



Massachusetts Department
of Energy Resources

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES

Patrick Woodcock, Commissioner

ACEC/MA Utilities & Energy Conference

May 4, 2022

DOER Action in 2022



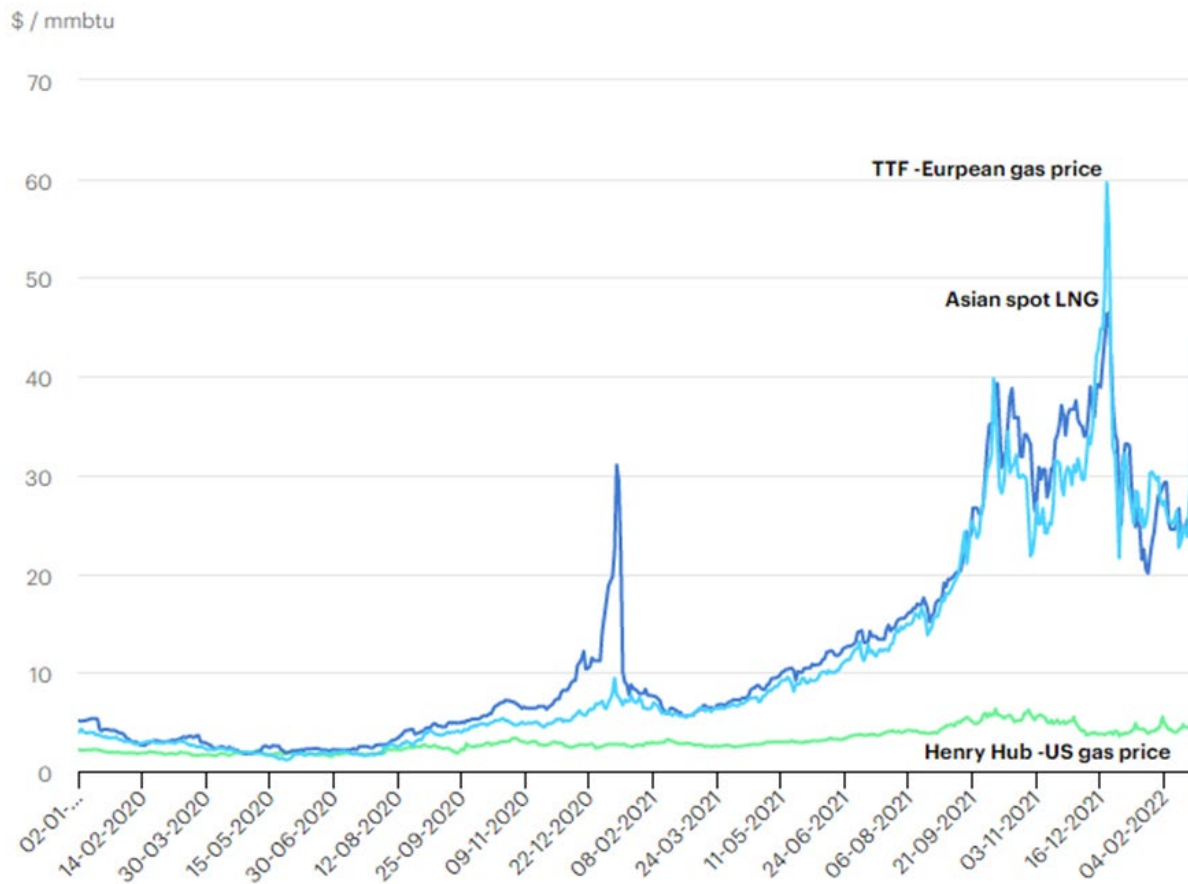
Governor Baker signing An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy – March 2021

