Acadia Center
Advancing the Clean Energy Future
21 Oak Street • Suite 202
Hartford, CT 06106-8015

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Mr. Jeffrey R. Gaudiosi, Esq.
Executive Secretary
Public Utilities Regulatory Authority
10 Franklin Square
New Britain, CT 06051

Regarding: Docket No. 21-05-15RE03 Staff Concept Paper #1

Dear Mr. Gaudiosi:

Thank you for the opportunity to submit written comments in response to the Public Utilities Regulatory Authority (PURA) Staff Concept Paper #1 in Docket No. 21-05-15RE03.

Integrated Distribution System Planning (IDSP) is a key tool for enabling the achievement of Connecticut's clean energy transition. IDSP provides a framework for comprehensively assessing the state's distribution system and identifying both challenges and the solutions as Connecticut seeks to reduce greenhouse gas emissions, enable an affordable energy system, strengthen resiliency and reliability, and advance equity and environmental justice. IDSP can also help to identify solutions that avoid overbuilding and oversizing investments, thereby saving ratepayers money. Connecticut can no longer afford to continue energy system planning in silos and without the inclusion of stakeholder voices and perspectives that are traditionally not included in planning efforts.

Acadia Center notes several overarching recommendations relevant to developing an IDSP framework:

1. **IDSP processes should enable robust stakeholder review and input.** From Acadia Center's perspective, one of the most important priority outcomes that IDSP can support is more comprehensive and transparent system planning. To that end, an IDSP framework should create processes that incorporate the voices and perspectives of stakeholders who traditionally have been unable to participate in utility planning efforts. Acadia Center supports the Office of Consumer Counsel's (OCC) recommendation for the inclusion of community and stakeholder engagement plans, which should ideally be created in partnership with community-based organizations. As part of Oregon's distribution system planning process, for example, utilities are required to develop community engagement plans and are required to collaborate with community-based organizations and environmental justice communities in doing so.[1] As part of its integrated grid planning process, Portland General Electric hired community-based organizations to recruit for and convene a series of community workshops, develop educational materials, and conduct research for the utility's distribution plan. These efforts could serve as a model for Connecticut's IDSP framework.

[1] Oregon Public Utility Commission, Order 20-485, Consideration for Adoption Staff Proposed Guidelines for Distribution System Planning (December 2020), https://apps.puc.state.or.us/orders/2020ords/20-485.pdf .

At the same time, independent vetting and review of utility planning efforts and work products can help to ensure that the assumptions, tools, and methodologies used are reasonable and accurate. Independent modeling efforts using the same tools and methods that the utilities use can provide useful counterpoints to utility modeling and provide a fuller picture of both forecasts and potential least-cost solutions. Independent review requires that relevant utility data be accessible to third parties. The Technical Advisory Panel used in Hawaii's Integrated Grid Planning proceeding (described in more detail farther below) provides a useful model. In that process, the utility was directed to adjust its forecast assumptions specifically in response to independent review and vetting by the Technical Advisory Panel, emphasizing the importance of incorporating a broad set of perspectives and expertise into an IDSP process.

2. **Although the current assessment of an IDSP is focused on the electric system, Acadia Center strongly encourages PURA to consider how an IDSP can enable closer coordination around long-term planning between the gas and electric utility sectors.** Integrated gas-electric planning is essential for the successful transformation of Connecticut's energy system as the state works to meet its emissions reduction and affordability goals. Acadia Center recommends that PURA emphasize the importance of coordinated electric-gas planning in any eventual IDSP framework. The Massachusetts Department of Public Utilities (DPU) 20-80 Future of Gas proceeding provides a useful model for how this could work in Connecticut and describes why integrated electric-gas planning is important:

> *"The [DPU] agrees that coordinated and comprehensive planning between electric and gas utilities is needed to facilitate the energy transition. Gas and electric infrastructure planning will be necessary as consumers transition from using fossil fuel-based heating systems to electric heat pumps. We note that going forward, evaluation of any proposed investments will have to take place in the context of joint electric and gas system planning. The Department emphasizes that joint electric and gas utility planning must occur in a broad stakeholder context so that the LDCs and electric distribution companies exclusively are not defining the process and outcome."*[2]

As PURA and other stakeholders work to develop an IDSP Document, Acadia Center would like to note the following considerations:

1. Acadia Center agrees that the Jade roadmap process developed by the NARUC-NASEO task force provides a helpful framework for developing an IDSP process.

