SECTION 2: PERFORMANCE BASED REGULATION

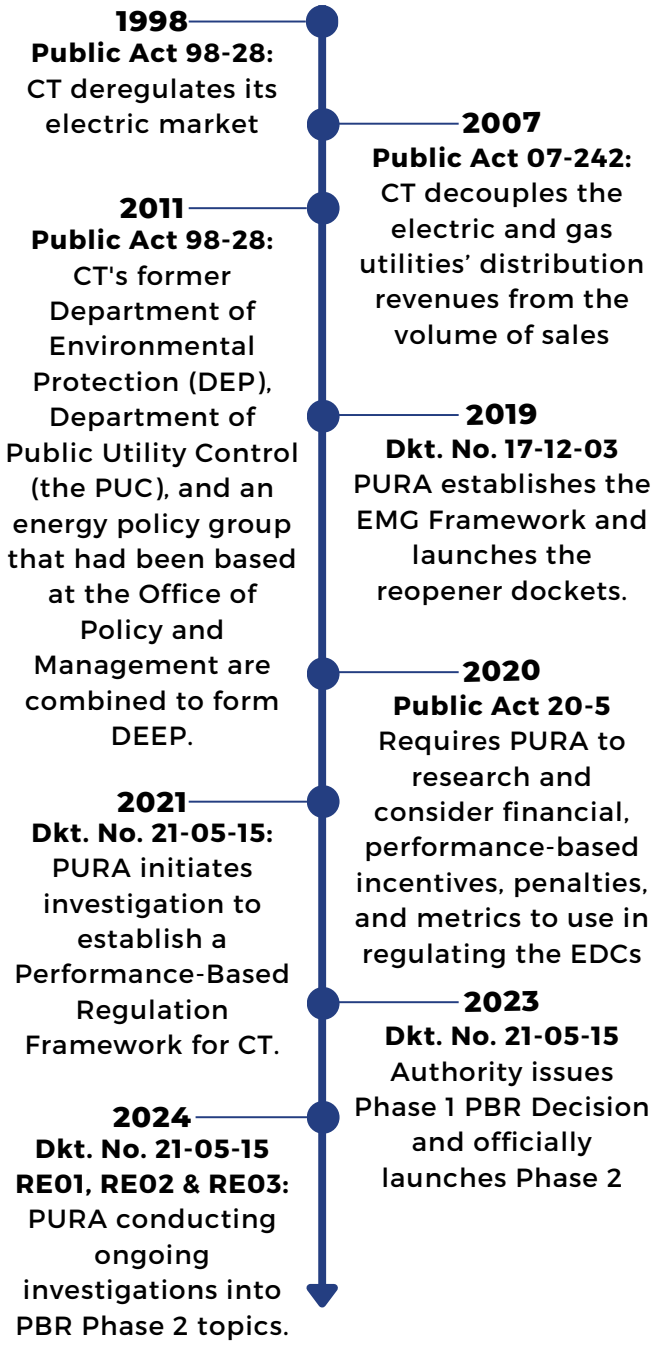
THE EXPANDING SCOPE OF UTILITY REGULATION

At both the national and state levels, the scope of utility regulation has expanded beyond safety, reliability, and affordability and has evolved to now also include the cost-effective achievement of certain public policy goals. States across the country are implementing policies and programs to reduce greenhouse gas emissions and to modernize electric distribution systems. In Connecticut, Public Act 08-98, An Act Concerning Connecticut Global Warming Solutions, set a goal to reduce economy-wide emissions to 80% below the 2001 level by 2050. Additionally, the Connecticut General Assembly has directed PURA and the utilities to develop and implement multiple programs in pursuit of Connecticut's public policy goals that include renewable energy deployment, energy storage, electric vehicle charging, energy justice, resiliency, and more. More recently, PURA catalyzed Connecticut's grid modernization efforts through the 2019 establishment of the Equitable Modern Grid Framework in Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies, (EMG Framework), deploying programs and regulatory procedures across a range of topics from reliability and resilience standards to zero emissions vehicles, as discussed in Section 3.