Building Code Updates

Renewable and Alternative
Energy

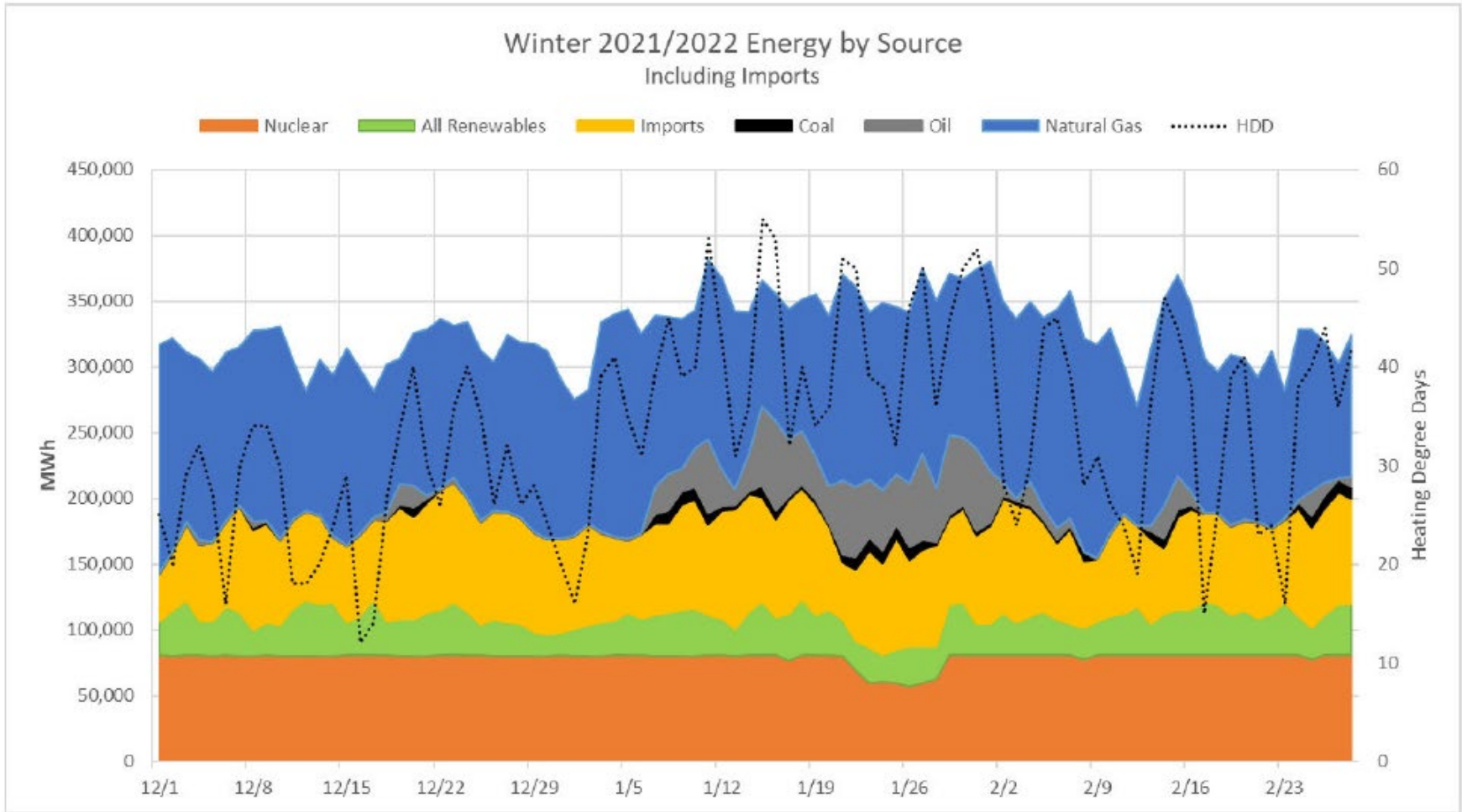
Future of Gas

Hydrogen Hub



Since the Russian invasion of Ukraine, there has been a historical increase globally in natural gas and LNG prices

Winter 2021-2022 - Fuel



- Colder January temperatures and gas price increase with the increased tensions in Ukraine resulted in oil burn in New England

Price Impacts in New England

- Prices for electricity in New England were significantly higher than previous winters
- This price impact will be seen in retail supply rates over the next winter

Comparison of energy market revenues for the past three winters, in \$millions

Winter	December	January	February	Total
2019/20	\$468	\$297	\$233	\$998
2020/21	\$450	\$488	\$759	\$1,697
2021/22	\$721	\$1,789	\$1,218	\$3,728

Starting in 2023 – 3 Energy Code options:

DOER issued a straw proposal on February 8th that includes an update to the stretch code alongside the new specialized stretch option for Municipalities

Base Code (10th Edition of MA Building Code)

- New Buildings in towns and cities that have not adopted a stretch code
- 52 communities
- BBRS update effective in 2023

Stretch Code (Update)

- New Buildings in towns and cities that adopted, including all green communities
- 299 communities
- DOER update effective in 2023

Specialized Opt-in (New Code Option)

- New Buildings in towns and cities that choose to opt-into this code
- Available for adoption Dec 2022

Goal of Analysis: Achieve Least-Cost Decarbonization

Energy Code Analysis

- In 2019, DOER commissioned analysis of different building code standards specific to the Massachusetts climate.
- Building Type Variety: 12 building use types and size-specific analysis to align with needs of different building types
- Analyzed up-front costs, operational costs, and total cost of ownership.

