





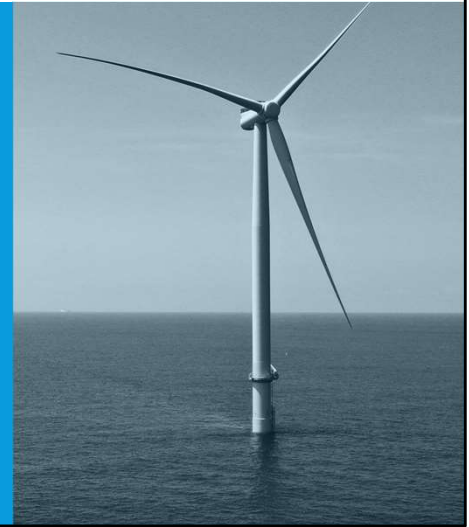
- **Net Zero Roadmap** – set goal of net zero by 2050 and 50% reduction by 2030, established emissions limits and sublimits across six sectors
- **Environmental Justice and Just Transition** – defined EJ and added protections, invested in workforce transitions, piloted geothermal networks
- **Energy Efficiency** – updated building codes, set appliance efficiency standards
- **Renewable Energy** – procured more OSW, raised RPS, set MLP goals, expanded solar net metering

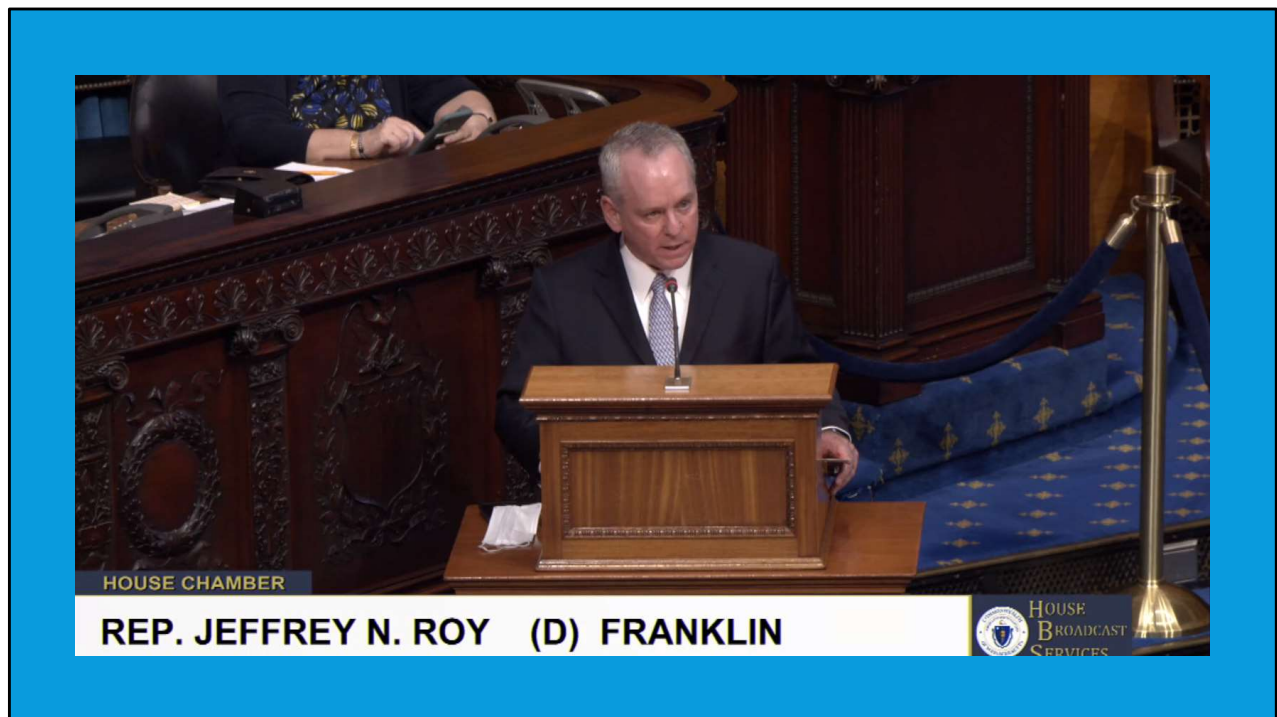


- This session, Speaker set early priority on offshore wind
- Produced a detailed and comprehensive 100-page report, with analyses and recommendations for further legislative action
- In September, Speaker announced House plan to produce offshore wind legislation