2. Acadia Center agrees with the OCC's recommendation that the IDSP should be updated every four years. Acadia Center also agrees with the OCC's recommendation about requiring annual updates for a specific

[2] Massachusetts Department of Public Utilities 20-80-B, page 131
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18297602

subset of categories.[3] The annual update for the Integrated Grid Planning action plan in the Hawaii Integrated Grid Planning process could serve as a model.[4]

3. Acadia Center agrees with the OCC about the importance of monitoring and tracking the actual use of the grid infrastructure that gets deployed as a result of IDSP processes in order to ensure that investments are being prudently used and that benefits are in fact being provided to ratepayers.[5]

4. The IDSP should include both a longer-term (e.g. 10+ years) vision for the grid, as well as a near-term (e.g. four-year) action plan.

5. Clear environmental, equity, and environmental justice metrics should be used to guide planning decisions. As part of the Maine PUC's directive to the state's utilities on Integrated Grid Planning, the PUC directed the utilities themselves to develop an environmental, equity, and environmental justice (EEEJ) framework that would be incorporated into the final grid plans and used to assess the EEEJ impacts of the plans. Moreover, the PUC directed the utilities to "propose how to measure the effectiveness of their grid plans."[6] Acadia Center strongly urges PURA not to follow this example and, instead, clarify the metrics required for assessing the effectiveness of the plans—including, but not limited to, those relevant to the environmental, equity, and environmental justice impacts—as part of the final IDSP framework before the IDSP process begins. Developing the metrics to measure the effectiveness of the plans should be a collaborative process and the result of broad stakeholder input and should not be up to the sole discretion of the utilities.

6. Acadia Center agrees with the OCC's social equity priority outcomes and proposed IDSP objectives (i.e. that "EDC's IDSP processes [should] *consider* distributive equity in new investment decisions…*prioritize* recognition justice, and…*promote* procedural equity"). To strengthen the three social equity objectives, Acadia Center recommends clear definitions and actions associated with "consider," "prioritize," and "promote," as well as consistent usage across the IDSP process.

7. Acadia Center supports incorporating the Non-Wires Solutions (NWS) program into the IDSP given that the NWS program provides an existing platform that can be used to support broader planning efforts and provides a model for substantive filing requirements. NWS like behind-the-meter and front-of-the-meter energy storage will help to optimize distribution system investments and will play a vital role in the IDSP process.

8. Acadia Center agrees with the OCC's recommendation to incorporate leading indicators, such as electric vehicle and heat pump targets, into forecasts and modeling, rather than relying solely on lagging indicators.[7]

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[3] Office of Consumer Counsel, Re: Docket No. 21-05-15RE03, PURA Investigation into the Establishment of Integrated Distribution System Planning within a Performance-Based Regulation Framework, August 23, 2024.

[4] See: https://hawaiipowered.com/igpreport/IGP_Action_Plan_Annual_Update_2024-06-24.pdf

[5] Office of Consumer Counsel, Re: Docket No. 21-05-15RE03, PURA Investigation into the Establishment of Integrated Distribution System Planning within a Performance-Based Regulation Framework, May 10, 2024, at 5.

[6] Maine Public Utilities Commission, Proceeding To Identify Priorities For Grid Plan Filings, *Order*, Docket No. 2022-00322, July 12, 2024, at 35.

[7] Office of Consumer Counsel, Re: Docket No. 21-05-15RE03, PURA Investigation into the Establishment of Integrated Distribution System Planning within a Performance-Based Regulation Framework, May 10, 2024.

