Dominion Energy Nuclear Connecticut

Overview Presentation | August 2023

Millstone Power Station

Waterford, Connecticut

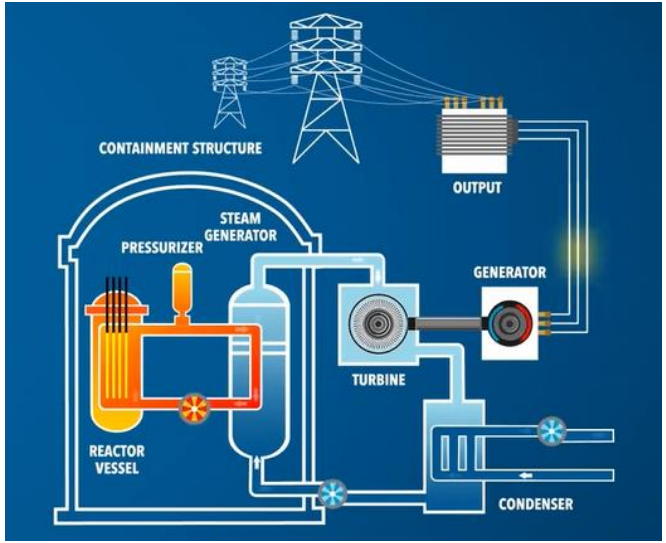
At Millstone Power Station, Safety Comes First

- Millstone was designed and built and is operated and guarded with **multiple, redundant layers of safety and security**
- Millstone has been recognized by the Occupational Safety and Health Administration (OSHA) as a **Star Worksite**
- Reactor operators are licensed by the independent U.S. Nuclear Regulatory Commission (NRC) and spend **20% of their time** in a continuous training regimen that includes sessions in full-scale control room simulators
- Millstone's Emergency Preparedness program is **highly coordinated and rigorously tested**, involving station personnel and local, state, and federal agencies

How Carbon-Free Nuclear Power Is Generated at Millstone Power Station

- Nuclear power is generated through a process called **nuclear fission**
- During nuclear fission, a neutron collides with a uranium atom and splits it apart, releasing a large amount of energy in the form of heat
- Heat is used to produce steam to spin a turbine, which drives a generator to make electricity
- Because nuclear power plants do not combust fuel, they do not produce greenhouse gas emissions

Pressurized Water Reactor



Note: More than 65% of commercial reactors in the U.S. are pressurized water reactors.
https://www.eia.gov/energyexplained/nuclear/nuclear-power-plants-types-of-reactors.php

An atom has a nucleus (or core) containing protons and neutrons, which is surrounded by electrons. Protons carry a positive electrical charge, and electrons carry a negative electrical charge. Neutrons do not have an electrical charge. Enormous energy is present in the bonds that hold the nucleus together. This nuclear energy can be released when those bonds are broken. The bonds can be broken through nuclear fission, and this energy can be used to generate electricity. See https://www.eia.gov/energyexplained/nuclear/ for more information on the basics of nuclear power.

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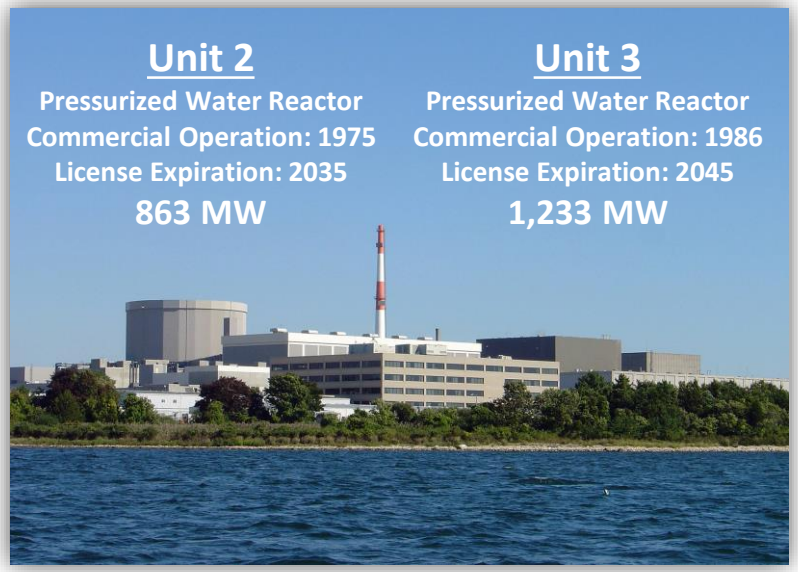
Millstone Power Station Is the Foundation for a Clean, Affordable, and Reliable Electric Grid

