# Connecticut Department of Energy and Environmental Protection

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

# Connecticut Electricity Sector Policy Objectives

## *Draft* Integrated Resources Plan, issued December 2020, key Objectives:

1. Decarbonizing the Electricity Sector
2. Securing the Benefits of Competition & Minimizing Ratepayer Risk
3. Ensuring Energy Affordability & Equity for all Ratepayers
4. Optimal Siting of Generation Resources
5. Transmission Upgrades & Integrating Distributed Energy Resources (DERs)
6. Balancing Decarbonization and Other Public Policy Goals

# 1. Decarbonizing CT's Electric Supply

- CT Global Warming Solutions Act (Conn. Gen. Stat. § 22a-200a) requires *economy-wide reductions:*
  - 45% reduction in GHG emissions from 2001 levels by 2030
  - 80% reduction in GHG emissions from 2001 levels by 2050
- Executive Order No. 3 (2019) directs DEEP to analyze pathways to achieve a 100% zero carbon electric supply by 2040.
- 65% of CT electric load already under contract to zero emission resources
  - Will increase to 91% by 2025 when all contracted resources scheduled to come online

# 1. Decarbonizing CT's Electric Supply

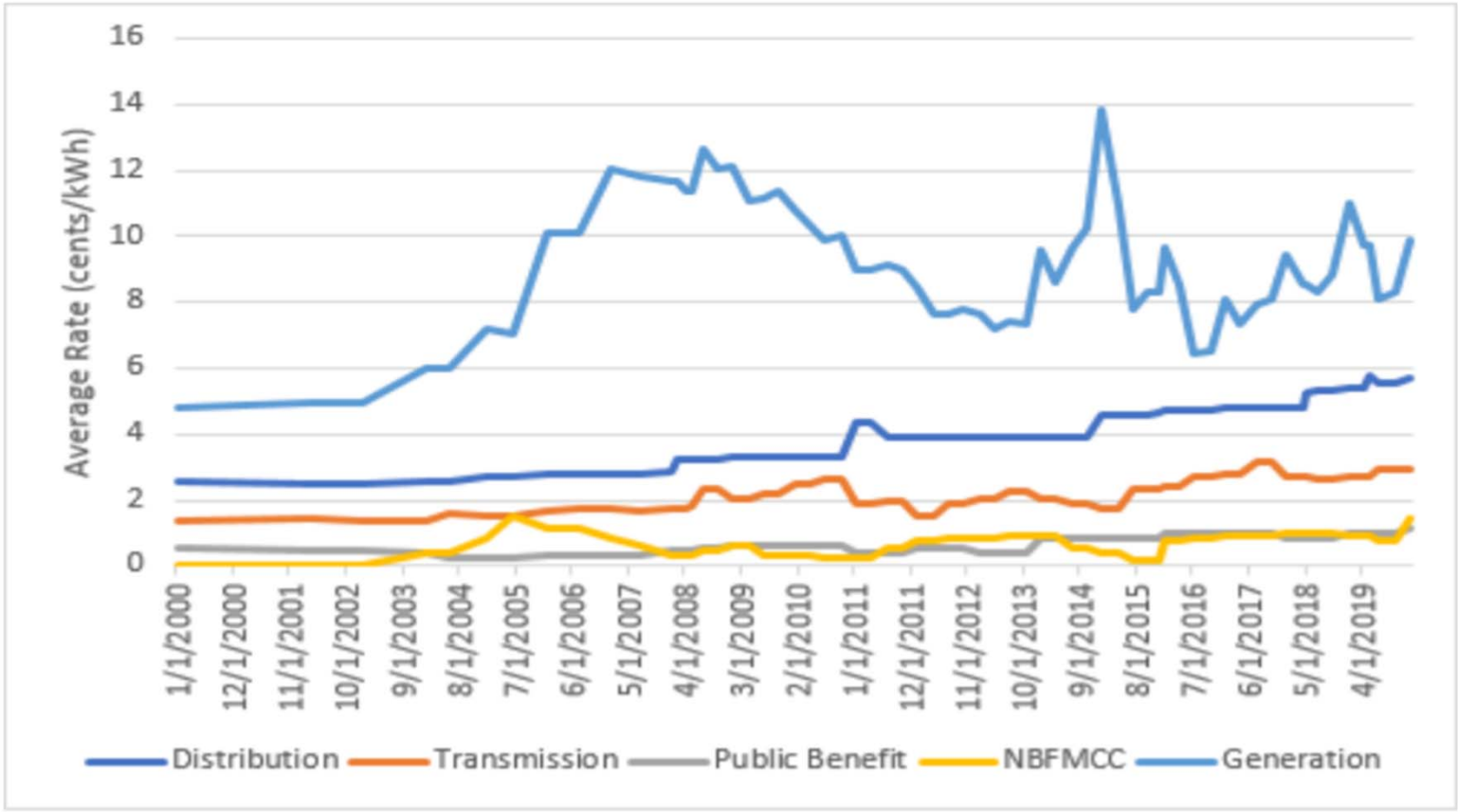
- Quantity and cost of new renewable resources needed to meet the 100% 2040 goal, and extent of fossil generation retirements, will be contingent on:
  - Pace of **electrification** of buildings, transportation sector
  - How long remaining **nuclear facilities** continue to operate
  - Increases in l**arge-scale hydropower** imports
  - Progess in removing **transmission constraints** and integrating **distributed energy resources**
  - Progress in deploying zero emission resources such as **storage, demand response,** that can balance/integrate intermittent renewables

# 2. Securing the Benefits of Competition

- **How it started:** obtain lower-cost electricity through competitive markets, insulate ratepayers from risks of uneconomic investments and stranded costs (1998)
- **How it's going:**
  - ISO-NE market rules designed around investment needs of natural gas resources imbed preference for fossil generation, reliability risks due to overreliance on natural gas
  - CT ratepayers bearing all costs of contract to prevent Millstone nuclear facility from retiring prematurely, placing regional grid at risk of 25% GHG increase and rolling black/brownouts
  - CT must contract outside the ISO-NE market to secure clean energy resources needed to meet clean energy mandates
  - Gradual erosion of states' authority under the Federal Power Act to choose their preferred source of geneation

# 3. Affordability, Equity & Env. Justice

**Figure 3.1: Historical Rate Composition in Connecticut, 2000-2019**



# 4. Optimal Siting, Environmental Justice

- Connecticut now hosts a disproportionate share of fossil fuel generation in the New England region
  - Impacts on local air quality and associated health concerns
- Environmental justice communities are disproportionately impacted by pollution from power plants in Connecticut.
  - 23 of the state's 54 large fossil fuel generating units are located in environmental justice communities, annually emitting more than 46% of the NOx from fossil-fueled power generation in the state.