Moreover, granular hosting capacity maps and streamlined interconnection processes can further support the goals of IDSP by revealing areas of expected load growth. Targeting incentives to help fast-track deployment of distributed generation or DERs at those locations can help offset expected load growth.

9. IDSP scenario planning and forecasting should include a sufficiently broad set of scenarios and parameters to test. The assumptions that go into the modeling should be fully transparent and should be the result of a stakeholder process to vet and review assumptions being made. For example, the Energy Resources Division in the Minnesota Department of Commerce conducts its own modeling to evaluate the economic and rate impacts of utility plans. As part of recent integrated resource planning, several clean energy groups had access to the same planning model as Xcel Energy, allowing them to conduct their own analyses, which identified a lower-cost and lower-emission alternative to investing in a new natural gas combined cycle plant.[8] While distribution system planning comes with unique complexities compared to Integrated Resource Planning in vertically integrated jurisdictions, the inclusion of independent technical experts to access and vet utility modeling efforts will remain important for Connecticut's IDSP.

   Further, Acadia Center recommends that the IDSP include a range of forecast scenarios that capture potential futures with sufficient granularity. Multiple scenarios can help reveal the varying impacts over time of factors such as fuel and technology costs, load flexibility, electrification, DER deployment, among other issues. Multiple scenarios can help capture the varying effects of different assumptions on load projections and solution evaluation. Moreover, any "baseline" scenario should incorporate all relevant state and federal policies to avoid missing potentially important assumptions. Although not all of its scenarios may be relevant, the Hawaii Integrated Grid Planning process considered the following scenarios, for example:

[8] *Coal plant retirements, renewable energy investments, and no new gas in final Xcel Energy plan*, Fresh Energy, February 8, 2022, at https://fresh-energy.org/no-new-gas-xcel-energy-long-term-plan.

Modeling Scenario	Purpose
Base Electricity Demand	Reference scenario.
Land-Constrained	Understand the impact of limited availability of land for future solar, onshore wind, and biomass development.
High Electricity Demand	Understand the impact of customer adoption of technologies for DER, EVs, EE, and TOU rates that lead to higher loads.
Low Electricity Demand	Understand the impact of customer adoption of technologies for DER, EVs, EE, and TOU rates that leads to lower loads.
Faster Technology Adoption	Understand the impact of faster customer adoption of DER, EV, and EE.
Unmanaged Electric Vehicles	Understand the value of managed EV charging relative to unmanaged.
DER Freeze	Understand the value of the distributed PV and BESS uptake in the Base forecast. Informative for program design and solution sourcing.
Electric Vehicle Freeze	Understand the value of the electric vehicle's uptake in the Base forecast. Informative for program design and solution sourcing.
High Fuel Retirement Optimization	Understand the impact of higher fuel prices on the resource plan while allowing existing firm unit to be retired by the model.
Energy Efficiency Resource	Understand the value of energy efficiency as a resource. Informative for program design and solution sourcing.

Table 1. List of Modeling Scenarios from Hawaiian Electric's 2023 Integrated Grid Plan.

10. Acadia Center recommends that the IDSP process include a technical advisory group, issue-specific working groups, and a stakeholder council to provide feedback and guidance throughout the process. Hawaii's Integrated Grid Planning (IGP) proceeding, which resulted in a Final Integrated Grid Plan in March 2023, provides a useful model. Hawaii's IGP included three main forums for stakeholder input, whose functions and composition may provide useful insights for PURA as it devises its own stakeholder process. These included a Stakeholder Council to provide feedback; a Technical Advisory Panel to vet tools and assumptions; and ad-hoc working groups.[9] These were standing bodies, utilized throughout the proceeding to ensure ongoing collaboration and dialogue.[10]

    Hawaii's 20-member Stakeholder Council met quarterly to provide a forum for updates and feedback throughout the planning process and to identify priority issues for ad-hoc working groups to explore in more