- Millstone is a **2,100 MW** nuclear power station that produces 16 to 17 million megawatt-hours of **carbon-free** electricity each year
  - Represents the largest carbon-free resource in New England
  - Accounts for more than 90 percent of the carbon-free power produced in Connecticut
  - Prevents more than four million tons of carbon dioxide from being released into the atmosphere each year



Note: In 2021, total retail sales of electricity in Connecticut were roughly 28 million megawatt-hours. https://www.eia.gov/electricity/state/Connecticut/.

Source: https://www.iso-ne.com/static-assets/documents/2022/04/2022_celt_report.xlsx

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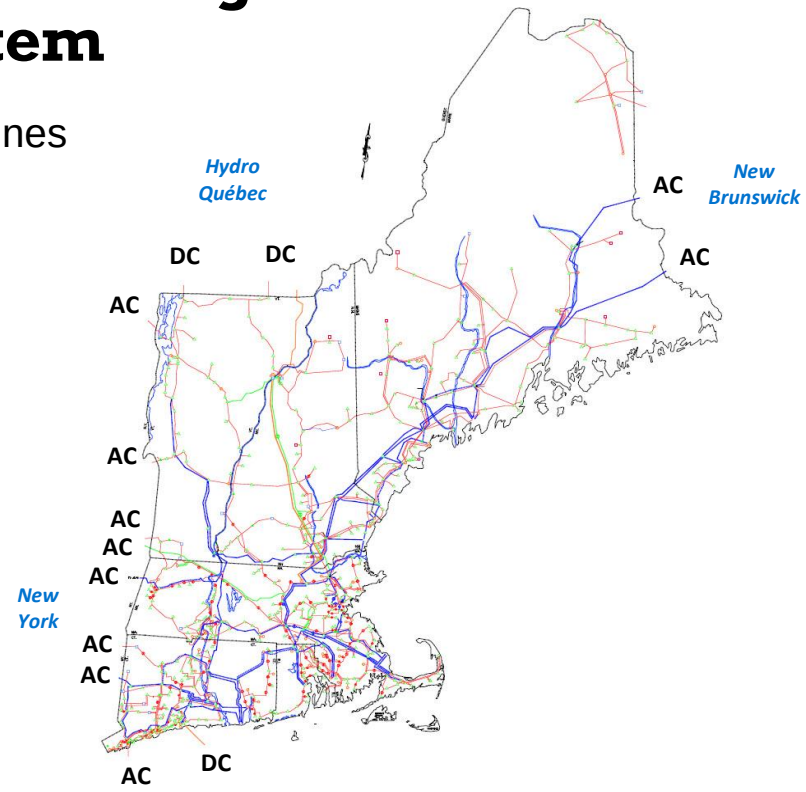
Millstone Is Interconnected to New England's High-Voltage Transmission System

- More than **9,000 miles** of high-voltage transmission lines crisscross the New England region
- 13 transmission lines connect New England to **neighboring power systems** in New York, Québec, and New Brunswick
  - 16% of the region's energy needs were met by imports of power in 2021
- More than **350 generators** are connected to the high-voltage transmission system with roughly **32,000 MW** of total generating capacity
- The flow of power is managed by the region's grid operator **ISO New England**