However, the legacy business model and operations of the EDCs are fundamentally at odds with such trends in public policy. The EDCs' ability to meet the core requirements of delivering safe, clean, reliable, and affordable electric service to customers is becoming increasingly complex and challenging in the midst of significant industry change and the present and future impacts of climate change.

Technology advances and falling costs have accelerated the adoption of distributed energy resources (DERs), giving customers greater control over their ability to generate and consume electricity independently from the grid. Additionally, the proliferation of DERs requires a more distributed electric grid that can better accommodate and manage bidirectional flows of energy and is likely to require additional investment to upgrade systems and infrastructure to optimally integrate and utilize these resources. Further, these conditions are all occurring against a backdrop of increasingly severe and frequent weather events. With every aspect of the economy and customers' daily lives dependent on reliable access to electricity for power, heating and cooling, internet service, and so much more, it is essential that any electricity outage be minimized to the greatest extent possible. Such a necessarily high bar may be increasingly difficult to meet in the face of an electric grid in transition and the more extreme temperatures and more frequent or intense storms associated with climate change.

Figure 4: Historical Evolution of Utility Regulation in Connecticut



Against this backdrop and in recognition of these trends, in 2020, the General Assembly enacted Public Act 20-5, An Act Concerning Emergency Response by Electric Distribution Companies, The Regulation of Other Public Utilities and Nexus Provisions for Certain Disaster-Related or Emergency-Related Work Performed in The State (Take Back our Grid Act), in 2020. This landmark bipartisan legislation required PURA to, among other things, initiate a proceeding to research and consider financial, performance-based incentives, penalties, and metrics to use in regulating the EDCs. In other words, PURA is required to design a performance-based

regulatory framework (PBR Framework) that cost-effectively incentivizes the EDCs to achieve all the outcomes desired from Connecticut's electric grid, including but not limited to: reliability, safety, affordability, emergency responsiveness, cost-efficiency, equity, customer satisfaction, municipal engagement, resilience, and the advancement of the state's environmental and climate policy goals. This PBR Framework will provide a set of tools to reform legacy regulatory structures to enable innovations within modern power systems.

PBR INVESTIGATIONS IN CONNECTICUT

On May 25, 2021, the Authority initiated Docket No. 21-05-15, PURA Investigation into a Performance-Based Regulation Framework for the Electric Distribution Companies, to investigate, develop, and adopt this PBR framework in Connecticut. To help ensure a successful outcome, the Authority established a two-phase process. The purpose of Phase 1 was to: (1) consider regulatory goals and (2) desired public outcomes to inform a PBR framework; (3) evaluate the current regulatory framework in Connecticut to examine which incentive mechanisms and regulatory components may not be functioning as intended or are no longer aligned with the public interest, and to identify specific areas of utility performance that should be targeted for improvement; (4) assess which regulatory mechanisms can best address the specific areas of interest; and (5) identify specific performance metrics, where appropriate.

On April 26, 2023, the Authority issued a Decision in Docket No. 21-05-15, summarized below, concluding Phase 1 and formally launching Phase 2 by initiating three reopener dockets, each focused on further investigating a distinct element of PBR:

