SECTION 7: GRID MODERNIZATION

The electric sector and its infrastructure are the veins and arteries that power modern society. Nationally, the electric sector accounts for approximately 5% of the gross domestic product (GDP). Indirectly, the electric sector contributes much more, enabling businesses and industry to create the goods and services that make up the remaining 95% of the GDP and improving productivity, health, safety, comfort, and convenience. However, today's electric grid faces new and growing challenges such as rising energy demand, growing deployment of distributed energy generation resources (DERs) like rooftop solar, ambitious climate and energy policies, and increasing storm frequency and intensity. These, and other challenges, are impacting the affordability, resilience, and reliability of our electric distribution system.

In response to these challenges, PURA determined that it needed a distinct strategy for grid modernization, separate from traditional electric sector regulation. In October 2019, PURA issued an Interim Decision in Docket No. 17-12-03, PURA Investigation into Distribution Planning of the Electric Distribution Companies (EMG Interim Decision) outlining the Authority's framework for investigating both near- and long-term strategies to implement an Equitable Modern Grid (EMG) for Connecticut. This framework is designed to foster innovative solutions that address the major challenges and opportunities facing the electric sector and has four objectives:

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

All four objectives are inextricably connected and, thus, no single objective can be accomplished without the others if an Equitable Modern Grid is to be achieved. Similarly, the whole of an Equitable Modern Grid is greater than the sum of its parts, as the realization of each objective can further the achievement of the others.

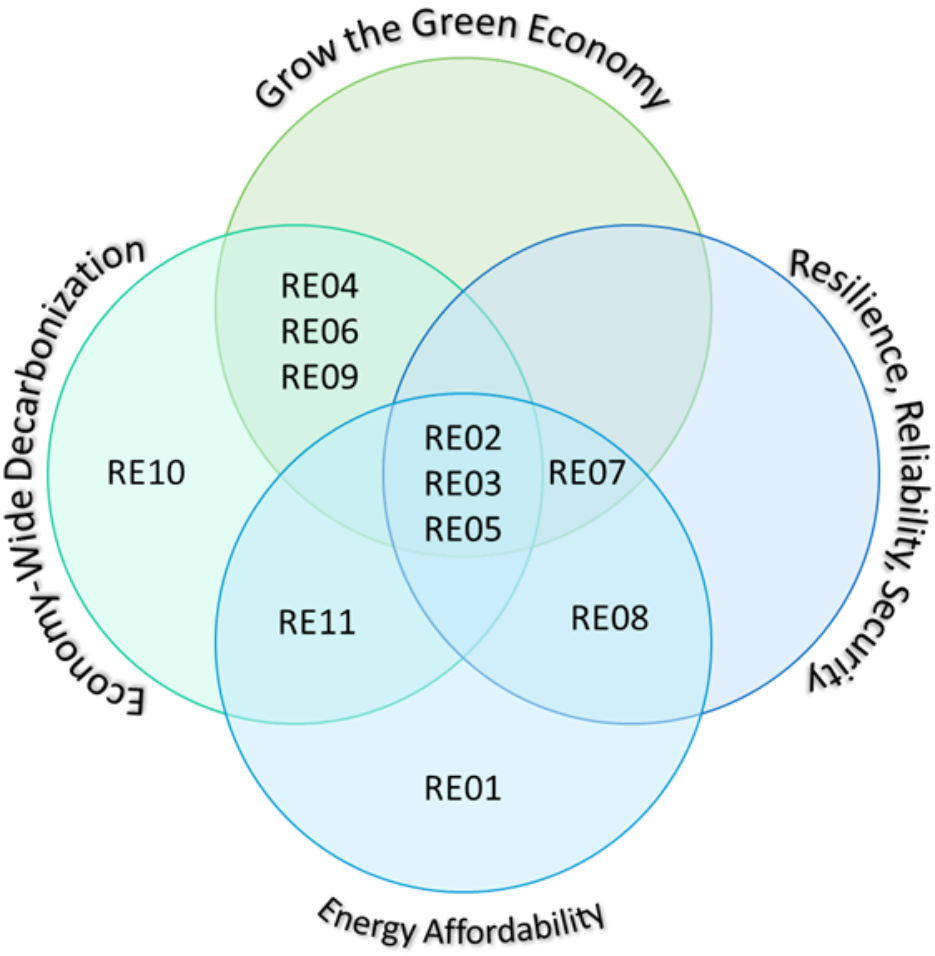
What is a "reopener docket"?
A docket that is initiated to either reassess or continue evaluating a specific part of the original docket's decision. It helps to maintain continuity between related dockets. "Reopened" proceedings use the naming convention "##-##-##re0#" in PURA's docket database.

The 2019 EMG Interim Decision introduced 11 sub-topics for further investigation through a series of “reopened” proceedings, where PURA has been and, in one case, continues to evaluate potential solutions for their cost-effectiveness and ability to meet the objectives of the framework in the long-term. Since 2019, PURA has initiated decisions or final reports in all 11 reopeners, with several having moved into the annual program review stage. The reopeners and their progress are as follows:

Figure 7: Progress Across EMG Reopener Dockets

Though each reopener contributes towards all four EMG objectives, some further more of the objectives than others. Figure 8 below helps to demonstrate the relationship between each topic and the EMG objectives, and PURA's strategy to ensuring all four are accomplished through this comprehensive approach.

Figure 8: Reopener Alignment with EMG Objectives



KEY GRID MODERNIZATION TOPICS IN 2024

As demonstrated by Figure 4 above, each EMG reopener docket addresses one or more of the original EMG Interim Decision objectives. The Authority has now issued final decisions, or final reports, in all eleven of the EMG reopener dockets, and has moved on to full implementation of the programs and policies designed by these final documents.

In 2024, the Authority continued to build and maintain momentum towards achieving the EMG Framework's objectives. In Docket No. 24-05-01, Annual Review of Affordability Programs and Offerings, PURA approved or modified the utilities' plan for implementing the New MPP, pursuant to Public Act No. 23-102, and associated communications materials. Additionally, PURA issued a decision in Docket No. 17-12-03RE11, PURA

Investigation into Distribution System Planning of the Electric Distribution Companies – New Rate Designs and Rate Reviews, approving a five-tiered Low Income Discount Rate (LIDR), which will help support energy affordability for all electric customers. In Docket No. 17-12-03RE06, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Interconnection Standards and Practices, PURA initiated, led, and completed a 100-day working group sprint with the EDCs, developers, and other stakeholders to help identify collaborative solutions to ongoing issues related to interconnection of DERs statewide. The Authority also enhanced community access to solar PV by establishing a specific carve out in the NRES program for solar deployed at public schools, pursuant to Public Act No. 24-151, in Docket No. 24-08-03, Annual Non-residential Renewable Energy Solutions Program Review – Year 4. In Docket No. 24-08-08, Non-wires Solutions Process Phase, the Authority completed the set up for implementation of the Non-wires Solutions (NWS) Program in 2025. Finally, the Authority approved nine new innovation pilot projects through Docket No. 23-08-07, Innovative Energy Solutions Program Cycle 2, which will join the seven approved through Cycle 1 that all made substantial progress throughout 2024.

Progress Advancing Energy Affordability

Each year, PURA conducts a comprehensive review of the energy affordability and arrearage forgiveness programs (AFP) offered by the EDCs and LDCs through one consolidated proceeding. The annual review process provides the Authority with an opportunity to assess these programs' effectiveness at addressing ongoing energy affordability issues, particularly for low-income or disadvantaged communities, as well as their impact on reducing overall unpaid utility bills. The programs available to help customers pay their bills are the result of collaboration between the Authority, the utilities, the Office of Consumer Counsel, EOE, the Department of Social Services (DSS), the General Assembly, low-income and community advocates, and other stakeholders with a commitment to ensuring these offerings are as helpful to customers as possible. These programs include the following summarized by Table 12.

Table 12: Connecticut Energy Affordability and Arrearage Forgiveness Programs

Program or Policy	Definition	Eligibility	Enrollment Process
Financial Hardship Verification	A designation that protects eligible residential customers from service shut-off during the winter and makes them eligible for certain energy affordability programs.	Customers who receive public assistance benefits from DSS, have a household income of <60% of State Median Income (SMI), or have a serious or life-threatening medical condition.	Contact your electric utility, or your local Community Action Agency (CAA), or Operation Fuel.
Medical Protection	Residential customers with serious medical conditions are protected from service shut-off during the winter. Customers with a life-threatening medical condition will be protected from shut-off during the certification period.	A customer's medical condition is certified as serious or life-threatening by a registered physician, advanced practice registered nurse (APRN), or physician assistant (PA).	The registered physician, APRN, or PA complete a certification of illness form online via an online medical web portal.
Connecticut Energy Assistance Program	Applies direct funding (typically in the range of $250-$600) towards your heating bill	Customers who also receive public assistance benefits from DSS, or have a household income of <60% of State Median Income (SMI).	Apply directly at your local CAA.
Matching Payment Plan	A payment plan for hardship customers heating with electricity or gas with past-due balances. Each payment made by the customer is matched by the utility until the balance is eliminated.	Customers who qualify as medical or financial hardship through DSS or a Community Action Agency (CAA) who have past-due balances.	Contact your local natural gas or electric utility company, or CAA directly.