Residential Low-Rise Team



NORESCO

Commercial & Large Multi-Family Team



12 Building types for in-depth analysis

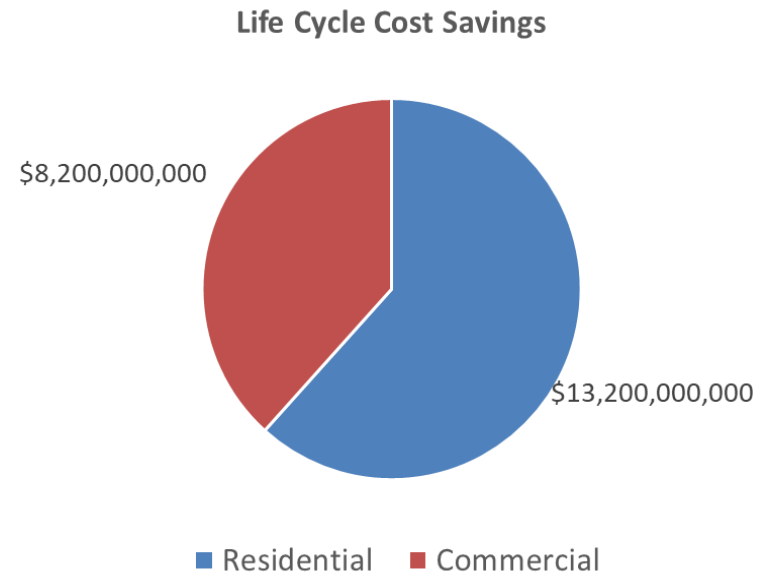
- Small office
- Large office
- Office-lab
- Elementary school
- High school
- Large multi-family tower
- 4 story multi-family
- Multi-family mid-rise pod
- 6-unit multi-family
- Townhouse
- Single family Small
- Single family Large



DOER Straw Proposal – Economic and Emissions Impact

- **DOER is proposing two updates:**
 - Update Stretch Energy Code, align with timing of the base energy code update
 - Issue new Specialized Opt-in Code as required by 2021 Climate Roadmap legislation by Dec 2022
- **500,000* tons/year** of GHG reductions in 2030,
 - rising to 694,000 tons/year by 2035
 - Other economic, health, resiliency and grid benefits
- **Over \$21 Billion** in life cycle cost savings (combined construction and operating costs)

*Note: Emissions reduction and cost savings forecasts are conservative as they currently do not account for any solar PV additions to new construction or methane leakage from natural gas supply and use.