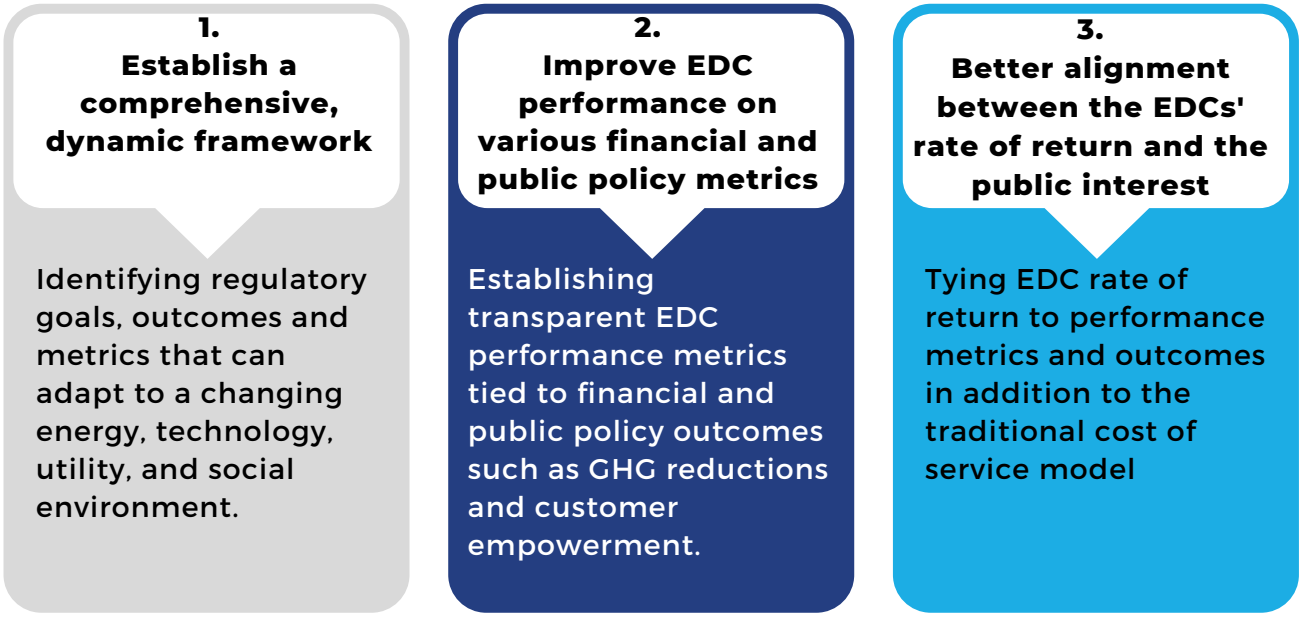
- Docket No. 21-05-15RE01: Revenue Adjustment Mechanisms
- Docket No. 21-05-15RE02: Performance Mechanisms
- Docket No. 21-05-15RE03: Integrated Distribution System Planning

Through these three Phase 2 proceedings, the Authority continues to collaborate with stakeholders to streamline and/or refine elements of the existing regulatory framework, develop incentive mechanisms to better address specific objectives or areas of utility performance, and implement other improvements to the regulatory framework that meet the goals and outcomes.

The PBR Framework is anticipated to alter the way utilities are regulated in Connecticut. The legacy regulatory framework used to ensure safe and reliable electricity at reasonable prices from capital-intensive electricity monopolies is now adjusting to a wave of disruptive technological advances that impact the way utilities earn revenues and what value customers expect from their own EDC. Indeed, the Authority views PBR as a means to revisit the principles of utility regulation and to re-apply these core tenets

in the context of an increasingly decarbonized, digitized, and distributed electricity system. The benefits of PBR converge around three main issues shown by Figure 5:

Figure 5: Objectives of PURA's PBR Proceedings



PBR Phase 1 Decision (Docket No. 21-05-15)

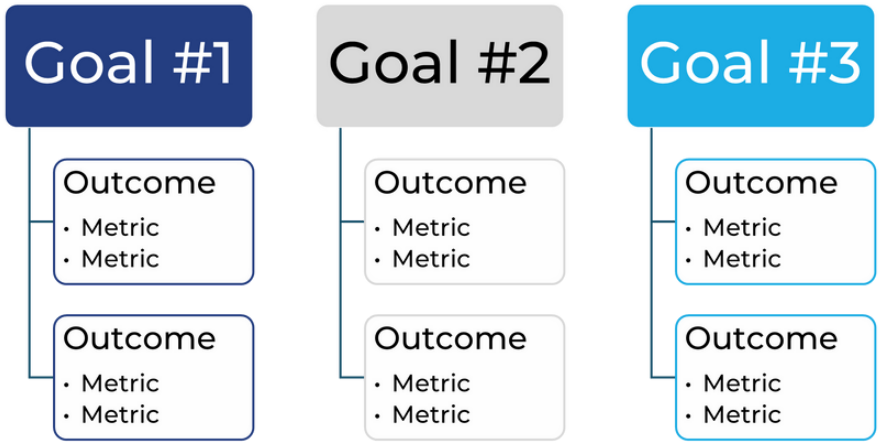
As introduced above, Docket No. 21-05-15, PURA Investigation into a Performance-Based Regulation Framework for the Electric Distribution Companies, was initiated by the Authority on May 26, 2021, pursuant to Section 1 of the Take Back our Grid Act, with the purpose of developing a PBR Framework for Connecticut's electric utilities. After retaining a consultant to provide additional supporting expertise in PBR framework development, the Authority announced a two-phase approach to the proceeding, where Phase 1 would establish a foundation from which to implement modifications and/or refinements to the current regulatory framework in Phase 2.