Program or Policy	Definition	Eligibility	Enrollment Process
Low-Income Discount Rate	As of January 1, 2024, Eversource and United Illuminating offer tiered discounts on a customer's bill based on their income.	Customers who are at or below 60% of SMI will receive at least 5% off of their bill each month. Customers that fall below 60% of SMI may qualify for additional discounts depending on what income threshold they meet that corresponds with four additional tiers.The maximum discount is 50% off of their monthly electric bill.	Customers who are verified as financial hardship are automatically enrolled. Otherwise, contact your electric utility, CAA, or Operation Fuel directly to submit proof of income.
Flexible Payment Plan	A payment plan for any active electric, residential customer with a past-due balance. Customers make monthly payments to prevent service shutoff.	Any active electric, residential customer of Eversource or United Illuminating.	Contact your electric utility company directly.

These programs are designed to ensure that as many customers and their varying circumstances can be addressed as possible. The official objectives of the programs are to:

1. Help customers maintain service by offering payment plans to help them resolve their past due balance and make timely payments;
2. Help reduce past due balances for eligible financial hardship customers with a past due balance by offering matching arrears forgiveness with their timely payments;
3. Increase awareness of and participation in energy assistance, weatherization, and relevant clean energy programs, including but not limited to Residential Renewable Energy Solutions (RRES) and Energy Storage Solutions (ESS) programs; and
4. Evaluate collections management practices for those with past due balances along with the cost and affordability impact on all customers.

The Authority conducted its review of the 2024-2025 Program Year for these programs through Docket No. 24-05-01, Annual Review of Affordability Programs and Offerings (Energy Affordability Annual Review), (2024 AFP Decision). Key findings, issues, and program modifications included in the November 6, 2024, Decision in this docket are discussed below.

Matching Payment Plan (MPP) Program

Connecticut law provides that residential electric or gas customers with unpaid utility bills who meet income qualifications are eligible to enter into an amortization agreement with their utility to reduce their unpaid balance. The Matching Payment Plan (MPP) program offered by the Eversource and Avangrid Companies (together, Companies) is the programmatic implementation of this law. Through the MPP, financial hardship customers (i.e., customers who receive public assistance benefits from DSS and/or have a household income of <60% State Median Income) are put on a payment plan to eliminate past-due utility balances. Each payment made by the customer is matched by the utility until the balance is eliminated.

In 2023, Section 30 of Public Act 23-102 made amendments to the MPP including the eligibility criteria, the calculation of a customer's matching payment, the timing of the distribution of matching payments, and the utilities' recovery of costs incurred. Specifically, the revised MPP is no longer limited to residential customers of the utilities using gas or electricity for heat, allowing oil-heating customers to participate. Additionally, residential customers are no longer required to apply for benefits available under CEAP or a state-appropriated fuel assistance program. Rather, residential customers are now only required to meet the income eligibility requirements of CEAP or a state-appropriated fuel assistance program, but are nonetheless encouraged to apply. Residential customers also must be eligible for financial hardship programs with the gas or electric distribution company. Residential customers are still required to authorize the gas or electric distribution company to send a copy of the customer's monthly bill directly to any energy assistance agency for payment and to enter into and comply with an amortization agreement that is consistent with decisions and policies of the Authority.

In the 2023 AFP proceeding, both Eversource and UI testified that the changes to MPP would take multiple months to implement. As such, the Authority directed the utilities to make the IT changes necessary to implement the New MPP no later than November 1, 2024, which is the start of the 2024 MPP program year, and to provide an update regarding such changes and the utilities ' implementation of the New MPP in the 2024–2025 AFP Plan in next year's annual affordability proceeding, Docket No. 24-05-01.

On May 31, 2024, the Companies filed their 2024-2025 AFP Plan in Docket No. 24-05-01 as a motion for approval. Traditionally, this plan is reviewed through stakeholder process and approved via a Final Decision; however, in this year's filing, the Companies requested approval of certain plan components by August 15, 2024, in order to implement required modifications prior to the launch of the Plan and New MPP on November 1, 2024. In order to ensure that these modifications would be completed in time, the Authority focused stakeholder input on those sections of the Plan in order to issue a motion ruling authorizing the Companies to proceed. After receiving the 2024-2025 AFP Plan, PURA issued two sets of interrogatories, three sets of written comments and held a technical meeting. The Authority incorporated this feedback into a motion ruling issued on August

19, 2024.

However, following the Motion No. 7 ruling, PURA received an additional motion filed jointly from EOE and OCC requesting further clarification on some of the points in the ruling including (1) when the 12-month period begins and resets when a customer re-enrolls in New MPP after a broken payment arrangement; (2) what "all missed payments" means relative to the requirement to re-enroll after a second broken payment arrangement; (3) whether there is a limit on the number of payments a customer can miss after breaking their first payment arrangement and being permitted to re-enroll on their second; and (4) whether there is a flexible payment arrangement available for customers with a financial hardship designation. Additionally, docket participants provided further information in briefs that caused the Authority to reevaluate certain topics. The Authority provided additional clarification regarding these issues, in addition to the remaining proposals from the EDCs' AFP Plan filed on May 31, 2024, that were not addressed in the Motion No. 7 Ruling, through issuance of the Final Decision issued on November 5, 2024. Key Proposals or modifications to proposals, and any clarifications approved through the Motion No. 7 Ruling, as well as any subsequent changes approved through the Final Decision, are summarized in Table 13 below.

Table 13: Connecticut Energy Affordability and Arrearage Forgiveness Programs

Topic	Authority Motion No. 7 Clarification or Determination	Authority Final Decision Clarification or Determination
Customer Eligibility	• Oil-heating customers may now participate in New MPP. • Customers are no longer required to receive a Connecticut Energy Assistance Program (CEAP) award in order to participate in New MPP. • Customers must have a $100 arrearage that is 60 days past due. • Customers may enroll in New MPP with both their electric and gas utility.	No change
Monthly Payment Calculation	• The monthly payment shall not include the amount of CEAP award reasonably anticipated; rather, the monthly payment shall be revised when a CEAP or other energy assistance benefit is received. • A customer's arrearage is required to be reduced by an amount equal to:	• Directed EDCs to provide a joint proposal for the optimal approach to application of CEAP awards to New MPP customer's bill, arrearage or both by January 31, 2025.

Topic	Authority Motion No. 7 Clarification or Determination	Authority Final Decision Clarification or Determination
	◦ the customer's monthly payment pursuant to an amortization agreement, provided the customer meets the MPP eligibility criteria for the month immediately preceding such payment; and ◦ any payment a customer who meets the New MPP eligibility requirements receives from CEAP, a state appropriated fuel assistance program, or other energy assistance sources. • The monthly payment arrangement will be re-evaluated every 6 months.	• Approved Companies' proposal to calculate new MPP monthly payments using retail rate at time of enrollment with a reevaluation of the monthly payment every six months.
Matching Payment Distribution	• Matching payments must be distributed monthly over a 12-month period, from November 1 through October 31. • The monthly payment must be affordable to the customer and satisfy the Authority's decisions and policies.	• No Change
Program Year	• The New MPP program year operates between November 1 to October 31 annually. • There is no longer a phased program year structure under New MPP.	• No Change
Financial Hardship Expiring	• Participants will receive a 30-day grace period after their financial hardship designation expires before being removed from New MPP.	• No change

Topic	Authority Motion No. 7 Clarification or Determination	Authority Final Decision Clarification or Determination
Program Removal	• Participants will be removed from New MPP after two consecutive missed monthly payments. • Participants will be removed upon "successful completion;" that is, after they have made sufficient payments with associated matches to eliminate their arrears.	• No change
Reenroll-ment	• Participants can be reenrolled an unlimited number of times within a 12-month period as long as they meet all eligibility criteria and all missed payments have been made up. • All New MPP participants will be auto-reenrolled every November 1.	• New MPP missed payments are payments required by a customer's calculated New MPP monthly payment arrangement. • Customers that fail out of New MPP more than twice in a 12-month period shall be eligible to enroll on a flexible payment arrangement. • If a customer is removed from New MPP and enrolls in a flexible payment arrangement, any payments made by the customer while enrolled in the flexible payment arrangement cannot be used to satisfy the requirement to pay missed New MPP payments used to reenroll in New MPP. • Note that PURA stayed this requirement in a motion ruling following the decision and now requires customers to make up missed MPP payments to reenroll.

