

2020 Integrated Resources Plan

Public Hearing
January 14, 2021



Connecticut Department of Energy and Environmental Protection

CONNECTICUT
ENERGY
ENVIRONMENT

Prepared in accordance with
Section 16a-3a of the Connecticut
General Statutes

**Integrated
Resources
Plan**

Pathways to achieve a
100% zero carbon
electric sector by 2040

DECEMBER 2020

Connecticut Department of Energy and
Environmental Protection

Statutory Requirements of the IRP (CGS 16a-3a)

- Optimal means to eliminate electric demand growth, reduce peak demand, and shift demand to off-peak periods;
- The impact of air quality standards and greenhouse gas goals, and the potential for different resources to help achieve those standards and goals;
- Energy security and economic risks associated with potential energy resources;
- A priority to meet resource needs through energy efficiency and demand reduction measures that are cost-effective, reliable, and feasible;
- Specific consideration of the extent to which generation needs can be met by renewable and combined heat and power (CHP) facilities;
- Optimal use of generation sites and generation portfolio existing within the state;
- Fuel types, diversity, availability, firmness of supply, and security and environmental impacts thereof (including greenhouse gas emission impacts);
- Reliability, peak load and energy forecasts, system contingencies, and existing resource availabilities;
- Cost impacts on electric ratepayers; and
- Import limitations and the appropriate reliance on such imports.



Global Warming Solutions Act

- In 2008, Connecticut enacted the Global Warming Solutions Act, Connecticut General Statutes Section 22a-200a, requiring an 80 percent reduction in GHG emissions from 2001 levels by 2050 across all sectors of the economy.
- The GWSA was amended in 2018 to establish a mid-term goal of 45 percent reduction in GHG emissions from 2001 levels by 2030.



Gov. Lamont's Executive Order No. 3

"In order to accelerate achievement of the goals in the 2008 Global Warming Solutions Act and the 2018 Act Concerning Climate Change Planning and Resiliency, spur innovation in carbon-reduction strategies and economic development throughout the state and region, and ensure that strategic electrification strategies for decarbonizing the transportation and building sectors will result in real emissions reduction, DEEP shall, in consultation with PURA as appropriate, in the IRP pursuant to sections 16a-3b of the Connecticut General Statutes **analyze pathways and recommend strategies for achieving a 100% zero carbon target for the electric sector by 2040.**"



2020 IRP Organization- Six Key Objectives

1. Decarbonize the Electric Sector

- There are multiple pathways to achieving a 100% Zero Carbon Electric Sector
- Connecticut should codify this goal

2. Securing the Benefits of Competition and Minimizing Ratepayer Risk

- Energy markets are not producing investment in clean energy resources and are creating an overreliance on natural gas resources
- Connecticut and the other NE states must work to reform the regional wholesale markets
- Connecticut must continue deployment of distributed generation resources

3. Ensuring Energy Affordability and Equity for all Ratepayers

- Connecticut has some of the highest rates in the country and a large energy affordability gap
- The state's electricity supply must be affordable for all customers to ensure Connecticut's economic competitiveness
- Achieving a Zero Carbon electric sector requires removing barriers to participation and expanding access to State energy programs for underserved and overburdened customers



2020 IRP Organization- Six Key Objectives

4. Optimal Siting of Generation Resources

- Reform regional energy markets so that they no longer primarily incentivize fossil fuel generating resources, which tend to be developed in low-income communities, creating air quality and environmental justice issues.
- Leverage regional resources for OSW siting to address concerns related to wildlife, natural resources, and fisheries.
- Connecticut must align its energy and environmental policies to establish siting practices that are transparent, predictable, and efficient while protecting our natural resources.