Throughout 2022, PURA held two public comment sessions and four stakeholder workshops, issued five requests for written comments, and published two concept white papers and a straw proposal in pursuit of the Phase 1 steps. The Authority's rigorous analysis and stakeholder input collection during this time culminated in the Authority's Phase 1 Final Decision, issued on April 26, 2023. The results of this Decision are discussed below.

Goals and Outcomes

Identifying and implementing strategies for encouraging and enforcing utility performance requires a foundation of specific regulatory goals and desired public outcomes. This base then informs the metrics used to measure the EDCs' performance. Figure 6 displays this structure.

Figure 6: PBR Goals-Outcomes Hierarchy Framework



Through this hierarchy, broad regulatory goals, which are high-level by nature, are broken down into clear and measurable actions and results, giving PURA a transparent lens through which to evaluate whether and how the goals are being achieved. While goals represent the "big picture" objectives for utility regulation, outcomes are a more specific set of factors that are closely related to utilities' operations and business decisions, and metrics are the most specific and fundamental indicators of progress toward outcomes, and ultimately, goals.

The goals, and outcomes adopted by the Phase 1 PBR proceeding are the product of significant stakeholder input and are designed with the interest of ratepayers and benefits to the public in mind. They also have broad applicability to all utility regulatory matters allowing them to guide current and future utility regulation in Connecticut. The selected goals are rooted in the longstanding and vital regulatory goals of safety, reliability, and affordability, as well as the four objectives of the EMG Framework. The selected goals are described in Table 2 below.

Table 2: PBR Goals and Definitions Established in Phase 1

Goals	Definitions
Excellent Operational Performance	Achieve the highest standards for EDC performance in terms of efficiency, reliability, resiliency, and supply.
Public Policy Achievement	Meet state-level GHG emissions, decarbonization and DER deployment targets and enhance environmental protection and equity measures.
Customer Empowerment and Satisfaction	Beyond traditional customer satisfaction metrics, empower EDC customers to take greater control of their energy services (e.g., deploying DERs and other grid-edge technology, reducing their carbon footprint, etc.) and expenditures (e.g., lowering their monthly utility bill.
Reasonable, Equitable, and Affordable Rates	Ensure customers across all socioeconomic classes receive reasonable rates and equitable access to the same products and services.

It is important to understand that there is inherent conflict between and within some legacy regulatory goals and the EMG objectives. For example, the achievement of public policy goals such as decarbonization may require additional costs that could strain the achievement of affordable rates in the short term. Such tension between goals cannot be resolved through pursuit of a "perfect" regulatory goal design; rather, finding an appropriate balance of such potential conflicts is both the work of the Phase 2 proceedings and the ongoing work of providing, regulating, and advocating for just and reasonable public utility services. In other words, the apparent tension between the above goals is a fundamental aspect of utility regulation.

Following the selection of these four regulatory goals, PURA, with input and feedback from participants and stakeholders, identified a set of priority public outcomes using a set of five factors:

- Participant and stakeholder priorities;
- Alignment with EMG objectives and other public policy goals;
- How well the proposed outcomes are supported by the existing regulatory framework;
- Magnitude and timing of public benefits; and
- Feasibility of outcome success through alternative regulatory mechanisms.

The result is a set of nine stakeholder-supported priority outcomes, shown by Table 3 below, that will facilitate progress and measurable performance toward the regulatory goals, while ensuring flexibility and a comprehensive approach.