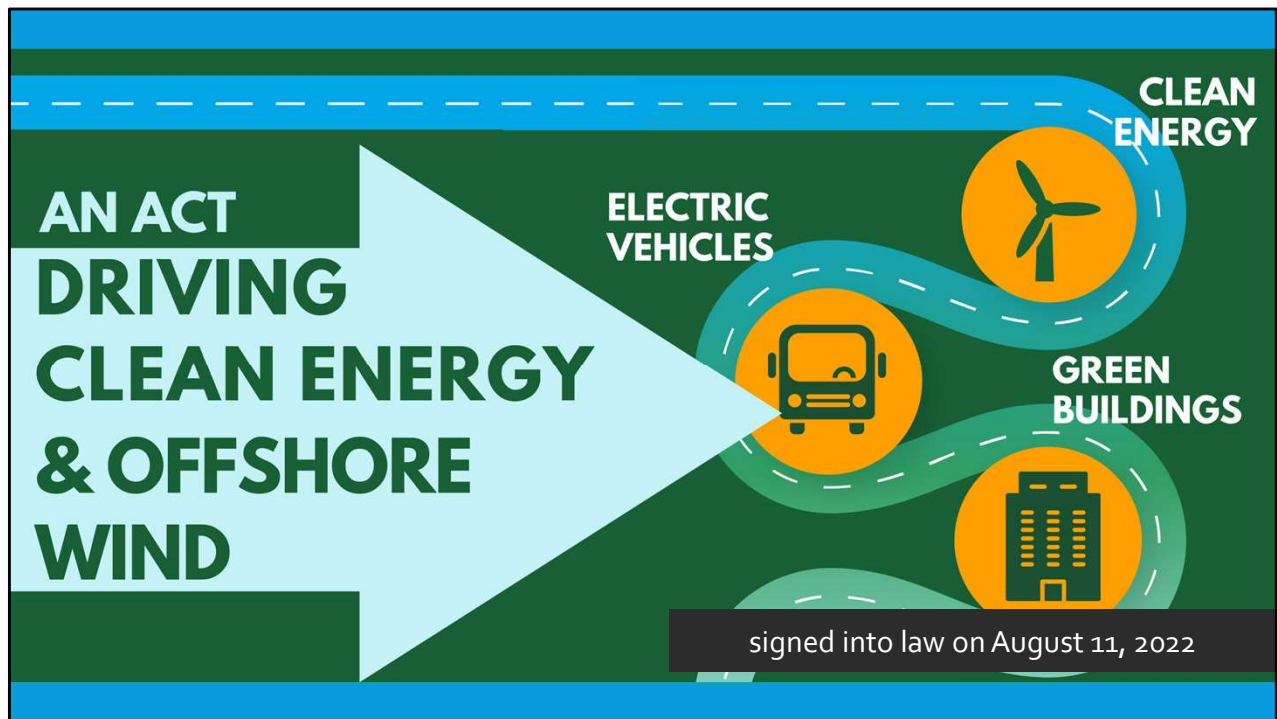
WHY OFFSHORE WIND?