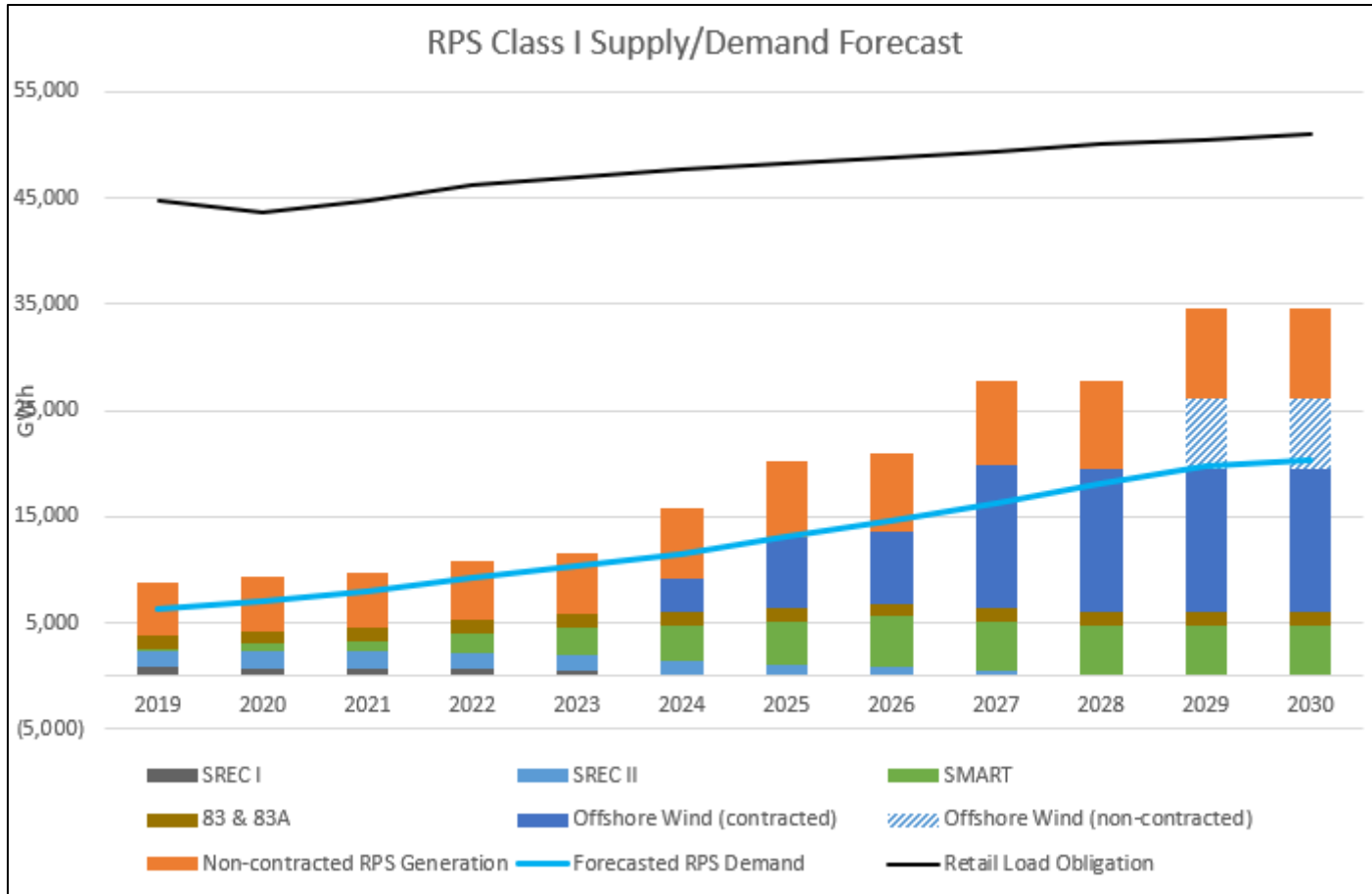


Information Posted here: <https://www.mass.gov/info-details/stretch-energy-code-development-2022>

Expected Timeline for code adoption

	Winter 2022	Spring 2022	Summer 2022	Fall 2022	Winter/Spring 2023	Summer 2023 and beyond
Updated Base Code	Draft on BBRS 10 th edition code webpage		BBRS Public hearing on 10 th edition	BBRS vote on final 10 th edition	Effective Jan. 2023 as part of 10th edition Code (MA IECC 2021)	
Updated Stretch Code	Outreach, public hearings, and comments on straw proposal	Draft code language available for public comment	Public hearings on draft code	Finalize code proposal & Publish Code	Effective Jan. 2023 to align with 10 th edition	Phase-in HERS requirements in Dec 2023
New Specialized Opt-in Code	Outreach, public hearings, and comments on straw proposal	Draft code language available for public comment	Public hearings on draft code	Finalize code proposal & Publish Code	Finalized Dec. 2022 - Municipal adoption begins	Likely effective dates - July 1, 2023, Jan 1, 2024

Clean Energy 2019-2030



83C Round 3 Project Selection



**1,600 MW total selection
announced on
December 16, 2021:**

1,200 MW Vineyard Wind
400 MW Mayflower Wind

- Two proposals, one from each bidder, was determined to provide the greatest overall value to Massachusetts customers
- Selection brings the total amount of offshore wind procured in MA to 3,200 MW out of total 5,600 MW currently authorized
- Combined energy output of the selected and previously contracted offshore wind projects represents approximately 25% of total Massachusetts annual electricity demand