[9] Hawaii Electric, Integrated Grid Planning Stakeholder and Community Engagement landing page, on September 1, 2022, at https://www.hawaiianelectric.com/clean-energy-hawaii/integrated-grid-planning/stakeholder-and-community-engagement

[10] Hawaii Public Utilities Commission, Docket No. 2018-01265, Order No. 35569 Instituting a Proceeding to Investigate Integrated Grid Planning.

detail. Stakeholder Council participants included city and county representatives; community delegates; consumer advocates; representatives for demand response, electric vehicles, energy storage, and energy efficiency industries; solar developers; generators; industrial customers; state planning agencies; and environmental organizations, among others. The Stakeholder Council was facilitated by the utility, but the Commission sets strong guidance and protocols for participation, e.g., the utility was required to come to meetings with specific questions for feedback and at the next meeting needed to demonstrate how feedback led to changes in its planning work.

Hawaii's model also included a Technical Advisory Panel, which comprised industry expert volunteers who provided independent peer review of the grid planning process, methodologies, tools, and the results of modeling and other technical analyses. In response to input from the Technical Advisory Panel, for example, the Commission required the utility to change its assumptions related to DER forecasts, load and peak forecasts, energy efficiency resource costs, and its reliability planning criteria, and the utility made significant changes to its Grid Needs Assessments. Hawaii also used ad-hoc working groups composed of subject matter experts to assist in specific aspects of grid planning, such as forecast assumptions, resilience, grid services, system and customer data solutions, and competitive procurement processes. These working groups were essential for identifying gaps, developing consensus, and enabling greater transparency and independent vetting. Importantly, the utilities were required to explicitly show at regular intervals how stakeholder feedback informed the planning work as it was in development.

The importance of independent review on a regular timeframe is reflected in the Hawaii PUC's guidance on forecasting as part of its Integrated Grid Planning (IGP) process: "Hawaiian Electric's forecast should be integrated into the overall IGP planning process through a series of feedback loops so that the forecast is not simply conducted once per cycle but is used as a tool to iteratively inform needs identification and solution evaluation."[11] Acadia Center recommends that PURA take a similar approach.

11. Acadia Center recommends that PURA establish a direct link between the IDSP process and the activities of the Energy Efficiency Board (EEB), given that energy efficiency will continue to play an increasingly important role in reducing demand and limiting strain on the grid as Connecticut electrifies its buildings and transportation sectors.

12. Acadia Center recommends that the IDSP include a requirement for the utilities to develop a roadmap outlining when and how they will undertake 8760-hour forecasting in the future.

13. Acadia Center recommends that the IDSP include a requirement for the utilities to fully incorporate Advanced Metering Infrastructure (AMI) data into the IDSP process. In service territories where AMI is currently being deployed, PURA should require a roadmap for the eventual inclusion of AMI data into the IDSP process. At the same time, IDSP processes should acknowledge and incorporate as appropriate the activities of third-party providers who make use of aggregated AMI data to provide demand flexibility solutions. These solutions can help inform grid management and investment decisions.

[11] Hawaii Public Utilities Commission, Docket No. 2018-0165, November 5, 2020, Instituting a Proceeding To Investigate Integrated Grid Planning. Order No. 37419, *Providing Guidance*, at 9.

14. The IDSP process should include a formal stakeholder process for identifying the "solutions library" to addressing grid needs and developing the criteria for evaluating and comparing across solutions.

15. The IDSP document should include clear guidelines for stakeholder engagement throughout the planning process, including key milestones, requirements for showing how and why stakeholder input was incorporated (or not), expectations for public outreach and education, etc.

Sincerely,

Oliver Tully
Director, Utility Innovation and Reform
otully@acadiacenter.org
860-246-7121 ext. 202

Jayson Velazquez
Climate and Energy Justice Policy Associate
jvelazquez@acadiacenter.org
860-246-7121 ext. 203