- Roadmap Bill:
 - MA to solicit 5600 MW by 2027
 - Also made a \$12 million annual commitment to offshore wind and other clean energy workforce development
- Biden administration announced national goal of 30 GW by 2030
- MA has largest technical offshore wind potential of any state in contiguous US





- Through transparent and iterative process, produced broad-sweeping bill that supported offshore wind and other key improvements toward a clean energy grid
- House passed March 3 (144-12)
- Got to work on additional topics



- Senate responded with legislation that focused mostly on electrifying our economy
- Long, exhaustive conference committee to reconcile the two bills
- Incorporated Governor amendments before passing final bill that was signed into law



offshore wind

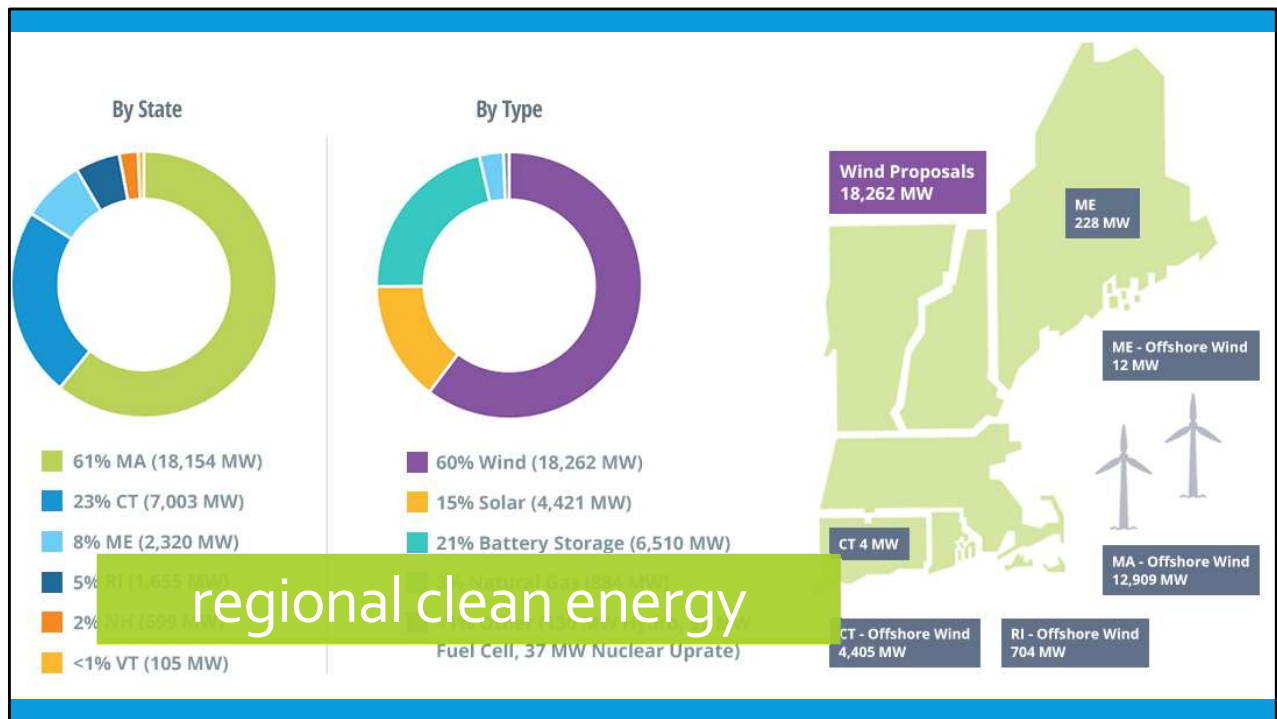
- Establishes Offshore Wind Industry **Investment Fund** for MassCEC to invest in manufacturing, interconnection, innovation, research, infrastructure, and workforce development
 - Includes tax incentives, grants, loans, and other investments
 - The \$35 million in total annual tax incentives is subject to a 10-year sunset clause, features a certification and clawback process



- **Removes price cap**
- Addresses potential **conflicts of interest** by:
 - Requiring DOER, in consultation with an independent evaluator, to issue a final binding determination of the winning offshore wind bid.
 - Utilities are consulted in the solicitation process but are removed from the selection
- Protects both ratepayers and utilities by providing **2.5% remuneration**
- Strengthens **preferences** for local economic development, environmental justice, organized labor, and more



- Requires bids to include an **environmental and fisheries plan**
- Establishes a **commercial fisheries commission** to provide input on best practices for avoiding, minimizing and mitigating impacts to wildlife related to offshore energy generation and transmission.