Topic	Authority Motion No. 7 Clarification or Determination	Authority Final Decision Clarification or Determination
MPP Term	• A customer may continue to participate in New MPP annually so long as they meet the requirements of New MPP.	• No change
Cost Recovery	• Approved Eversource's and UI's proposals to cease offering New Start and BFP, respectively, to new customers when New MPP is offered, i.e., by November 1, 2024. • A customer enrolled in New Start or BFP prior to November 1, 2024, may continue on the program until the date the customer's New Start or BFP, respectively, ends or the customer fails to comply with the program's participation requirements, whichever occurs first.	• The Companies are directed to report in the next AFP filing, i.e., Docket No. 25-05-01: (1) the number of remaining customers on the voluntary AFPs; (2) the minimum, average, and maximum amount of customer arrearages for those still enrolled in a voluntary AFP; and (3) the number of customers that transitioned from a voluntary AFP to New MPP during the 2024–2025 program year.
Voluntary Arrearage Forgiveness Programs	• Approved Eversource's and UI's proposals to cease offering New Start and BFP, respectively, to new customers when New MPP is offered, i.e., by November 1, 2024. • A customer enrolled in New Start or BFP prior to November 1, 2024, may continue on the program until the date the customer's New Start or BFP, respectively, ends or the customer fails to comply with the program's participation requirements, whichever occurs first.	• The Companies are directed to report in the next AFP filing, i.e., Docket No. 25-05-01: (1) the number of remaining customers on the voluntary AFPs; (2) the minimum, average, and maximum amount of customer arrearages for those still enrolled in a voluntary AFP; and (3) the number of customers that transitioned from a voluntary AFP to New MPP during the 2024–2025 program year.

Topic	Authority Motion No. 7 Clarification or Determination	Authority Final Decision Clarification or Determination
Customer Communi-cations	• Approved draft energy New MPP communication materials including letters, text alerts, emails, on-bill messages, fact sheets, social media posts, and web pages.	• Approved with modification remaining customer communication materials. • Directed the creation of an Energy Affordability Customer Communications Working Group dedicated to reviewing energy affordability customer communications materials. The Authority will no longer review each individual customer communications item for approval.

Utility Collections Practices

In the Companies' 2024-2025 AFP Plan, they highlighted increasing arrearages that support a reevaluation of current collections practices. Residential customer legal collections and wage garnishment activities were previously paused, pending further stakeholder discussion and the outcome of the Wage Garnishment Working Group established in Docket No. 22-03-16RE01, Petition of the Office of Consumer Counsel for an Investigation into the United Docket No. 24-05-01 Illuminating Company and Eversource Energy Regarding Collections Practices During the COVID-19 Moratorium – Avangrid NOV. OCC completed its activities and filed the Wage Garnishment Working Group Report on July 27, 2024. In this Report, OCC recommended that the Authority allow the Companies a "modified model of a total prohibition" on wage garnishments. Specifically, OCC recommended that the wage garnishment practice generally be prohibited; however, the Companies "could proactively seek authorization to request a wage execution" when the Companies can demonstrate that a customer has "sufficient income and/or assets" such that wage garnishment would not unduly burden the customer. Importantly, OCC clarified that financial hardship customers should be exempt from wage garnishment.

While the Authority is committed to providing affordable energy bills to low-income customers, it must balance the interests and impacts for all ratepayers. Past-due balances can ultimately increase costs for all customers, including those that are low- to moderate income. The Authority therefore determined that legal collections for all residential customers may resume.

Legal collections activities are one tool the Companies have to encourage those customers that are otherwise challenging to engage, such as those that cannot be disconnected because of medical protection or inaccessible meters. Accordingly, the Authority permitted the Companies to resume legal collections activities on January 1, 2025, for customers that fall at or above the 75% state median income (SMI) threshold. Importantly, setting the threshold for legal collections at 15% higher than the threshold (i.e., 60% SMI) used to qualify customers as financial hardship, who are protected from wage garnishment, also protects the most financially vulnerable medically protected customers. The Companies were also directed to track wage garnishment throughout the year and make such data available to stakeholders upon request.

Additionally, the Authority determined that the flexible payment parameters for non-hardship customers should be modified. As of the 2024 decision, non-financial hardship customers are now required to pay 10% of their arrearage, instead of 5%, to prevent shut-off. The DSS data sharing agreement now ensures that the majority of hardship-eligible customers are correctly coded and will not be incorrectly assessed a payment more appropriate for non-hardship customers. Further, the higher payment may incentivize customers to maintain their payment arrangements while minimizing cost-prohibitive payments for moderate income customers.

Read the 2024 Annual Affordability Programs and Offerings Review Final Decision.

Low-Income Discount Rate (LIDR)

In 2022, PURA directed the EDCs to implement a LIDR for electric customers with an overall eligibility cap at 60% State Median Income (i.e., Tier 1) and eligibility for Tier 2 aligned with existing state benefit programs (i.e., up to 160% FPG) through its October 19, 2022 Final Decision in Docket No. 17-12-03RE11, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – New Rate Designs and Rate Reviews (LIDR Decision). The creation of these two tiers centered around two objectives: (1) achieving energy affordability, considered to be no more than 6% of a household's annual income being spent on energy costs; and (2) reducing uncollectible expenses paid by all ratepayers, in part by reducing the need for service disconnections and reconnections.

The LIDR offering officially launched on January 1, 2024. Customers enroll through their EDCs, local CAAs, or Operation Fuel. Additionally, the EDCs launched an opt-out customer data sharing agreement with the Department of Social Services (DSS) in January 2024, where eligible customers were auto-enrolled onto the appropriate LIDR

tier. Through this agreement, the Companies send DSS a data file every month that consists of all active residential accounts. DSS then analyzes whether the customers currently receive public benefits, and then respond to the Companies and indicate whether each account is eligible for financial hardship, and for electric customers, whether they are eligible for LIDR Tier 1 or Tier 2.

However, following implementation of the DSS data-sharing agreement, it was discovered that the number of Tier 2 eligible customers far exceeded initial expectations. In February 2024, Eversource estimated that an additional 115,000 DSS-identified customers were eligible for Tier 2, which would create about $100 million in incremental annual LIDR expense. As a result, program costs were going to be much higher than anticipated in the LIDR Decision. As such, the Authority directed the Companies to temporarily enroll all DSS-identified eligible customers onto Tier 1 only, and initiated an investigation in Docket No. 17-12-03RE11 into whether to modify the LIDR Decision.

Through this investigation, PURA and docket participants compared multiple combinations of numbers of tiers, discount amounts, and income thresholds to understand participant and ratepayer impacts of various LIDR structures. As a result, it was determined that a five-tiered, rather than two-tiered, structure was in the best interest of all ratepayers; specifically, those customers who originally qualified for Tier 2 but were placed on Tier 1 during the interim step. By implementing five tiers, customers avoid a discount "cliff" when their income increases. In other words, rather than drop from a 50% to 10% discount, under a five-tiered structure customers would gradually shift up and down discount levels with shifts in income.

This revised LIDR structure also is more effective at containing the overall cost burden to ratepayers. During the investigation, it was also determined that establishing a "budgetary target" of 2% of total electric revenues for the LIDR Program would help control costs. Under a budgetary target, if the 2% budget of all total revenues is exceeded in a given year by more than 0.1% of total revenues (i.e. 2.1%), a review is triggered and the level of the discount is reduced so that costs are contained within the budgetary target. Importantly, the discount levels established in the new five-tiered structure (i.e. 5%, 15%, 20%, 40%, and 50%) were selected based on an analysis of expected enrollments and costs for each tier that would result in an estimated annual cost of 1.6% of Eversource's annual revenue, and 1.8% of UI's.

A summary of the approved five-tiered LIDR and the corresponding income criteria or qualifying DSS program is summarized in Table 14 below.