Contracting and Regulatory Review



- Selected bidders negotiate long-term contracts with EDCs

- *Contracts have been executed*



- Executed contracts are subject to review and approval by the DPU

- *Contracts to be filed at the DPU in the coming weeks*



- Further details of bids, evaluation and selection process are made public when contracts are filed at DPU

More info & updates: <https://macleanenergy.com/83c-iii/>

Solar Statistics

Installed Capacity in Massachusetts

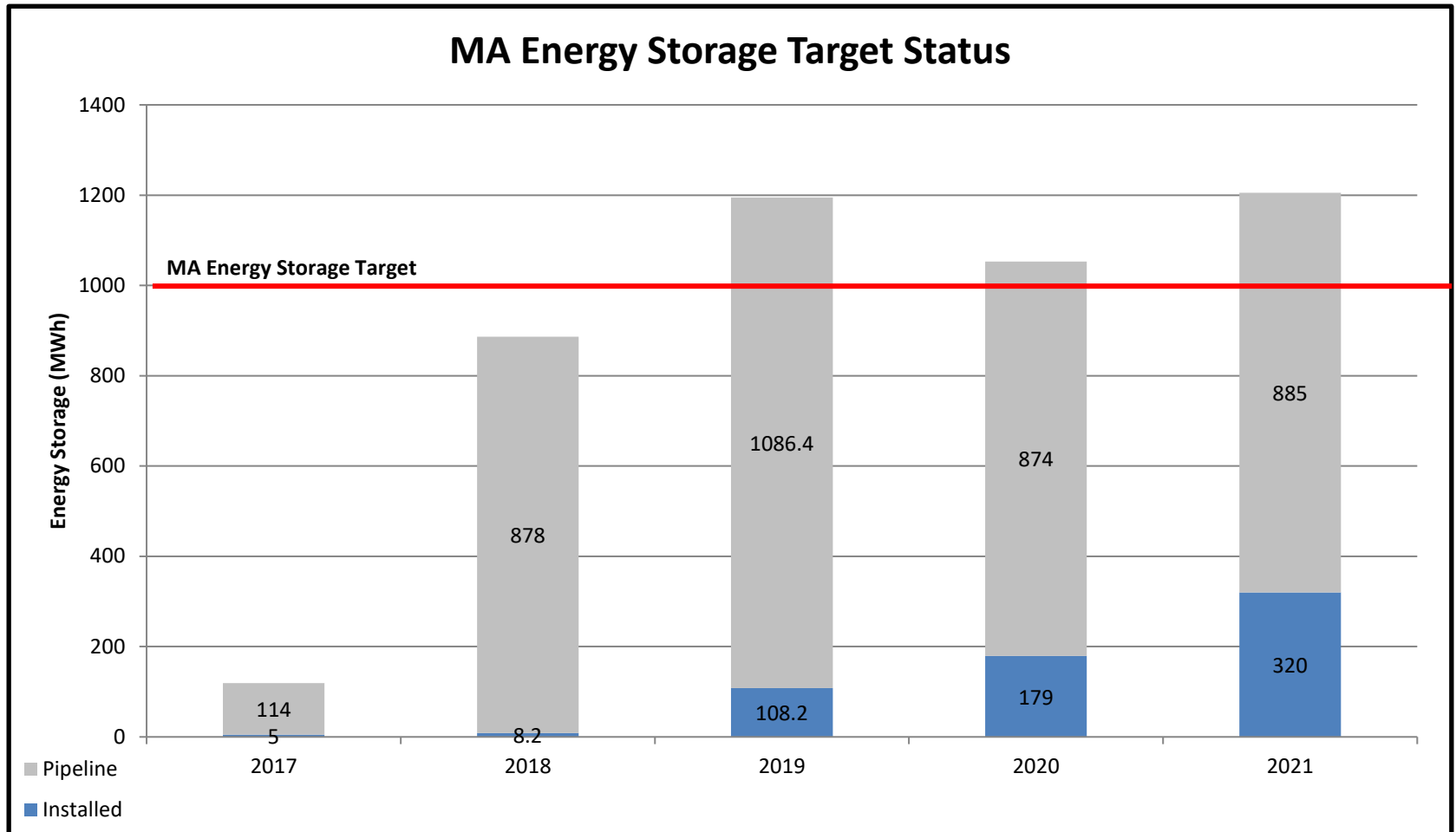
- By the end of 2021, over 100,000 projects, representing over 3,200MW DC of clean energy.