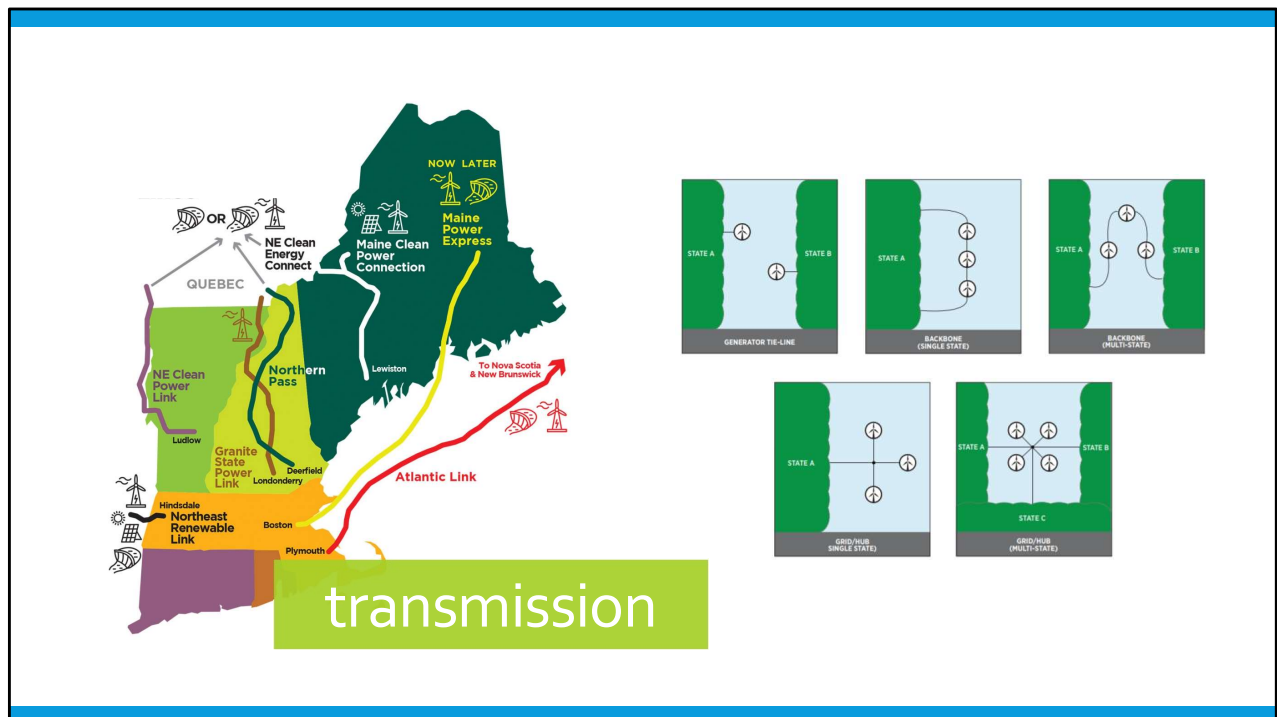
- **Near-term:** Authorizes DOER to participate in upcoming solicitations across New England, such as on-shore wind in Maine to substitute for Quebec hydro imports that have been delayed through litigation
- **Long-term:** Authorizes EEA to investigate participation in new regional energy solicitation schemes (such as a Forward Clean Energy Market) in order to facilitate the development of clean energy generation resources



- Eliminates the “**donut hole**” for on-site solar energy net metering, allowing Class I solar systems up to 25kW to be exempt from the cap.
- Loosens the “**single parcel rule**” by allowing, in certain circumstances, for net metering for facilities on the same parcels as solar facilities
- Permits **agricultural land** to host renewable energy if it does not impede in the continued use of the land
- Directs DOER to include incentives for **pollinator-friendly** solar installations
- Establishes a commission to study **agri-voltaics**