5. Transmission Upgrades & Integration of Variable and Distributed Energy Resources

- New England's existing transmission infrastructure can effectively support only a limited amount of new zero carbon generation
- Energy efficiency, demand response, and storage play a crucial role in minimizing total load and integrating intermittent resources
- Upgrading our transmission system can reduce wasted clean energy
- Regional collaboration will improve efficiency and cost effectiveness

6. Balancing Decarbonization and Other Public Policy Goals

- Connecticut has multiple coexisting energy and environmental policy goals (e.g. waste management, air quality)
- There are opportunities to better align the state's decarbonization efforts with the broader goals of the RPS and other state policies.



Near Term Strategies for Success

Adopt Legislation

- Enacting a 100% zero carbon supply target for Connecticut
- Signal commitment to the market, and citizens of CT

Reform Markets

- Ensure the markets recognize and incorporate the states' climate and clean energy policies
- Allow clean energy resources to compete fairly
- Regionalize costs of supporting zero carbon resources that benefit all

Upgrade Transmission

- Transmission needs to be reconfigured and upgraded to integrate offshore wind and other new resources
- Upgrades must occur in advance of new resource development
- Proactive and collaborative approach with all NE states and ISO-NE

Balance Intermittent Resources

- Ensure continued savings by authorizing DEEP to procure additional EE and DR and developing storage procurement strategies

Streamline Siting

- Improve the transparency, predictability, and efficiency of solar siting and permitting in Connecticut
- Work with regional entities on offshore wind siting and mitigation of impacts on natural resources and fisheries

Thermal RPS

- Heating of buildings and water is a major source of GHG emissions. Deployment of “renewable thermal” faces economic barriers.
- P.A. 19-35 requires IRP to consider creation of “portfolio standard for thermal energy,” including biodiesel in home heating oil. DEEP conducted fact-finding, engaged stakeholders.
- *Concerns about biodiesel:* NOx emissions; degree of GHG reductions difficult to predict; T-RPS would potentially support ongoing use of fossil fuels
- *Concerns about T-RPS:* As expansion of RPS, would exert upward pressure on electricity prices; alternatively, as carve-out within RPS, would reduce support for decarbonizing electricity
- *Recommendation:* No immediate move to T-RPS
- Upcoming CES will explore comprehensive approach for decarbonization of thermal sector, potentially including some form of T-RPS



Equity in the IRP: Thinking Points

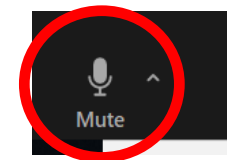
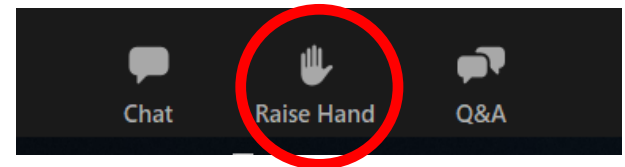
- How could the IRP be used to advance environmental justice?
- What opportunities are there to leverage the IRP to improve energy equity?
- How can we ensure participation from a broad group of stakeholders, particularly underserved and overburdened communities, in the planning and implementation of these strategies?
- Other recommendations or concerns.



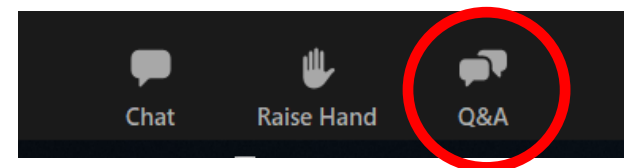
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1. Raise your hand by pressing the raise hand button at the bottom of your screen
2. We will call your name as it is displayed on Zoom and you will get a notice to unmute yourself
3. Unmute yourself in Zoom, and on your phone if you have called in for audio.
4. Please state and spell your name and affiliation
5. Please keep your comments to three (3) minutes
 - We will provide indicators for 0:30 seconds left and for concluding comments.
6. If you have a procedural question, please enter it into the Q&A box, the chat has been disabled for this event.



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Adjourn

- This 2020 Draft IRP public hearing has adjourned
- There is an additional public hearing session tonight (1/14/2021) beginning at 6:00pm
 - Registration link available in IRP notice
- You may also submit written comments to DEEP.EnergyBureau@ct.gov until 2/15/2021
- Thank you for your participation!