Source: https://www.iso-ne.com/about/key-stats/maps-and-diagrams

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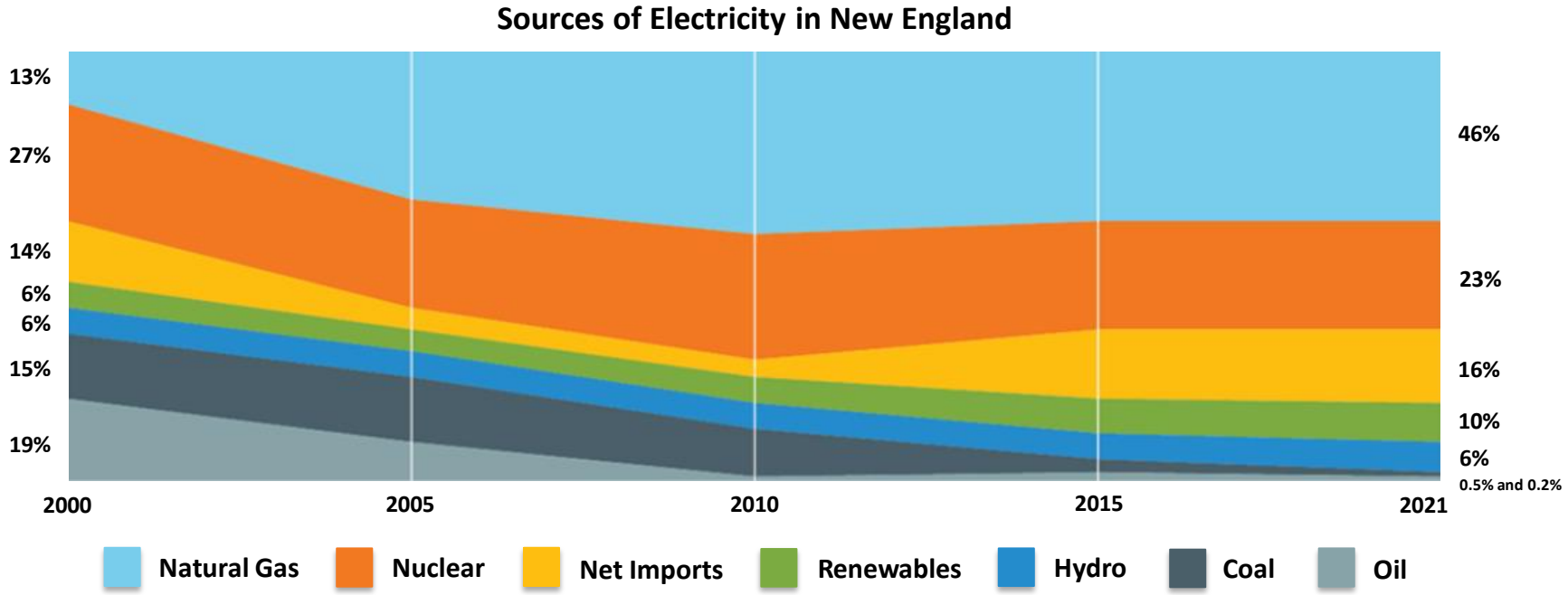
Carbon-Free Nuclear Power Is An Important Part of the Resource Mix in New England



Source: ISO New England Net Energy and Peak Load by Source Report
https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/net-ener-peak-load