Table 14: Approved Five-Tier LIDR and Income Eligibility Thresholds

New Tier	Discount Amount	Gross Income Limit (Federal Poverty Level)	Prior Tier
Tier 1 (212–275% FPL | 60% SMI)			
ALMB/SLMB	5%	212–246%	1
Husky B Band 1	5%	292–254%	1
Husky B Prenatal	5%	263%	1
Husky A Pregnant / Postpartum	5%	263%	1
Husky C Long Term Services and Supports	5%	225%	2
Special / Limited Medical Benefit	5%	263%	1
CEAP Level 3	5%	275% (60% SMI)	1
Tier 2 (161–211% FPL)			
SNAP	15%	200%	2
CEAP Level 2	15%	200%	1
Husky A Chilrden	15%	201%	2
QMB (lowest $ Medicare Savings Program)	15%	211%	2
Tier 3 (126–160% FPL)			
Husky D	20%	138%	2
Husky A Parent	20%	138%	2
Tier 4 (101–125% FPL)			
CEAP Level 1	40%	125%	2
Tier 5 (Up to 100% FPL)			
Temporary Family Assistance	50%	55%	2
Refugee Assistance	50%	55%	2
Husky C (non-LTSS)	50%	58%	2
SAGA	50%	225%	2
State Supp	50%	225%	2

In many cases, the Authority directs the utilities to implement programs in coordination with each other to ensure consistent customer experiences statewide. However, in this proceeding, PURA determined that allowing Eversource to implement the five-tier LIDR as quickly as possible, while allowing UI an additional year due to IT constraints, was in the best interest of rate payers. DSS has estimated being able to provide data-sharing for all five tiers by May 2025. Both companies are directed to track and report on an annual basis in the relevant RAM proceeding data regarding the cost to implement LIDR and enrollment data.

Read the 2024 LIDR Final Decision.

Progress Enabling Decarbonization

Interconnection Working Group - 100 Day DER Interconnection Sprint

A key enabling component of the electric distribution system to ensure deployment of solar PV systems, battery electric storage systems, and other kinds of distributed energy resources (DERs) is the ability to support two-way flows of energy. DERs are an important tool to meeting the state's climate goals, and can be an even more important tool in providing customers with resiliency solutions and providing demand flexibility, which provides benefits to both the customer and the grid at large. To unlock the benefits of DERs, however, they must be interconnected to the grid. While this sounds simple, without carefully designed standards in place, a new interconnecting resource could compromise the reliability or safety of the distribution system; conversely, inefficient interconnection standards and protocols can inhibit the timely deployment of DERs.

In 2020, PURA established an Interconnection Working Group, led by EOE, tasked with: (1) reviewing interconnection guidelines and application forms; (2) improving transparency in the interconnection process; (3) examining technical criteria/screens; (4) monitoring IEEE-1547 developments; (5) evaluating hosting capacity maps; and (6) considering the establishment of a formal technical regional working group. The Working Group is comprised of PURA, OCC, DEEP, CIEC, two developer representatives, Eversource, and UI, and meets on a monthly basis.

Since the Interconnection Working Group's establishment, numerous additional interconnection issues have arisen, particularly within the annual reviews of the Non-Residential Renewable Energy Solutions (NRES) and Energy Storage Solutions (ESS) Programs.The NRES and ESS Programs have faced challenges such as: (1) delays in processing applications; (2) complexities in technical reviews; (3) unilateral project withdrawals by EDCs; (4) unresponsive developers; (5) disputes between developers and EDCs; and (6) unclear interconnection requirements.

The Authority has previously endeavored to direct changes to interconnection processes within individual clean energy program proceedings.[1] However, the lack of tangible improvements to interconnection outcomes to date and stakeholder feedback indicate

the need for comprehensive interconnection solutions across clean energy programs.

Rather than address the above-referenced issues on a case-by-case basis in the Authority's clean energy program annual review proceedings, the Authority determined it would be more efficient to collaboratively discuss solutions to the remaining interconnection issues with stakeholders via the Interconnection Working Group. This group was tasked with finding solutions for current and emerging interconnection issues, including but not limited to: (1) delays in EDC-led interconnection approval processes; (2) ambiguities in interconnection guidelines and approval timelines; (3) insufficient hosting capacity for new distributed energy resources; (4) communication breakdowns between project developers and the EDCs; (5) slow response times from the EDCs to developer inquiries; (6) inconsistencies in interconnection guidance or approvals among EDC departments; and (7) the potential need for a pre-submission checklist to inform developers of interconnection requirements before application submission. Consistent with prior "sprint" working groups directed by PURA, the Interconnection Sprint Working Group was given 100 days to resolve outstanding interconnection issues, including the problems identified above.

The Interconnection Sprint Working group met nine times between October 3, 2024, and December 9, 2024. On December 20, 2024, PURA staff assigned to lead the Sprint Working Group filed the 100-Day Sprint Working Group Report identifying and recommending for approval 26 proposals that achieved consensus support among working group members. These proposals fell into three distinct categories: (1) updates to PowerClerk or EDC data; (2) updates to the Interconnection Guidelines; and (3) updates to EDC processes or procedures. The 100-Day Sprint Working Group Report additionally identified 18 proposals that did not achieve consensus approval.

Sprint Staff requested that the EDCs provide cost and timeline estimates for all consensus proposals adopted by the Working Group by December 21, if feasible. In response, the EDCs submitted cost and timeline estimates for the consensus proposals as part of their written comments. However, in many cases, these estimates remain uncertain.

The Authority will consider the recommended proposals and determine whether they should be approved in early 2025. Additionally, the Authority will evaluate which issues remain unresolved and will address these issues as appropriate, including submitting possible recommendations to the General Assembly.

View the 100-day DER Interconnection Sprint Report.

Promoting Equitable Access to Clean Energy

As described in the 2024 Annual Clean and Renewable Energy Report, attached to this report, Connecticut has made continuous progress in deploying renewable energy statewide. An ongoing objective for the state's clean and renewable energy technology programs is to ensure equitable access to these resources for all customers. In 2024, two

changes to existing programs approved by PURA that will help further that objective in particular included the creation of a distinct "School Category" in the Non-residential Renewable Energy Solutions Program (NRES) program, and opening the Residential Renewable Energy Solutions Program (RRES) to master-metered multifamily affordable housing.

In Docket No. 24-08-03, Annual Non-Residential Renewable Energy Solutions Program Review - Year 4 (Year 4 NRES Decision), PURA and stakeholders developed an offering for NRES projects at public schools, in accordance with Public Act 24-151 Section 173, which required the Authority to develop a program to encourage the installation of up to 25 MW of solar PV systems and energy storage systems at public schools annually. Accordingly, the Decision created a distinct NRES "School Category" and directed bids to be awarded on a "first-ready" basis to prioritize projects based on their viability. To accommodate a non-competitive auction approach, the Decision set a fixed Buy-All price for the solar component of school category projects at $188.90 per MWh, the same as the Buy-All price cap for the NRES medium zero-emission category.

In Docket No. 23-08-02, Annual Residential Renewable Energy Solutions Program Review – Year 3, PURA issued a second decision on July 10, 2024, approving master-metered multifamily affordable housing to participate in the RRES. Previously, only individually metered multifamily affordable housing was eligible for the program. The decision approved the Multifamily Housing Working Group's proposal to allow master-metered affordable housing to receive RRES benefits, as long as properties distribute at least 25% of the tariff's financial value to tenants through eligible building upgrades.

Both of these modifications will help to distribute the benefits of clean energy to more customers, especially those that are not able to install solar themselves.

Read the NRES Final Decision, and the July 10, 2024 RRES Final Decision.

Progress Supporting Resilience & Reliability

Non-Wires Solutions Process

In 2022, PURA issued a Decision in Docket No. 17-12-03RE07, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Non-Wires Alternatives (NWS Decision), establishing a process to transparently leverage competition to identify and deploy non-wires solutions (NWS) to meet distribution system needs with the ultimate objectives of improving grid resilience and reliability, as well as improved outcomes for customers (NWS Process). As technology has changed over time, new options are available to lower system costs and improve outcomes, and specifically to avoid, defer, or reduce the cost of necessary grid investments. In addition, EDCs are now permitted by statute to own energy storage systems under a wider range of conditions than previously possible. The NWS Process enables the Authority and stakeholders to receive the necessary and appropriate information to evaluate the prudence of EDC

investments, including EDC-owned energy storage.

Further, in the NWS Decision, PURA determined that the NWS Process and its policy objectives would greatly benefit from the expertise and oversight of an official PURA Process Monitor. Given the role of the EDCs in this process, oversight and transparency is key to the provision of results in the public interest. The PURA Process Monitor would act as an extension of lead staff in the annual NWS Process proceedings to supplement existing staff expertise in its oversight of the NWS Process and will provide expertise in areas in which Authority staff expertise does not currently exist. Further, given the importance of the robust stakeholder process called for by many docket participants, the PURA Process Monitor would assist in the creation of key NWS Process materials and analytical tools to provide information to stakeholders and facilitate their input.

Thus, PURA conducted a public solicitation for proposals from consultants to serve as the NWS Process Monitor in 2023. On May 4, 2023, PURA officially retained Optimal Energy (formerly identified as NV5) to serve as the NWS Process Monitor. Generally, the Process Monitor's responsibilities will include stakeholder engagement, development of NWS process materials, data review and analysis, oversight of each electric distribution company's (EDC) solicitations, and providing feedback to the Authority.