- Removes biomass from the **renewable portfolio standard**
- Requires DOER to issue a one-time procurement to stimulate the deployment of **anaerobic digestion** facilities for electricity



- Directs DOER (with possible regional coordination) to **solicit transmission proposals** to deliver authorized offshore wind generation to existing grid
- Creates Working Group to analyze costs and **cost-allocation** measures for necessary transmission upgrades to support the region's clean energy development



- Requires utilities to work with a Grid Modernization Advisory Council to **proactively upgrade transmission and distribution**



- Requires DOER to recommend Roadmap **benchmarks for energy storage**
- Directs DOER to **study mid- and long- duration energy storage** and authorizes subsequent procurements
- Requires utilities to file a tariff for **standalone energy storage**



- Strengthens rule that **only zero emission vehicles (ZEVs) can be sold starting 2035**
- Directs DPU to reduce emissions from Transportation Network Companies (like **Uber and Lyft**)
- Requires DOT to compile a **vehicle database** to assist in vehicle electrification planning
- Instructs MassCEC to develop a **website** with the costs and availability of EVs



incentives

- Creates a **Trust Fund** to be expended by DOER for funding electric vehicle incentive programs
- Increases the **ZEV rebate to \$3,500** for qualifying purchases and leases, with an additional \$1,000 to purchasers who are trading in an internal combustion vehicle
- Adds an additional \$1,500 rebate for low-income customers
- Requires MOR-EV to offer rebates to **medium- and heavy- duty ZEVs**
- Creates an outreach program for **underserved and low-income communities**
- Requires an **annual review** of MOR-EV



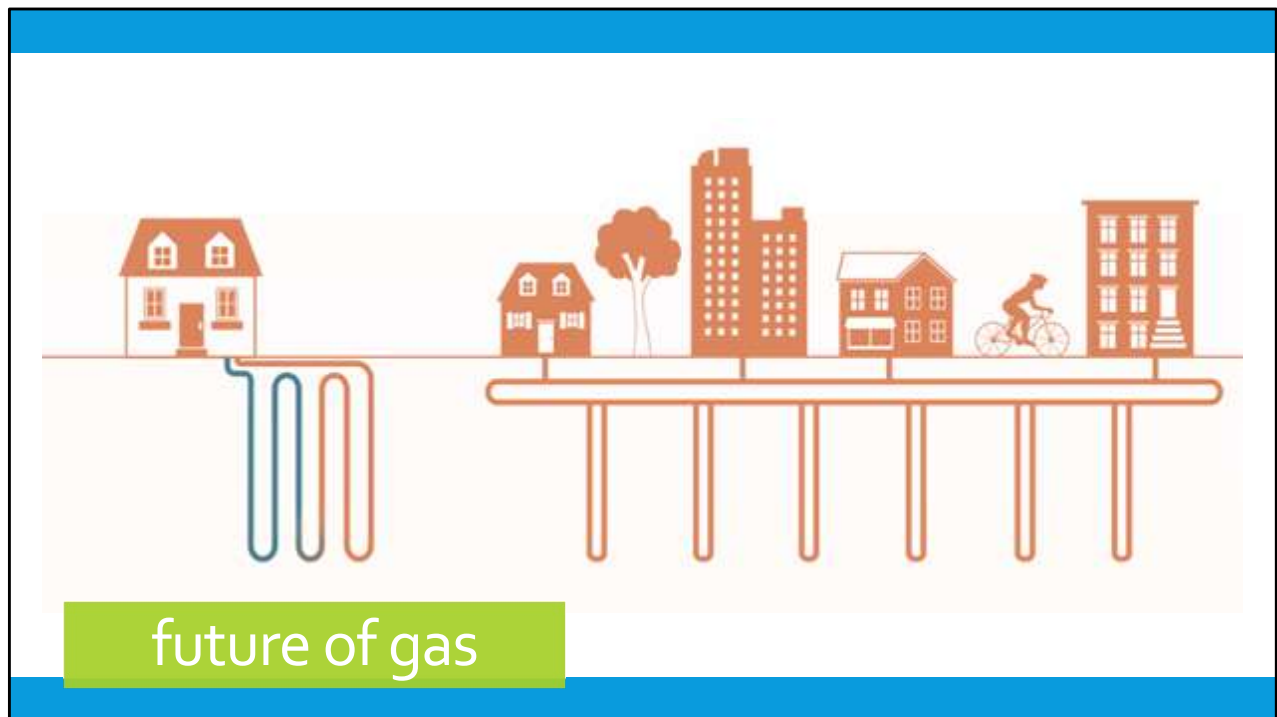
- Requires the state **building and electrical codes** to include requirements for EV charging for residential and commercial buildings
- Establishes an **intergovernmental coordinating council** to implement an EV charging infrastructure deployment plan.
- Requires MassDOT to install and maintain **public EV charging stations** on the MassPike, parking lots of at least 5 commuter rail stations, parking lots of at least 5 subway stations, and a parking lot of at least one ferry terminal
- Requires utilities to submit **off-peak rate** proposals for electric vehicle charging