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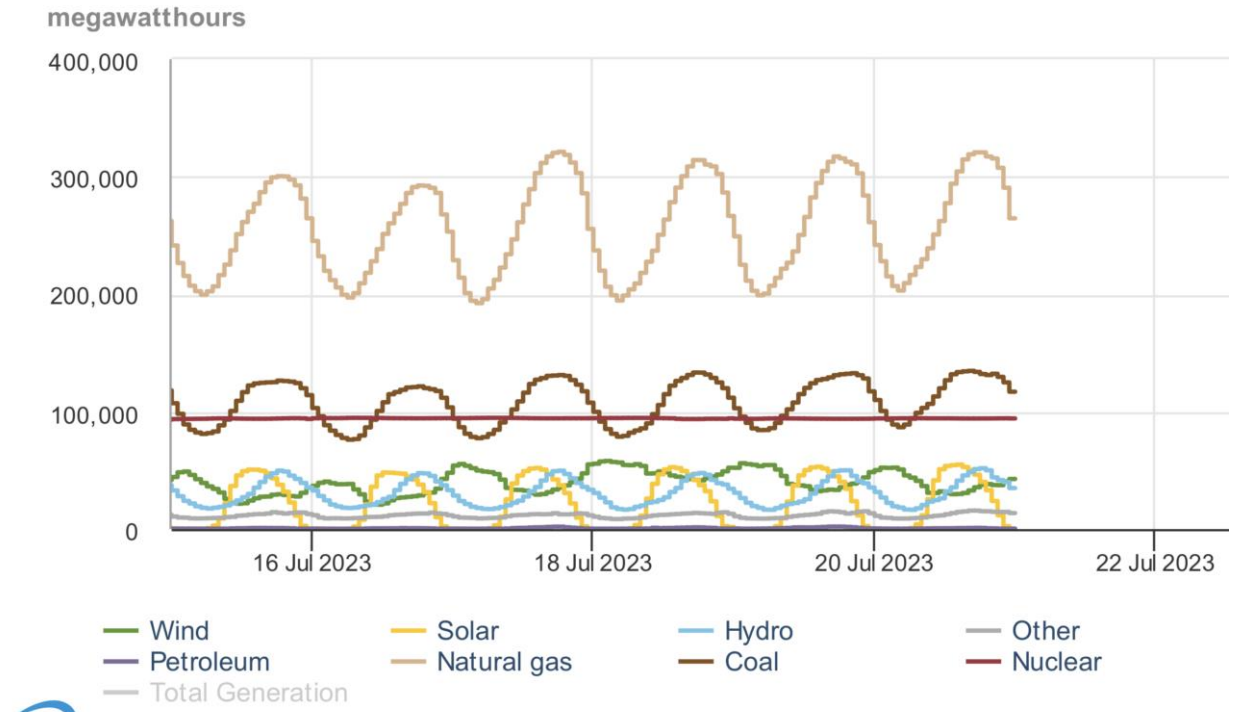
U.S. electricity generation by energy source 7/15/2023 – 7/22/2023, Eastern Time



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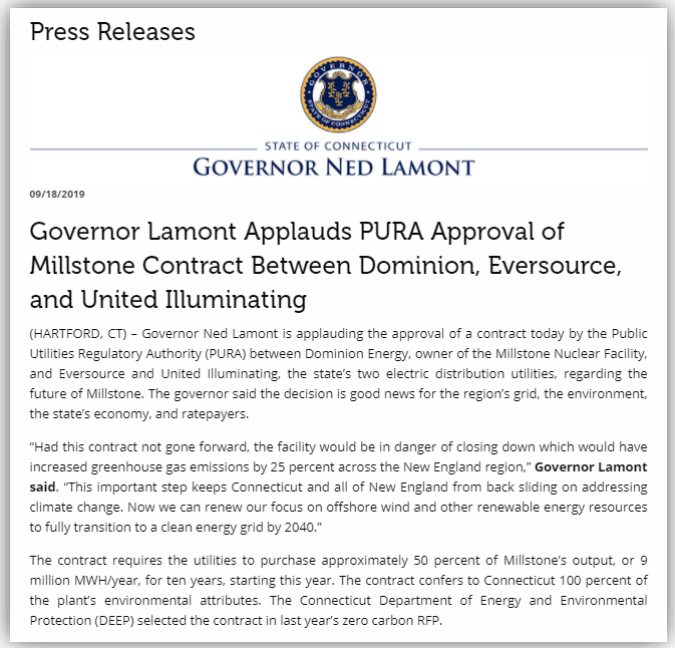
Dominion Energy Is Proud to Partner with Connecticut in Achieving its Ambitious Carbon-Reduction Goals