The NWS Process Monitor began the NWS Process Initiation phase identified in the NWS Decision in 2023, which progressed throughout 2024 through Docket No. 24-08-08, Non-wires Solutions Process Initiation Phase (NWS Process Initiation Phase). From June 2023 to June 2024, the Process Monitor facilitated stakeholder engagement and reported findings on task-level research, and develop the corresponding deliverables and final recommendations to PURA. These key deliverables included, but were not limited to:

- Any additional requirements and format for the annual Grid Needs Filing;
- NWS solicitation benefit-cost analysis model and process;
- Timelines for competitive NWS solicitation processes;
- Applicability of the existing regulations regarding codes of conduct for EDCs and their affiliates and any additional policies and protections needed to allow EDC affiliates to submit a competitive NWS bid;
- Plans for ongoing market engagement activities and RFI documents; and
- A standard set of data to be provided to prospective NWS solicitation bidders, which shall include, at a minimum, the information listed in Exhibit C and any relevant information from the EDC Data and Grid Needs Filings.

The NWS Process Initiation Phase also includes review, discussion, and potential modification to deliverables being developed by the EDCs, including but not limited to:

- A standard cybersecurity data access policy and pre-approval process, including non-disclosure agreements (NDAs) and data security agreements (riders) that specify vendor security requirements;

- The standard RFP to be issued by the EDCs for a NWS solicitation, inclusive of any processes to screen and qualify bidders, which shall include relevant information from the cybersecurity data access policy; and
- The pro forma contract for NWS bidders to execute with the EDC upon selection, including performance criteria and an EM&V plan.

The Process Monitor facilitated ten stakeholder meetings and two technical sessions that, similar to a working group, were open to all stakeholders and provided an opportunity to provide input on the NWS Process in a collaborative setting outside of the more structured and formal setting of a PURA-led technical meeting.

Subsequently, the Authority convened a number of in-person roundtable discussions to further address comments and concerns regarding the filed materials. On August 29, 2024, the Authority conducted the first roundtable discussion on the annual data filings and the system needs suitability criteria. On September 19, 2024, the Authority conducted the second roundtable discussion on the NWS Competitive Solicitation Process and the EDCs' developed materials. On October 1, 2024, the Authority conducted the third and final roundtable discussion on the benefit cost analysis (BCA) framework.

On December 18, 2024, PURA issued the Final Decision in NWS Process Initiation Phase, formally completing the materials, design documents, and steps for the first NWS Process Cycle. Below is a timeline for the first NWS Process Cycle, which launched officially on February 8, 2025, in Docket No. 25-08-08, Non-wires Solutions Process Cycle 1.

Table 15: Timeline for the None-wires Solution Process Cycle 1

Date	Process Milestone	Frequency
February 8	EDC Data and Grid Needs Filing	Annual
First Friday in February	First Quarter Filing for Investments between $250,000 to $500,000	Quarterly
Late February	Q1 Stakeholder Meeting: Discuss EDC Data and Grid Needs Filing	Annual
March 22	EDC Annual Reliability Report Data Filing (includes SAIDI, SAIFI, CEMI, CELID, CEMSMI)	Annual
May 1	Discovery for data filing officially closed	Annual
First Friday in May	Second Quarter Filing for Investments between $250,000 and $500,000	Quarterly
May 15	NWA Process Monitor Comments	Annual
Late May	Q2 Stakeholder Meeting: Discuss Process Monitor Comments	Annual

Date	Process Milestone	Frequency
June 15	Stakeholder Comments	Annual
First Friday in August	Third Quarter Filing for Investments between $250,000 and $500,000	Quarterly
August 15	PURA Screening Decision and Competitive solicitation process begins	Annual
September	Q3 Stakeholder Meeting: Discuss PURA August Decision	Annual
First Friday in November	Fourth Quarter Filing for Investments between $250,000 and $500,000	Quarterly
November	Q4 Stakeholder Meeting: Discuss Potential NWA Process Improvements	Annual

Read the NWS Process Initiation Phase Final Decision.

Advanced Metering Infrastructure

In 2019, the EMG Interim Decision identified advanced metering infrastructure (AMI) as essential to achieving the objectives of a modern electric grid for Connecticut. AMI is a tool available to the EDCs to better understand, plan, and operate their system, but that same information is also important to customers and market-based opportunities to help customers better manage their consumption and save money. Specifically, AMI enables a number of functions that conventional utility meters cannot provide including automatic measurement of granular energy usage data, remotely identifying and isolating outages, and monitoring voltage. These functions unlock a whole host of new customer offerings such as time-of-use energy rates or advanced rates for EVs, greater control over energy consumption using smart technology, and load-shifting. For utilities, AMI allows reduced costs related to metering and billing, better visibility of the grid and power quality, faster outage restoration, and improved operations efficiency. AMI will accelerate the modernization of Connecticut's electric grid in numerous innovative, cost-effective, and equitable ways.

Today, about 84% of customers in UI's territory have AMI. The AMI deployment in UI territory has allowed the company to realize many operational benefits such as remote meter reading, service order automation, proactive outage planning, storm restoration efficiencies, the validation of resilience/reliability measures, early outage detection, system planning optimization, energy theft reduction, provision of detailed billing data, rate design, enhanced online portals, high-bill alerts, outage status, customer targeting for initiatives, and reduced billing-related calls to the call center. UI expects that the benefits will continue to accrue for the listed categories and expects the benefits to

increase as existing Automatic Meter Reading (AMR) meters are replaced and as additional features of more advanced AMI meters and systems are available that can provide load disaggregation, load balancing, voltage monitoring, and voltage reduction. In Eversource's territory, however, more than 75% of Eversource's customers still have standard meters (AMR meters) that are 20 or more years old. The other 25% have "bridge meters" that work with the AMR meters but can be enabled to work with an AMI system. To support AMI, Eversource would not only need to install meters, but it would also need to install and integrate the following with meters and existing systems: communications systems; back-office systems; meter data management; and customer information systems.

As such, achieving statewide deployment of AMI and the realization of its associated benefits will require significant capital investment from ratepayers. After three years of a comprehensive public process in Docket No. 17-12-03RE02, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Advanced Metering Infrastructure, including numerous opportunities for stakeholder input, guidance from industry experts such as federal agencies, peer jurisdiction utilities, and technology providers, PURA released a framework for the deployment of AMI in a final Decision on January 3, 2024. This framework provides a regulatory roadmap for the EDCs, protects ratepayers, and ensures that the investment in AMI will advance the economic, energy, and environmental policy goals of Connecticut. Importantly, this Decision also outlined a process to assess the prudence of any costs associated with the deployment of AMI in accordance with the outlined framework during the EDCs' future, respective contested rate proceedings.

Utility AMI Cost Recovery

During the proceeding, Eversource stated that the company requires a certain cost recovery path to move forward with an AMI investment on an accelerated timeline of five years. Previously, Eversource had proposed approximately $400 million of capital investment over the first five years of AMI deployment (approximately $80 million per year). Eversource claims that due to both the level of costs and the short timeline with which they are to be incurred, it is necessary that cost recovery be granted at defined intervals during the deployment window outside of a general rate case, such as through the annual RAM proceedings. Importantly, Eversource has stated publicly in numerous investor and public settings that it intends to file a general rate case application in 2025, which would be its first time since 2017.

Using the upcoming rate proceeding to provide cost recovery for AMI investments has several benefits. First, Eversource would be able to obtain fairly synchronized recovery (i.e., low regulatory lag) of any AMI capital investments made in 2024 and during a significant portion of 2025, depending on the application timing. Second, the Authority would have the opportunity to consider a multi-year rate plan that incorporates AMI investments through a 2025 rate proceeding. Such a multi-year rate plan could provide

the same reduction in regulatory lag and rate shock as an annual rate reconciliation mechanism. Third, in a rate case proceeding, the Authority could also consider establishing a reconciliation mechanism for post-2025 AMI investments if necessary and appropriate. Further, in a general rate case, a cost-of-service study may be developed and evaluated to ensure AMI costs are equitably shared by the different customer classes.
That being said, the Authority recognizes that the anticipated capital costs outlined above, while not entirely incremental, may be significant and incremental relative to the business-as-usual core business investments. The costs are also largely concentrated in a five-year deployment period. Taken together, these factors may potentially necessitate consideration of an extraordinary ratemaking measure, such as the implementation of an annual cost reconciliation mechanism. Given this, the Authority initiated a docket simultaneously to releasing its framework decision on January 3, 2024, under Docket No. 17-10-46RE04, Application of the Connecticut Light and Power company d/b/a Eversource Energy to Amend its Rate Schedules – AMI Cost Recovery.

The Authority conducted an investigation through this docket and, within 11 months, on December 4, 2024, established an extraordinary cost recovery mechanism for Eversource's AMI deployment (AMI Tariff). The Authority largely adopted the Company's proposed AMI Tariff, making some necessary clarifications to ensure that Eversource receives only those costs necessary to support deployment and that customers are protected from paying more than is warranted. The Company is not required to utilize the AMI Tariff since, as stated above, they could seek cost recovery through a general rate proceeding. Rather, the Authority offered the cost recovery mechanism to assist in Eversource's accelerated deployment of AMI.