- Requires DESE and DOER to study **school bus electrification**
- Requires MassDOT to help **Regional Transit Authorities** develop electrification rollout plans
- Requires **MBTA maintenance** program to report on and account for climate change.
- Requires new MBTA bus purchases and leases to be ZEVs by **2030** and the entire MBTA fleet to be ZEV by **2040**
 - Must prioritize routes through **underserved communities**
- Requires MBTA to consider climate change within its **capital planning**



- Authorizes **ten cities and towns to require fossil fuel-free new construction**
 - each community must first meet their 10% affordable housing target
 - life science labs and health care facilities are exempt
- Ends **Mass Save incentives** for fossil fuel infrastructure, except as backup
 - starting with the next Mass Save plan (2025-2027)
- Reforms Mass Save to increase participation from **low-income households and renters**
 - Requires quarterly reports on Mass Save's service to low-income ratepayers



- Eliminates natural gas extensions from **C-PACE**
- Requires new working group to develop policy recommendations that align gas system enhancement plans (**GSEP**) with statewide greenhouse gas emissions limits.
- Prevents DPU from approving utility “Future of Gas” plans prior an **adjudicatory proceeding**
- Encourages DPU to remove impediments for the development of efficient heat generation technologies, including **networked geothermal** heating systems
 - Expands eligible GSEP replacement projects to non-emitting renewable thermal installations and advanced gas leak repairs.
 - Expands gas company reporting obligations under networked geothermal pilots
 - Authorizes DPU to require utilities participating in the pilots to submit plans for decommissioning gas infrastructure



- Expands **C-PACE** to include commercial energy improvements that exceed energy code requirements
- Requires a study on the net zero transition of the state's **K-12 schools**
- Requires large buildings (20,000 sq. ft. and larger) across the commonwealth to **report their energy usage** annually

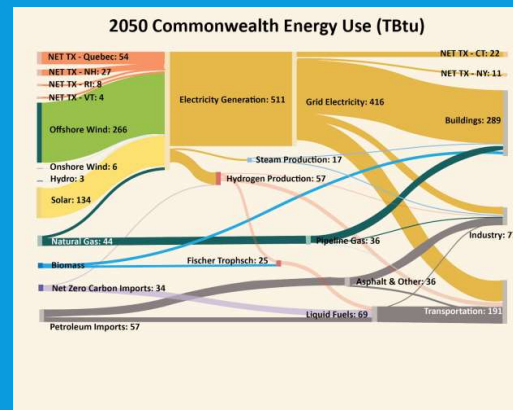
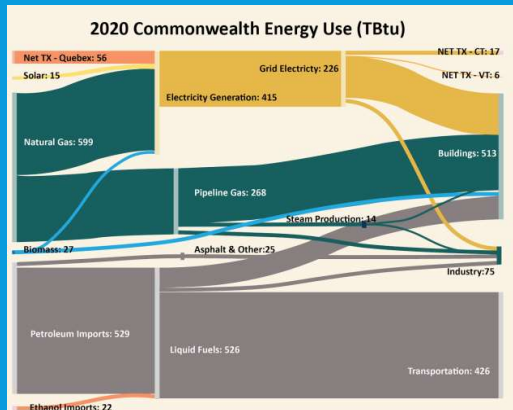


