Grid Cyber Security, NISTIR 7628, and the DataGuard Energy Data Privacy Program, developed by the US Department of Energy. Adherence to these standards ensures that security measures and risk management efforts align appropriately with grid modernization processes and technologies under Eversource's responsibility. Eversource's Grid Modernization Cyber Security Plan includes the following topics:

- Risk management;
- Cybersecurity technical requirements;
- Data privacy;
- Threat and vulnerability management;
- Information sharing and communications;
- Event and incidence response, continuity of operations;
- Supply chain and external dependencies management;

[18] See Connecticut General Assembly, SB 6, An Act Concerning Personal Data Privacy and Online Monitoring, effective Jul. 1, 2023.

[19] See Docket No. 17-12-03RE02, Eversource Correspondence dated Dec. 17, 2021, Cyber Security Plan Final July 2020 ES GridMod.

- Workforce management; and
- Cybersecurity program management.

Eversource shares its privacy policy with its customers[20] which sets forth the EDC's policies concerning the information it collects and uses and the measures Eversource takes to protect and limit access to customer information. The document includes information such as:

- What information we collect and how we collect it;
- How we use information we collect;
- How do we share your information;
- How we safeguard your information;
- How you can safeguard your information;
- How you can control your information and how we communicate with you;
- Using social media sites;
- How you can access, change or correct your information;
- Our linking policy;
- Protecting children's privacy online and the Eversource school programs; and
- Additional privacy terms for Connecticut residents.

Eversource has included the following documents as attachments:

- **ES-Attachment 5** ES-Grid Modernization Cyber Security Plan

[20] Privacy policy last updated on Nov. 22, 2024.

7.2 United Illuminating

Data privacy and security are essential to the work UI performs on a daily basis, allowing the EDC to interact with personal data and allow others to use it in a safe and secure manner under the guidance of its corporate policy. Data privacy and security are comprised of privacy, data classification, and third-party rules. UI's privacy policy references how Avangrid's Operating Companies treat personally identifiable information ("PII") from all stakeholders.

The Personal Data Privacy Policy (see UI-Attachment 11) established by the Board of Directors, establishes the principles employees will exemplify with regard to personal data, and the standard of care customers, employees and suppliers can expect**.** The Binding Corporate Rules (hereinafter referred to as "BCRs") express the global commitment of all the companies which compose the Iberdrola Group bonded to these BCRs (Iberdrola, S.A. a controlling company and each of its controlled undertakings which are also bonded to these BCRs, hereinafter "Iberdrola Group" and each of its bonded companies, the "Group Companies") with privacy and data protection and establish the framework of appropriate guarantees for the transfer and the processing of personal data between them.

- The **privacy notice** describes, among other things: (i) the types of information the EDC collects from the customer when they use the UI website (the "Site"); (ii) how the EDC uses the information collected through the Site; and (iii) with whom and why the EDC shares the information;
- **Data classification rule** is for the protection of all Avangrid Operating Companies' information and data assets throughout lifecycle; and
- **Third-party rules** establish the security and business practices required when engaging a new or existing third party to ensure the proper security controls are assessed when a third party is accessing, storing, processing, or transmitting Avangrid Operating Company information or access to UI's facilities. Annex 1 (see UI-Attachment 7) Is the contract required when a third party will be processing, storing or accessing company or personal data/information. Annex 2 (see UI-Attachment 8) is an industry standard document to understand the third-party security

posture. The Third-Party Risk evaluation is the actual third-party cyber review. Annexes 1 and 2 are the result and recommendation of the Third-Party Risk Evaluation process.

UI has included the following documents as attachments:

UI-Attachment 5 Third Party Risk Evaluation Form 2025

UI-Attachment 6 Avangrid Third Party Risk Management Rule

UI-Attachment 7 Annex 1 AVANGRID Data Security Rider 2024

UI-Attachment 8 Annex 2 AVANGRID Use of AI Assessment

UI-Attachment 9 Data Classification Rule (2019)

UI-Attachment 10 Interval-Data-Request 2025

UI-Attachment 12 Binding Corporate Rules 2025