In providing metering, billing, and other services (traditional utility services that are enhanced by AMI), the Company is required to provide safe, reliable, affordable, and available electric service to all customers in a uniform, equitable, and prudent manner. Further, the Company must provide the services with economy, efficiency, and care for public safety and energy security; promote economic development; consider the need for energy conservation and energy efficiency; and provide protection for relevant foreseeable public interests. The AMI Decision outlines in detail how AMI can provide these services to the benefit of ratepayers. While the AMI Decision provides a regulatory roadmap for Eversource to take advantage of AMI, Eversource does not require Authority approval to deploy AMI. Indeed, Eversource may deploy AMI at any time, as has been commonly done by other utilities throughout the country. UI has achieved nearly full deployment of AMI and did so without a special cost recovery mechanism. Eversource is currently implementing AMI in Massachusetts, and has hired staff who have been involved in AMI deployment in at least seven other states, including Florida, Indiana, Kentucky, Massachusetts, North Carolina, Ohio, and South Carolina.

Despite the Authority providing Eversource with a clear pathway for the deployment of AMI and an extraordinary cost recovery mechanism to support Eversource's accelerated

deployment of AMI, the Company has not yet initiated the deployment of AMI in Connecticut. Instead, on December 9, 2024, the Company requested that the Authority reconsider the AMI Cost Recovery Decision for the purpose of fully satisfying the Company's AMI Requirements. According to Eversource, it will not be able to commence its AMI deployment before October 1, 2025, and can only do so then if the Authority addresses the four Company AMI Requirements.

Importantly, the AMI Tariff is an accommodation for Eversource and was intended to allow the accelerated deployment of AMI. As of today, Eversource can make a prudent investment in AMI and, under the approved AMI Tariff, has available to it an extraordinary cost recovery mechanism. The Authority will reconsider the AMI Cost Recovery Decision, on an appropriate schedule, and will provide notice and an opportunity to all stakeholders to submit written comments on the Company AMI Requirements.

Read the December 4, 2024 AMI Tariff Final Decision.

Progress Growing the Green Economy

Innovative Energy Solutions (IES) Program

Innovation is a natural complement to modernization; one that can, if harnessed, greatly enhance the benefits and services delivered to ratepayers. With the increase of data availability, grid-edge visibility, and distributed energy resources comes significant opportunities to optimize the grid, its resiliency and reliability, and the customer experience. However, the risk and uncertainty of requiring utilities to conduct traditional research and development or even to pilot new technologies or applications can often be too great to consider the expenses prudent. So, conventional strategies often continue to be implemented, even though novel and emerging options show promise to lower costs and/or improve service.

The Authority issued a decision in Docket No. 17-12-03RE05, PURA Investigation into Distribution System Planning of the Electric Distribution Companies –Innovative Technology Applications and Programs (Innovation Pilots), on March 30, 2022, officially approving the program design of the Innovative Energy Solutions Program (IES Program). The goal of this program is to enable the deployment of, on a limited basis, innovative pilot technologies, products or services, and to evaluate their performance. If satisfactory ratepayer benefits are demonstrated, the innovation(s) could be scaled up for statewide deployment by the EDCs.

There are two features of this program that distinguish it from other pilots or test beds. The first is that it employs guardrails and project "off-ramps" to ensure value and to minimize ratepayer risk. The IES Program is structured into four phases, where potential innovations are reviewed with increasing scrutiny to ensure that their product or service meets the needs of Connecticut's grid and ratepayers, and can deliver their claimed benefits or value at scale. If a project cannot meet the criteria and thresholds at a certain phase, the Authority will be able to quickly retire the project, thereby avoiding unnecessary risk and costs to ratepayers.

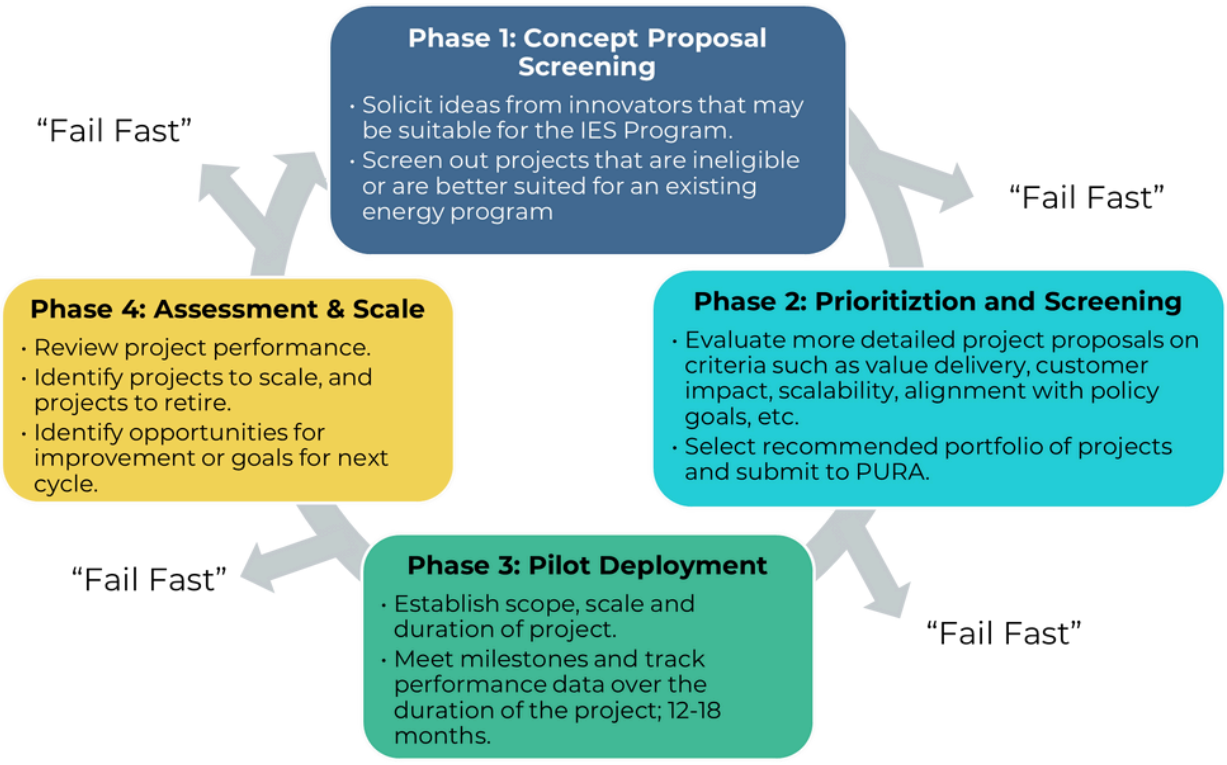
The second feature addresses the inverse situation where a pilot project demonstrates substantial ratepayer and grid benefits. In this case, the IES program provides a clear pathway by which to move a successful pilot project to full-scale deployment across the state's two largest EDCs' territories, which the traditional approach to EDC pilots have lacked nationwide to date. This ensures that successful pilots are brought to scale, thereby delivering the benefits of innovation to all ratepayers.

The IES Program also places a high value on transparency, which is achieved through the external Innovation Advisory Council (IAC) comprised of a representative set of stakeholders, who would have a responsibility for ensuring a balanced perspective in the IES program.[2] Though the Authority is the primary entity responsible for developing, administering, and managing the IES Program, and retains ultimate decision-making authority over aspects of program design and project selection, the IAC provides a forum where potential participating innovators can engage and discuss the program without violating the standard communications rules with PURA. Additionally, the IAC will set the themes and objectives for each annual Program Cycle and will screen projects applications before submitting recommendations to PURA for final approval.

Four-Phase Program Cycle Design

The IES Program operates around a four-phase cycle, with a new cycle launching each year. Each cycle takes approximately two years to complete. The four phases are summarized in Figure 9 below.

Figure 9: Connecticut IES Program Cycle Phases



Phase 1 focuses on soliciting and screening concept proposals from innovators. The IAC assesses Phase 1 proposals on their ability to meet eligibility criteria including:

- Addresses current gaps in EDC offerings in Connecticut;
- Advances decarbonization;
- Addresses underserved communities in Connecticut;
- Avoids a competitive advantage for EDCs,
- Avoids an unreasonable impact to Connecticut ratepayers; and
- Will be authorized to practice business in Connecticut.

Projects deemed ineligible are directed to relevant existing programs in which they may participate, if applicable. Projects deemed eligible are invited to submit proposals in Phase 2 and are required to provide detailed information regarding the project's value proposition, business and financial model, strategic alignment with the IES Program objectives, equity provisions, scalability, and project team qualifications.