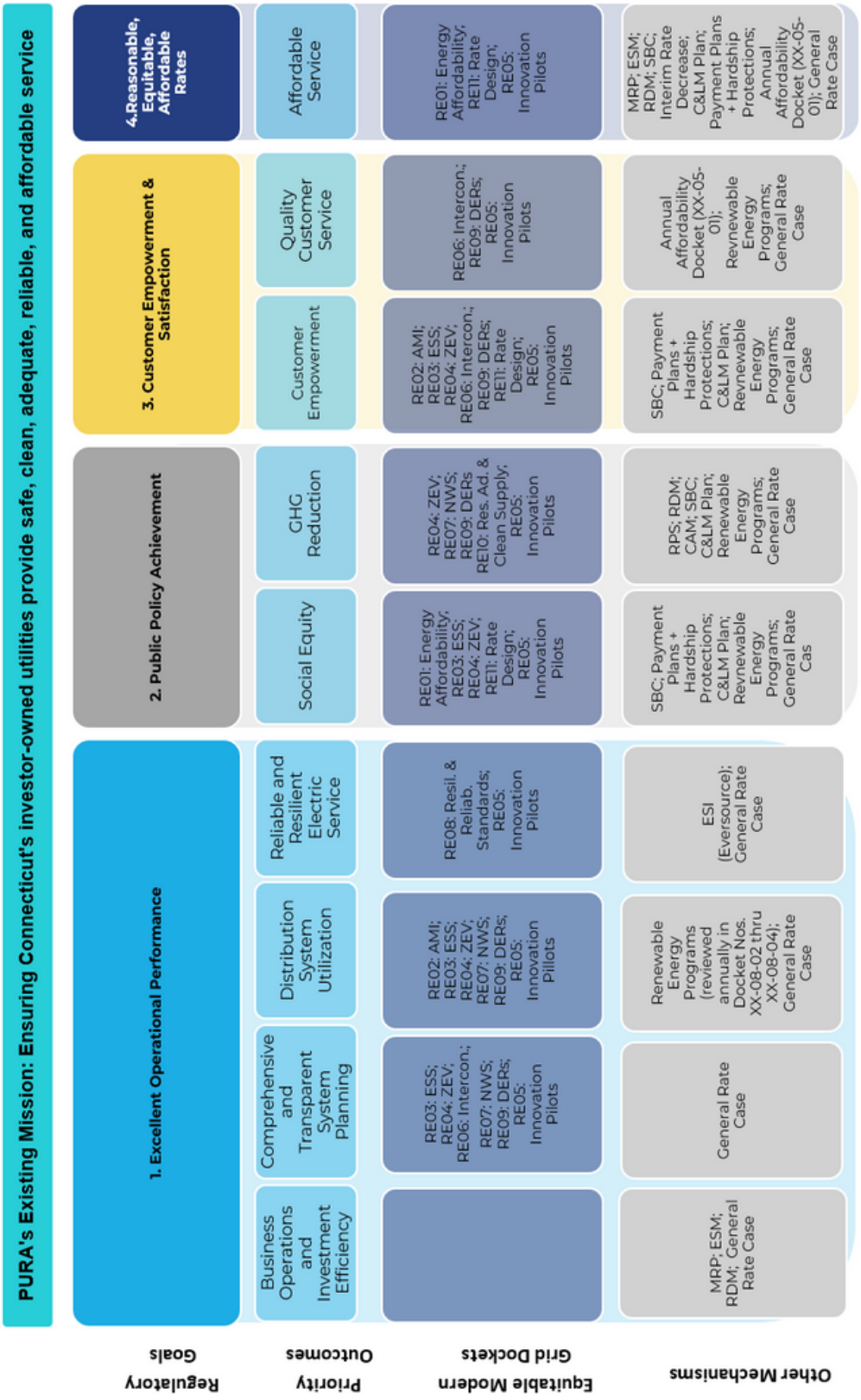
Table 3: PBR Priority Outcomes Established in Phase 1

Goals	Outcomes
Excellent Operational Performance	• Business Operations and Investment Efficiency • Comprehensive and Transparent System Planning • Distribution System Utilization • Reliable and Resilient Electric Service
Public Policy Achievement	• Social Equity • GHG Reduction
Customer Empowerment and Satisfaction	• Customer Empowerment • Quality Customer Service
Reasonable, Equitable, and Affordable Rates	• Affordable Service

Each EMG Framework docket, and all other dockets in the electric sector, can now be identified to support specific regulatory goals and priority outcomes. Figure 7 below provides a visualization of the relationship between the regulatory goals and priority outcomes, the EMG dockets, and other existing mechanisms. As with all of its work, the Authority will strive to balance competing and, at times, potentially conflicting

objectives in Phase 2 in pursuit of optimally achievable results for Connecticut ratepayers.