- After a competitive procurement process for **zero-carbon resources**, Dominion Energy executed long-term power purchase agreements with the state's investor-owned utilities for **nine million megawatt-hours** of Millstone's energy each year (≈ 55% of output)
  - Millstone's carbon-free energy and 100% of the plant's environmental attributes are locked in at a **low, fixed price** of 4.999 cents per kilowatt-hour (cents/kWh) for 10 years
  - Millstone continues to be one of the **lowest-cost**, **carbon-free** resources procured by CT to date



Press Releases

STATE OF CONNECTICUT

GOVERNOR NED LAMONT

09/18/2019

Governor Lamont Applauds PURA Approval of Millstone Contract Between Dominion, Eversource, and United Illuminating

(HARTFORD, CT) – Governor Ned Lamont is applauding the approval of a contract today by the Public Utilities Regulatory Authority (PURA) between Dominion Energy, owner of the Millstone Nuclear Facility, and Eversource and United Illuminating, the state's two electric distribution utilities, regarding the future of Millstone. The governor said the decision is good news for the region's grid, the environment, the state's economy, and ratepayers.

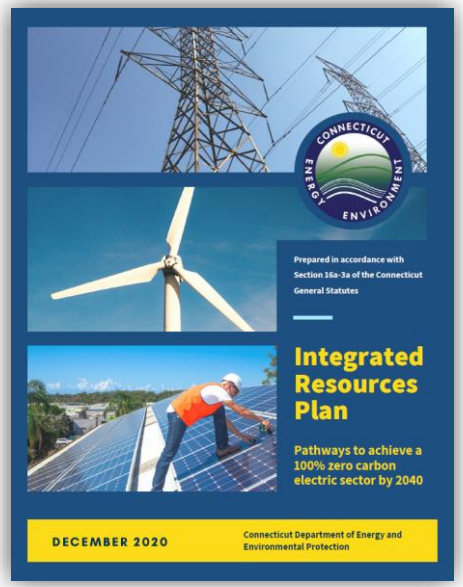
"Had this contract not gone forward, the facility would be in danger of closing down which would have increased greenhouse gas emissions by 25 percent across the New England region," **Governor Lamont said**. "This important step keeps Connecticut and all of New England from back sliding on addressing climate change. Now we can renew our focus on offshore wind and other renewable energy resources to fully transition to a clean energy grid by 2040."

The contract requires the utilities to purchase approximately 50 percent of Millstone's output, or 9 million MWH/year, for ten years, starting this year. The contract confers to Connecticut 100 percent of the plant's environmental attributes. The Connecticut Department of Energy and Environmental Protection (DEEP) selected the contract in last year's zero carbon RFP.

Source: https://portal.ct.gov/Office-of-the-Governor/News/Press-Releases

Continued Operation of Millstone Is the Least-Cost Pathway to Achieve a Zero-Carbon Electric Grid

- Connecticut's 2020 **Integrated Resources Plan** (IRP) models four different "pathways" (scenarios) to achieve the state's zero-carbon electricity goal by 2040
- The **Millstone Extension Scenario** demonstrates that if Millstone continues operating through 2040, it will:
  - ❖ Reduce the total cost of meeting the state's zero-carbon electricity goal, resulting in $5 billion in ratepayer savings compared to other zero-carbon pathways
  - ❖ Allow the state to meet interim emission reduction targets
  - ❖ Enable more fossil fuel retirements throughout the region



Source: https://portal.ct.gov/DEEP/Energy/Integrated-Resource-Planning/Integrated-Resource-Planning