The Program Administrator and the IAC then evaluate these proposals and their ability to address key criteria such as Innovation Potential, Measurable Benefits, and Focus on Underserved Communities and Equity. The IAC then agrees to a recommended portfolio of projects to recommend to PURA for approval, staying within a total budgetary cap of $25 million, or $5 million per project. Phase 2 concludes with PURA's issuance of an interim decision in the relevant program cycle docket that provides an overview of the review and selection process and announces the successful projects for deployment. Such interim decision may also include, but is not limited to, direction to the EDCs regarding contract provisions and other safeguards to minimize customer and utility risk regarding cost recovery, direction to the EDCs regarding interconnection agreements and/or treatment of selected projects in the distribution interconnection process/queue, details regarding program versus outside funding sources for each project, and a project-specific cost recovery cap.

During Phase 3, innovators will deploy their proposed projects based on an agreed-upon scope and scale within an approximately 12–18-month period. Cost recovery for selected projects is tied to their completion of project milestones to help reduce ratepayer risk, rather than upfront payment. The Authority reserves the right to terminate projects that do not adhere to programmatic guidelines or demonstrate an inability to meet program objectives and/or guidance provided by the Authority or the IAC. During the active lifetime of the project, innovators are also required to meet defined reporting requirements, with progress periodically reported to the Authority. The Authority and Program Administrator provide appropriate support and oversight via recurring review meetings with innovators to identify and discuss project progress, roadblocks, and rule derogations as needed.

In Phase 4, Assessment & Scale, innovators will be required to develop and submit a final report discussing project performance and lessons learned. Conclusions on project

performance are expected to inform decisions on project scaling, while lessons learned will provide valuable insight regarding the effectiveness of the IES program process that will benefit future projects. The Program Administrator will provide a brief report of recommendations based on the final reports submitted by innovators to assist the Authority in making informed decisions as to which projects should be identified for deployment at scale. This phase will promote discussion of potential opportunities for improvement or modification in future cycles based on lessons learned by innovators, the Program Administrators, the IAC, and the Authority.

It is expected that most projects will have a clear "go" or "no go" determination regarding scaling at the end of Phase 4. These determinations will be made as a final decision in the relevant IES program cycle docket. Projects that are ready to scale up will be invited to submit the appropriate regulatory application. Regulatory applications for successful project may include, but are not limited to, an application for the creation of a distinct, "scale up" docket or the incorporation of the project into existing state programs over which the Authority has jurisdiction. It is important to note that only the initiatives that demonstrate readiness to scale and are projected to accrue net benefits at scale as measured by multiple evaluation metrics, will be selected to scale. Projects that are not yet ready to scale but display promise and economic viability will have an opportunity to cycle back though the IES program with modifications in place, but this will be assessed on a case-by-case basis. Projects that do not display further potential to scale up upon assessment during Phase 4 will exit the IES program.

IES Program Cycle 1

The first IES Program Cycle officially launched on January 31, 2023, in Docket No. 22-08-07, Innovative Energy Solutions Program Cycle 01. Each program Cycle focuses on a selected "theme" around which projects are solicited, but does not exclude proposals that fall outside that theme. The theme is discussed and voted on by the IAC with consideration from the EDC's joint grid and customer needs reports, as well as other ongoing state policy and priority goals. The Cycle 1 theme focused on "Demand-side Flexibility," which includes, but is not limited to, advanced forecasting, automation, flexible winter peak technology, and thermal storage.

The Authority approved seven projects totaling approximately $10.4 million. Table 16 below provides a brief summary of the project, its status as reported in the December 2024 quarterly status reports, and highlights local economic impacts.

Table 16: IES Program Cycle 1 Project Progress

Company	Award	Description	Local Economic Benefit	Status as of December 2024
AmpUp	$1,695,000	EV charging station management platform that assists EV charging station owners to balance and optimize load through revenue and data-driven use cases.	• AmpUp charger lab is based in East Hartford, CT • 3 existing FTEs at time of proposal; committed to hiring 2 more for the pilot.	• 2 FTEs confirmed to be hired. • Working towards Milestone 4: Software Feature Development
Edo	$1,441,000	Demonstrate a low-cost, easy-to-install optimal control solution at 25 commercial buildings and behind-the-meter DER to optimize efficiency and provide load flexibility.	• Partnering with a CT-based (Windsor) firm to recruit customers, creating 5 part-time jobs during the pilot. • At scale, Edo would open an office in CT and hire approx. 5 FTEs.	• 3 part-time jobs created to date and has successfully subcontracted with TRAC to conduct audits and analysis. • Working towards Milestone 4: completion of marketing and outreach campaign and
GridEdge Networks	$500,000	Demonstrate the integration of an EV school bus with Vehicle-to-Grid (V2G) capabilities with the local grid.	• Expect to create at least 1 FTE to complete the pilot • 1 new office space • Retain local CT engineering firm to perform onsite installation & interconnection work	• 1 FTE created and subcontractor for engineering work selected • V2G charger installed and an interconnection application is filed. • Working towards Milestone 4: DERCOM system ready for field installation

Company	Award	Description	Local Economic Benefit	Status as of December 2024
KrakenFlex	$1,095,000	Deploy a real-time DERMS platform that enables EDCs to dynamically match supply with demand and optimize residential DERs like EV chargers and heat pumps to shift load strategically away from high load periods.	• Project manager based in CT to support the project. • Will promote indirect economic sectors through increased installations of heat pumps and EV chargers in CT.	• Project manager hired • Working toward Milestone 9: – Mid-point Report. Working on recruiting customers now.
Piclo	$1,824,500	Deploy New England's first DER-enabled flexibility marketplace that connects EDCs experiencing grid congestion issues to DER aggregators, owners, and Flex Service Providers. This pilot will create a CT-specific marketplace.	• Two new FTEs created with an office in CT to support the project. • Partnering with Connecticut Innovations and CTNext to promote the state as an innovative, future-looking area for business development.	• Hired 1 FTE and one subcontractor. Has also acquired CT-based office space. • Working towards Milestone 4: End-to-End test of data and performance calculation. Has well surpassed enrollment goal for flex-service providers.
Smarter Grid Solutions	$2,703,200	Demonstrate an interconnection platform for flexible load resources like energy storage, and EV chargers at commercial sites to allow EDC to reduce interconnection bottlenecks and manage grid constraints in real-time, providing additional hosting capacity for DER interconnection.	• Indirect economic benefits during pilot stage through increased load, installations of EV chargers, BESS, and DG projects, etc. • At scale, support staff in-state may be required.	• Working on Milestone 3: site recruitment. Have recruited two to participate so far that can serve as multiple use cases.

Company	Award	Description	Local Economic Benefit	Status as of December 2024
Tantalus	$1,113,308	Demonstrate the capabilities of a system that offers AMI and advance power quality measurement to pinpoint vulnerable assets across the distribution grid and enable EDCs to securely access and control behind-the-meter DERs.	• CEO and Chief Legal & Admin. Officer are already based in Norwalk, CT. • At scale, anticipates needing two or three additional offices and hiring 30-60 new staff. Also considering whether to deploy a manufacturing facility with 15-20 staff.	• Hired one additional FTE in Norwalk, CT and 1 local HVAC contractor. • Working toward Milestone 5: 50% Grid Management Deployment, though may face some delays due to local permitting and inspection issues.

Read the IES Cycle 1 Interim Decision.

IES Program Cycle 2

Cycle 2 of the IES Program proceeding began accepting Phase 1 proposals on January 1, 2024, under the theme, "Empowering Electrification." Electrification refers to replacing direct fossil fuel use (e.g., propane, heating oil, gasoline) with electricity in a way that reduces overall emissions and energy costs. Transportation, electricity, and residential heating account for almost three quarters of Connecticut's greenhouse gas (GHG) emissions, which by 2030, must be reduced by 45% from 2001 levels. Projects that fit within the Cycle 2 Theme of "Empowering Electrification" can reduce emissions across all sectors by electrifying equipment as electricity generation simultaneously shifts towards cleaner alternatives, creating a "win-win-win" for EDCs, customers, and the environment.

On December 11, 2024, PURA issued an Interim Decision in Docket No. 23-08-07, Innovative Energy Solutions Program Cycle 2, approving nine projects totaling $11.7 million. Seven of the nine projects are innovator-led, and the other two, Noteworthy AI and Rhizome, are collaborative projects between the innovator and the EDC(s). The projects and the EDCs completed and filed contracts as of February 13, 2025, allowing the projects to officially commence. Table 17 below provides a brief summary of the project, and highlights local economic impacts.