Figure 7: Visual Map of PBR Goals and Outcomes' Relationships with EMG



Ultimately, the regulatory goals and priority outcomes adopted in the Phase 1 PBR Decision are rooted in, and have broad applicability to, all utility regulatory matters and, as such, will guide current and future utility regulation in Connecticut.

Additional PBR Phase 1 Resources

- Final Decision
- Procedural Record

PBR Phase 2 Topics and Procedural Plan

Phase 2 of the PBR Framework development focuses on establishing or modifying mechanisms to ensure the achievements of the established regulatory goals and priority outcomes and the necessary metrics to track progress towards these goals and outcomes. The Phase 1 PBR Decision identifies the regulatory mechanisms that PURA is investigating in Phase 2 and how they map back to the priority outcomes.

Table 4: PBR Phase 2 Regulatory Mechanisms by Topic Area

Regulatory Mechanism Category	Regulatory Mechanism	Investigation Description	Likely Priority Outcomes Served
Revenue Adjustment Mechanisms: Regulatory tools designed around a utility's revenue requirement aimed at better aligning the utility's financial incentives with regulatory principles or a desired outcome.	Multi-Year Rate Plan (MRP) and Indexed Revenue Cap	Consider a revised MRP design, including an appropriate control period, and an Externally-Indexed Revenue Cap approach that allows for interim adjustments pursuant to a revenue cap index formula.	• Business Operations and Investment Efficiency • Affordable Service
	Earnings Sharing Mechanism (ESM)	Examine whether the existing ESM provides a fair and equitable sharing of earnings between the EDC and customers when earnings fall outside an Authority-approved range and is consistent with the implementation of any PIMs.	• Business Operations and Investment Efficiency • Affordable Service
	Revenue Decoupling	Explore advanced uses of revenue decoupling that both true up revenues to an annual revenue target and protect customers' interests.	• Distribution System Utilization • Customer Empowerment • GHG Reduction
	Capex / Opex Equalization	Explore development of approaches to equalize treatment of capital expenditures and operating expenditures.	• Business Operations and Investment Efficiency • Comprehensive and Transparent System Planning • Affordable Service

Regulatory Mechanism Category	Regulatory Mechanism	Investigation Description	Likely Priority Outcomes Served
Performance Mechanisms: Regulatory tools used to track, measure, and/or possibly incent EDC behavior through achievement of performance targets.	Reported Metrics	Develop a portfolio of reported metrics to highlight activities under several priority outcomes.	• Affordable Service • Social Equity • Reliable and Resilient Electric Service • Comprehensive and Transparent System Planning
	Scorecards	Design and publish scorecards with targeted performance levels to track progress against several priority outcomes.	• Reliable and Resilient Electric Service • Business Operations and Investment Efficiency • Quality Customer Service • GHG Reduction
	Performance Incentive Mechanisms (PIMs)	Implement a set of PIMs designed to help drive achievement of several priority outcomes.	• Reliable and Resilient Electric Service • Customer Empowerment • Distribution System Utilization
Other Regulatory Mechanisms: Additional mechanisms that do not qualify as revenue adjustment mechanisms or performance mechanisms.	Integrated Distribution System Planning (IDSP)	Establish a comprehensive, transparent, and stakeholder-informed IDSP process that is integrated with considerations regarding grid-edge technologies, DERs, electric vehicles (EVs), and other beneficial electrification initiatives. This effort could also explore the refinement of data-sharing mechanisms and standards.	• Comprehensive and Transparent System Planning • Distribution System Utilization • GHG Reduction16F

As shown above, these various regulatory mechanisms can be grouped into three distinct categories: revenue adjustment mechanisms; performance mechanisms; and other regulatory mechanisms. As such, Phase 2 consists of three reopener proceedings, Docket Nos. 21-05-15RE01, 21-05-15RE02, and 21-05-15RE03, to investigate each of these categories of regulatory mechanisms. The Authority initiated each of these three reopener proceedings on May 3, 2023.