SMART

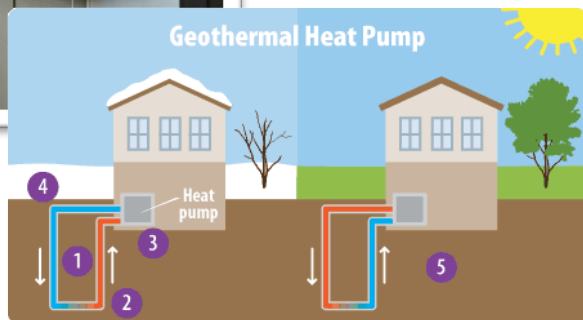
- By end of 2021,
- over 41,000 applications have been approved, representing almost 1,400MW AC of capacity committed.
 - Location Based
 - ~1,170 of 1,400 large projects (30% of capacity) applied for a location adder
i.e. rooftop, parking lot canopy, landfill, brownfield, etc.
 - Projects with a greenfield subcontractor have declined since the regulations were published in April 2020.
 - Pre-Publication: 12% of large projects have a greenfield subcontractor (34% of capacity)
 - Post-Publication: 7% of large projects have a greenfield subcontractor (29% of capacity)

Energy Storage Target

On 8/9/19, An Act to Advance Clean Energy, Chapter 227 of the Acts of 2018 established a 1,000 MWh energy storage target to be achieved by December 31, 2025.



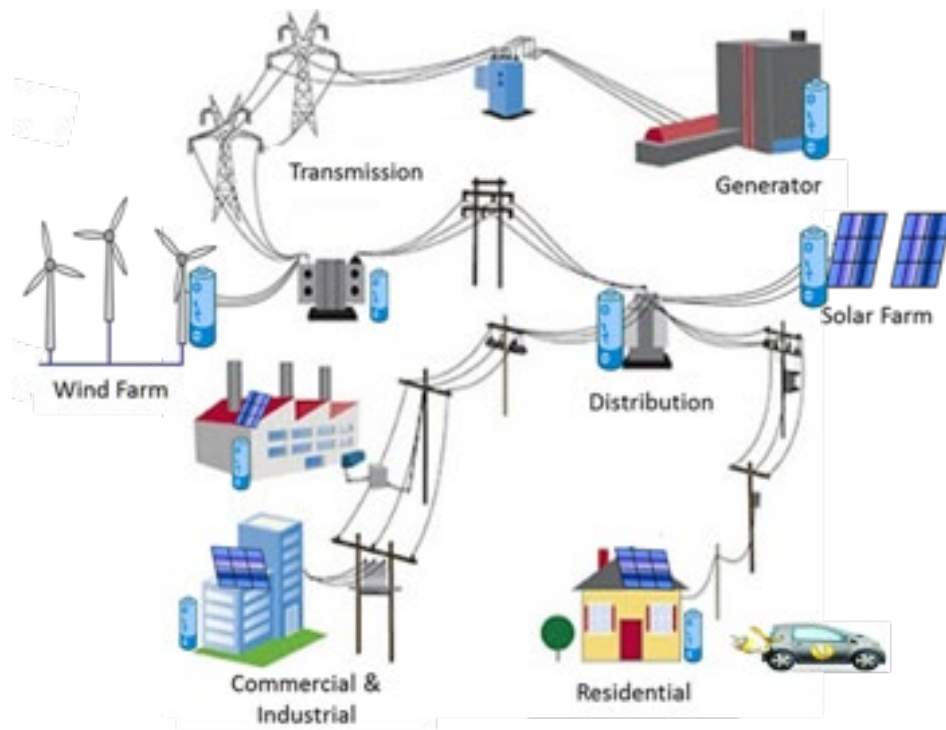
Future of Gas



Potential technologies to support decarbonization of the natural gas system:

- Renewable Natural Gas
- Electrification
- Hydrogen
- Energy Efficiency
- Geothermal

Hydrogen Hub



- CT, NJ, NY, and MA coordinating on hydrogen related infrastructure proposal seeking to develop a clean hydrogen region.
- Primary focuses of end-uses:
 - Transportation sector, including for medium and heavy- duty vehicles
 - Heavy industry
 - Power generation
 - Maritime applications
 - Other appropriate uses consistent with decarbonization efforts.



Thank you!