Table 17: IES Program Cycle 2 Selected Projects

Company	Award	Description	Planned Local Economic Benefit
SPAN	$1,625,000	Demonstrate smart electrical panel that can replace traditional electrical breakers and can monitor and control loads in the home, enabling electrification without service upgrades. Will deploy to 300 LMI households across both EDC territories.	• Partner with local PosiGen contractor for deployment • Expected that 2 new FTEs will be created through the pilot
ReVert	$150,000	Install 5,000 Smart Plugs, designed to deliver intelligent plug load management across wide variety of appliances, in municipal buildings, public schools and nonprofit facilities in New Haven, CT.	• 2 FTEs expected to be created • Based in New Haven, CT • Plan to partner with a technical high school
Roundtrip EV	$2,019,177	Public-private-partnership model for deploying electric refuse trucks in CT. Offers turn-key solution with the full suite of services to acquire, install, use and maintain a fleet of EV trucks. IES Program funds will support charging infrastructure and operational costs for five EV refuse trucks for deployment in Environmental Justice communities in East and West Stamford, CT.	• 4 direct FTEs expected to be created • 14 indirect FTEs from vendors
Noteworthy AI	$1,784,750	Smart camera + AI mounted on utility fleet vehicles to passively collect and analyze data on condition of the electric grid as vehicles move on routine schedules. Pilot will mount cameras on two fleet vehicles and target 20%, or 34,000 poles in UI territory.	• 8 direct FTEs expected to be created • Office expansion in New Haven, CT

Company	Award	Description	Planned Local Economic Benefit
Bidirectional Energy	$1,158,782	Virtual power plant platform that aggregates residential or light-duty EV chargers to enable them to operate as bidirectional, “vehicle to everything” (V2X) chargers. Project will provide VTX chargers and mobile app access to 100 customers.	• 10 direct FTEs expected to be created
SWTCH	$1,246,150	Building-level energy management system that manages heat pumps and EV chargers at commercial and multifamily buildings to maximize building electrical capacity and minimize upgrades to allow electrification. Will deploy 10 EV stations and 10 heat pumps with a SWTCH Cortex system at a commercial building and multifamily building in Bridgeport, CT.	• 3 direct FTEs expected to be created • Satellite office established in CT • Work with CT-based installers
Rhizome	$345,000	Resilience Investment software platform that allows EDCs to generate a “future climate risk profile” to strategically planned resilience upgrade investments. Will generate climate-related financial loss estimates up to 50 years into the future. Model will focus on UI territory.	• Work with 3 UConn Grad students for 6 months
Optiwatt	$1,132,989	End-to-end platform targeted at homeowners to facilitate the installation of electrification measures in their home and provide ongoing management. Will provide concierge services incremental to offerings on existing EnergizeCT and EDC webpages.	• 1.65 direct FTE expected to be created • Indirect jobs through local contractors for installations

Read the IES Cycle 2 Interim Decision.

IES Cycle 3

Cycle 3 of the IES Program began accepting applications on January 1, 2025, under the theme "Smart Energy Communities." Smart Energy Communities are defined as neighborhoods, districts, towns, or cities that strategically enhance local energy infrastructure or energy end-uses in ways that improve quality of life for their citizens. Projects deployed under this theme will demonstrate innovative energy solutions that can be easily replicated in other communities facing similar challenges.

Smart Energy Communities themed projects could include, but are not limited to:

- Applications of technology at the intersection of multiple critical sectors (e.g., energy and water);
- Co-location and optimization of energy technology;
- Co-location and optimization of energy technology and community resilience needs;
- Enhanced connectivity and IoT;
- Sustainable energy cost savings;
- Critical infrastructure resilience and reliability;
- Energy data management solutions;
- Incorporating sensors and their data into operations to improve efficiency;
- Increased accessibility to clean energy infrastructure;
- Strategic reuse of existing energy infrastructure;
- Clean transportation accessibility;
- Local energy workforce development; or
- Critical facilities' energy infrastructure resilience.

Importantly, the IES Program will also accept proposals that address the priorities identified in the EMG Framework. Concept proposals were due by February 1, 2025.[3]

Additionally, because this Cycle has a strong community and municipal focus, the IAC developed a short survey that was opened in concert with the Phase 1 application specifically targeted at community leaders. The survey is designed to elicit feedback on potential types of solutions a community is interested in, and potential host sites for projects. Responses to the survey will help the IAC identify potential partners and locations for IES projects that will benefit ratepayers and residents alike. The survey was distributed to municipal leaders in early January 2025, but remains open to responses from other community leaders through February 28, 2025. For more information, interested parties should visit www.ct-ies.com or contact info@ct-ies.com with any questions.

Additional IES Program Resources

- IES Program Design
- Cycle 1 Interim Decision

Click to visit the IES Portal

INNOVATIVE ENERGY SOLUTIONS

Click to Participate in the Community Survey

- Smart Energy Communities Survey

2024 CLEAN & RENEWABLE ENERGY PROGRAM UPDATES

Since 2021, the Authority has prepared and released an annual report summarizing the most up-to-date and comprehensive data available regarding ratepayer-funded clean energy programs in Connecticut. This Annual Clean and Renewable Energy Report (CRE Annual Report) is designed to provide transparency and insight into the state's CRE programs and procurements for all stakeholders and state policymakers. The CRE Annual Report is also intended to be a resource for state policymakers and stakeholders when considering potential modifications to state energy policy goals. In sum, the Authority's primary objective in the CRE Annual Report is to provide open access to the data from the CRE programs that are funded by Connecticut ratepayers.

Specifically, this report provides data regarding the following CRE programs and market segments:

- Residential solar photovoltaic (PV) systems
- Non-Residential solar PV systems
- SCEF Program
- Public Policy Contracts and Power Purchase Agreements (PPAs) selected through Department of Energy and Environmental Protection (DEEP) procurements
- Clean Energy Options Program (CEOP) / Voluntary Renewable Option (VRO) Program
- Renewable Portfolio Standards (RPS) Compliance
- EV Charging Program
- ESS Program

In 2023, the Authority began releasing its Annual Report concurrently with the CRE Annual Report. The 2024 CRE Annual Report will be finalized on February 19, 2025, in Docket No. 24-08-01, 2024 Clean and Renewable Energy Program Data and Report. The Authority remains committed to expanding and improving the type, quality, and presentation of the data included in the CRE Annual Report, and will seek to make incremental improvements each year, to the extent possible.

2024 Clean and Renewable Energy Report

- See Appendix 3
- Report in Docket No. 24-08-01

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[1] See UI Order No. 22 Compliance, Feb. 1, 2024, Docket No. 23-08-03; Motion No. 19, Docket No. 23-08-03, Annual Non-Residential Renewable Energy Solutions Program Review – Year 3; Motion No. 20; Docket No. 23-08-03; UI Order No. 32 Compliance, Aug. 1, 2024, Docket No. 24-08-03; Eversource Order No. 32 Compliance, Aug. 15, 2024, Docket No. 24-08-03; Eversource Order No. 26 Compliance, Aug. 1, 2024, Docket No. 24-08-05; UI Order No. 26 Compliance, July 30, 2024, Docket No. 24-08-05, Annual Energy Storage Solutions Program Review – Year 4; Order No. 28 Compliance, Aug. 1, 2024, Docket No. 24-08-05.

[2] Specifically, the IAC includes representation from PURA, OCC, DEEP, the Connecticut Green Bank, Connecticut Innovations, DECD, UI, Eversource, and the Acadia Center.

[3] The Phase 1 Application period was subsequently extended to February 28, 2025.

2024 GRID MODERNIZATION DECISIONS

Docket Number	Title	Decision Date
17-12-03RE02	PURA Investigation into Distribution System Planning of the Electric Distribution Companies -Advanced Metering Infrastructure	1/03/2024
23-08-01	2023 Clean and Renewable Energy Program Data and Report	2/14/2024
23-08-02	Annual Residential Renewable Energy Solutions Program Review - Year 3	7/10/2024
24-08-02	Annual Residential Renewable Energy Solutions Program Review - Year 4	10/16/2024
24-08-03	Annual Non-Residential Renewable Energy Solutions Program Review - Year 4	11/6/2024
24-05-01	Annual Review of Affordability Programs and Offerings (ENERGY AFFORDABILITY ANNUAL REVIEW)	11/6/2024
17-12-03RE11	PURA Investigation into Distribution System Planning of the Electric Distribution Companies – New Rate Designs and Rates Review	11/20/2024
24-08-05	Annual Energy Storage Solutions Program Review - Year 4	12/4/2024
24-08-06	Annual EV Charging Program Review - Year 4	12/4/2024
24-08-04	Annual Shared Clean Energy Facility Program Review - Year 6	12/11/2024
24-08-08	Non-Wires Solutions Process Initiation Phase	12/18/2024

A comprehensive list of PURA 2024 decisions is available in Appendix 2, attached to this Report.