PBR Phase 2 Progress

The Authority remains committed to advancing the PBR reopener dockets at an ambitious but achievable pace. While the timelines are flexible and docket completion

dates remain tentative, the Authority aims for issuance of a Proposed Final Decision in both Docket Nos. 21-05-15RE01 and 21-05-15RE02 by the end of 2024 and the completion of all three proceedings by 2025. These deadlines were designed to ensure ample opportunity for frequent and detailed stakeholder participation through technical meetings and opportunities to comment. The following summarizes the substantive focus and progress in each of the three reopeners through year-end 2023.

21-05-15RE01: Revenue Adjustment Mechanisms

The first PBR reopener is investigating potential modifications and additions to Revenue Adjustment Mechanisms (RAM). Specifically, these include: Multi-Year Rate Plans (MRP); Earnings Sharing Mechanisms (ESM); the Revenue Decoupling Mechanism (RDM); and potential Capex / Opex Equalization Measures. As the MRP is the primary mechanism governing EDC cost recovery through base rates, it will be the main focus of this investigation. By necessity, the ESM, RDM, ARM, and Capex / Opex Equalization will also be reviewed as mechanisms related to the MRP; however, such review may or may not result in reforms during Phase 2 if none are deemed necessary to advance priority outcomes. Moreover, the Authority plans to review, consider, and investigate the MRP, ESM, RDM, ARM, and Capex / Opex Equalization as a group of Revenue Adjustment Mechanisms in Phase 2 to account for the interrelationships and collective results of such mechanisms and proposed modifications.

The discovery, analysis, and deliberation of the Revenue Adjustment Mechanisms reopener will culminate in a Final Decision that provides guidance for subsequent EDC rate cases. Though this articulated endpoint may evolve over the course of the proceeding, any material changes will be communicated publicly through Docket No. 21-05-15RE01.

Table 5 provides a summary of the procedural events that have occurred to date, and the upcoming events and opportunities for participation.

Table 5: 21-05-15RE01 Procedural Schedule Summary

Event	Date
Technical Meeting #1	7/31/23
Technical Meeting #2	8/23/23
Technical Meeting #3	9/05/23
Technical Meeting #4	9/18/23
Written Comments Round 1	9/29/23
Straw Proposal	11/16/23

Event	Date
Written Comments on Straw Proposal	12/21/23
Technical Meeting #5	1/10/24
Technical Meeting #6	2/14/24
Technical Meeting #7*	3/30/24 Register
Written Comments Round 3*	5/31/24
Technical Meeting #8*	6/7/24 Register
Hearing*	9/9/24 Register
Briefs*	10/9/24
Proposed Final Decision*	11/22/24
Final Decision Issued*	1/15/25

*Tentative

21-05-15RE02: Performance Mechanisms

The second PBR reopener is investigating potential modifications and additions to Performance Mechanisms. These include: Reported Metrics; Scorecards; and Performance Incentive Mechanisms (PIMs). These elements of the state's regulatory structure provide transparency of information with respect to EDC performance and will help measure achievement of the regulatory goals and priority outcomes adopted in this Decision. The Authority intends to review this group of performance mechanisms as a portfolio to account for the interrelationships and collective results of such mechanisms and proposed modifications. The relationship between an EDC's revenues and profits and its performance and financial incentives requires that the substance of Docket Nos. 21-05-15RE01 and 21-05-15RE02 be developed with mutual consideration of each.

The discovery, analysis, and deliberation of the Performance Mechanisms reopener will culminate in a final Decision to align existing reported metrics within the PBR Framework and elsewhere and to adopt new metrics effective immediately where necessary. Additionally, this reopener docket's final Decision will establish scorecards to be implemented as soon as practicable and PIMs likely to be implemented in the subsequent EDC rate cases. The final Decision in Docket No. 21-05-15RE02 will include the requisite detail for implementation, including but not limited to, metric and scorecard reporting frequency, the format and venue for reporting, targets and benchmarks in the case of scorecards, and impact on return on equity in the case of PIMs. Though this articulated endpoint may evolve over the course of the proceeding,

any material changes will be communicated publicly through Docket No. 21-05-15RE02.