- Establishes a **Clean Energy Investment Fund** for MassCEC to invest in:
 - Advancement and deployment of clean energy technologies
 - Clean-energy industry-related workforce development and technical training programs
 - Infrastructure improvements (including ports) related to the clean energy industry
 - Research and development, including wildlife impact mitigation
 - And more!
- Raises the maximum project cost under the **Green Communities Act**
- Adds legislative involvement to **MassCEC Board of Directors** appointments
- Qualifies cutting-edge technologies – **fusion energy** and networked geothermal energy -- for MassCEC support



- Creates DESE pilot for offshore wind **credential training** in high schools
- Requires the Office of Labor and Workforce Development to annually send DESE a list of **high-demand jobs**
- Tasks a program director for the clean energy equity workforce and market development fund to study and report on best practices for DEI across offshore wind and other clean energy industries

NEXT STEPS



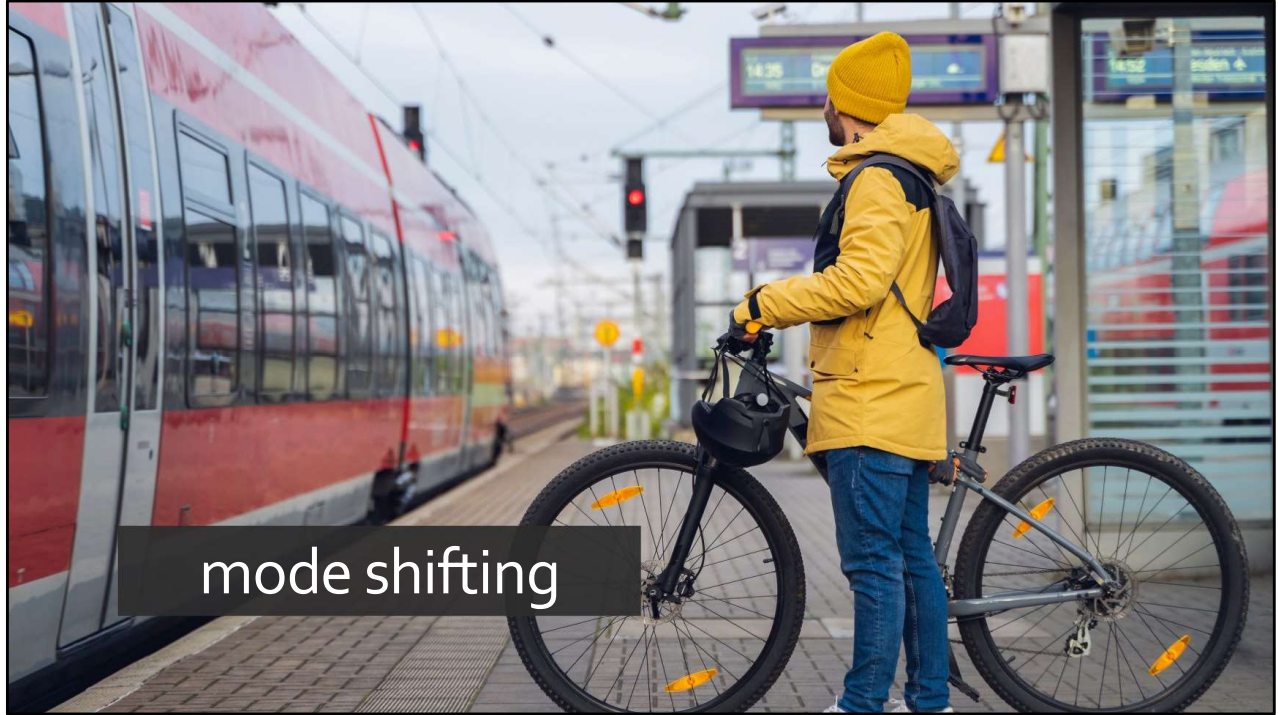
- EEA released a report in December 2020, prior to the Roadmap bill, identifying cost-effective and equitable strategies to ensure Massachusetts achieves net-zero greenhouse gas emissions by 2050.
- Helps provide an understanding of where the Commonwealth needs to focus its efforts, both in greening the energy supply and lowering energy demand