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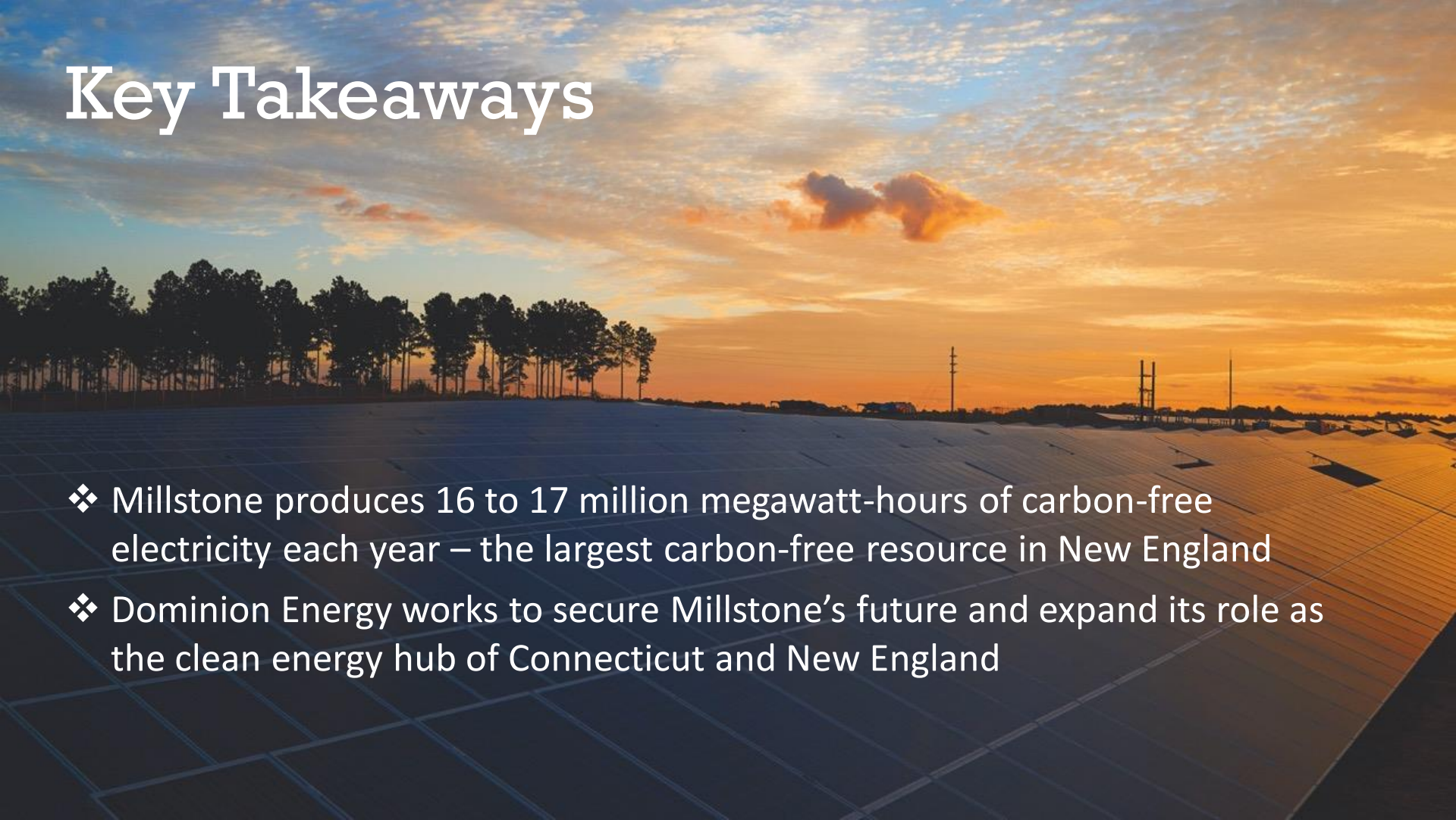
Millstone Power Station
Waterford, Connecticut

Key Takeaways



- Millstone produces 16 to 17 million megawatt-hours of carbon-free electricity each year – the largest carbon-free resource in New England
- Dominion Energy works to secure Millstone's future and expand its role as the clean energy hub of Connecticut and New England