Table 6 provides a summary of the procedural events that have occurred to date, and the upcoming events and opportunities for participation.

Table 6: 21-05-15RE02 Procedural Schedule Summary

Event	Date
Working Group Meeting #1	6/22/23
Working Group Meeting #2	7/17/23
Working Group Meeting #3	7/27/23
Written Comments Round 1	8/21/23
Working Group Meeting #4	8/29/23
Technical Meeting #1	9/11/23
Written Comments Round 2	10/2/23
Technical Meeting #2	10/12/23
Technical Meeting #3	12/12/23
Written Comments Round 3	12/15/23
Straw Proposal*	3/14/24
Technical Meeting #4*	3/27/24 Register
Straw Proposal Comments*	4/17/24
Technical Meeting #5*	6/10/24 Register
Public Listening Session*	7/16/24 Register
Public Listening Session*	7/18/24 Register
Hearing*	9/13/24 Register
Briefs*	10/16/24
Proposed Final Decision*	11/27/24
Final Decision*	1/22/25

*Tentative

21-05-15RE03: Integrated Distribution Planning

The third and final PBR reopener will investigate the establishment of an Integrated Distribution System Plan (IDSP). Such planning among EDCs is a growing industry standard to anticipate and accommodate the proliferation of DERs and grid-edge technologies on the distribution system. This investigation is expected to encompass three key areas: (1) EDC systems and processes that support IDSP, including but not limited to internal planning, operations, and Information Technology systems; (2) operations and optimization of the grid; and (3) IDSP structure and process.

Given the interrelationship between these topic areas and various other dockets, the Authority intends to take a holistic approach that considers elements of IDSP currently in effect in Connecticut. Various elements of IDSP currently exist in Connecticut, for example: EDC hosting capacity maps and the Non-wires Solutions (NWS) Process recently established in Docket No. 17-12-03RE07, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Non-Wires Alternatives, (see Section 3 for more information on the NWS Process). Additionally, the EDCs already conduct some version of load forecasting and assess grid needs to inform capital investments – both of which are core practices of IDSP.

As a result, this proceeding will focus on documenting the existing components of IDSP, reviewing and evaluating the systems and processes that support IDSP, making components of IDSP more transparent and better connected where necessary, and establishing a public and transparent IDSP process and reporting standard(s). Furthermore, the Final Decision adopted in Docket No. 21-05-15RE03 will replace the IDSP requirements in the EMG Decision. Though this articulated endpoint may evolve over the course of the proceeding, any material changes will be communicated publicly through Docket No. 21-05-15RE03.

Table 7 provides a summary of the procedural events that have occurred to date, and the upcoming events and opportunities for participation.

Table 7: 21-05-15RE03 Procedural Schedule Summary

Event	Date
Technical Meeting #1	9/20/23
Technical Meeting #2	11/08/23
Technical Meeting #3	1/11/24
Technical Meeting #4	2/6/24

Event	Date
Technical Meeting #5*	3/6/24 Register
Technical Meeting #6*	4/2/24 Register
Technical Meeting #7*	5/14/25 Register
Technical Meeting #8*	6/11/24 Register
Concept Paper*	9/19/24
Written Comments Round 1*	10/9/24
Technical Meeting #9*	10/22/24 Register
Technical Meeting #10*	12/03/24 Register
Straw Proposal*	2/6/25
Written Comments Round 2*	2/27/25
Hearing	5/13/25 Register
Briefs*	6/3/25
Proposed Final Decision*	7/8/25
Final Decision*	8/20/25

*Tentative

PBR Implementation in Rate Cases

A key driver of the Authority's ambitious timelines for these Phase II proceedings is the ability to utilize the completed framework for the next set of EDC rate cases. Much of the PBR reforms outlined in the Final Decisions in Docket Nos. 21-05-15RE01 and 21-05-15RE02 will be implemented through such rate cases.