- Leverage private capital to enable more individuals and companies to invest in themselves



- Massachusetts' bottle bill has one of lowest redemption rates in country



- Can't just replace every vehicle with an electric vehicle, need to rethink how we plan around other modes of transportation
 - Electrification and regionalization of our rails
 - Transit-oriented development
 - Bike and bus lane protections

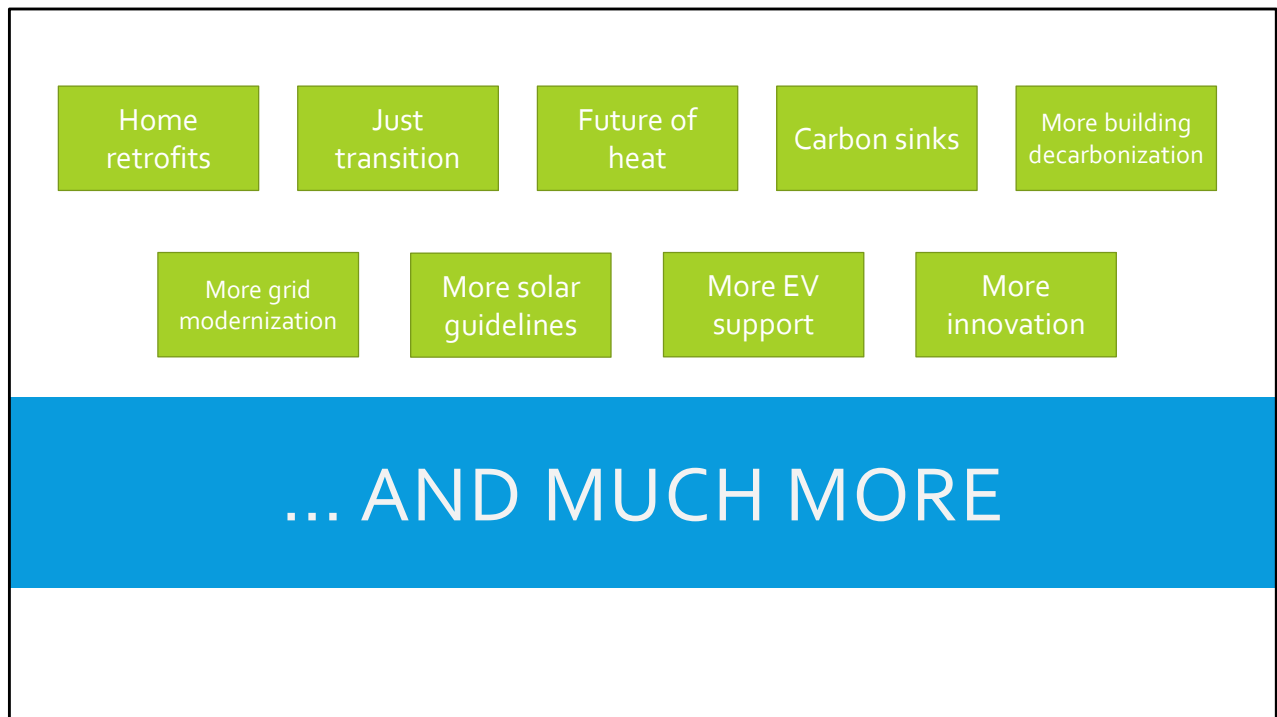


- Historic infrastructure siting has caused disparate impacts of air and water pollution



competitive supply

- Address widespread industry abuse while providing ratepayers choices in their energy supplier



- More money!
- MLP oversight, carbon pricing...

QUESTIONS

