

October 2021 Public Webinar: *Approach to Complete the Clean Energy and Climate Plan for 2025 and 2030*

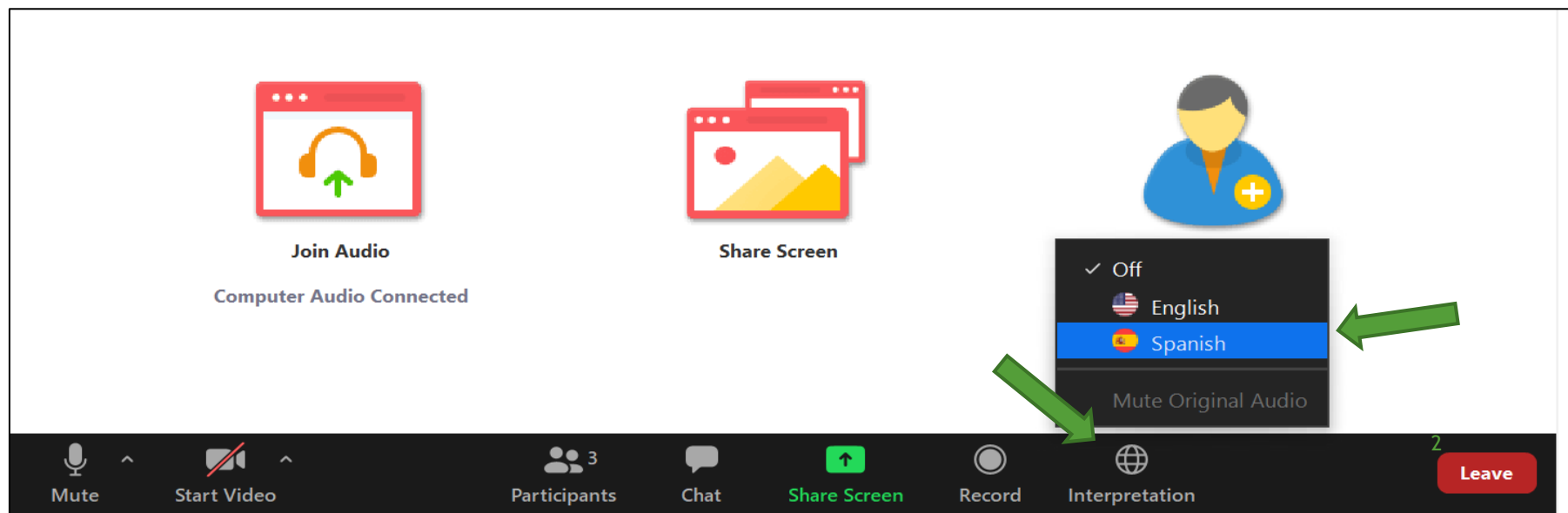
Judy Chang,
Undersecretary of Energy and Climate Solutions
Massachusetts Executive Office of Energy and Environmental Affairs



October 15, 2021

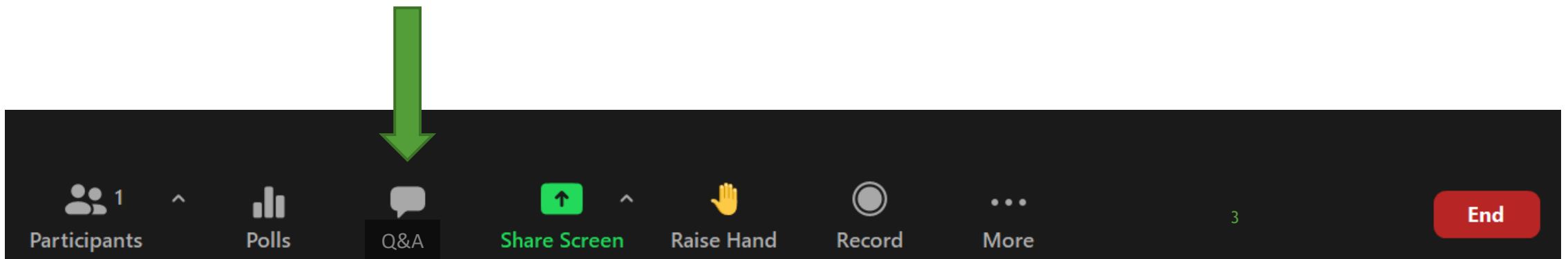
Interpretation is being offered in: Português, Kreyòl ayisyen, Español, 廣東話(Cantonese), & Tiếng Việt

- ▶ To participate in English, click the “Interpretation” icon and select English.
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Webinar logistics

- ▶ This webinar is being recorded.
- ▶ The recording of the presentation will be posted on www.mass.gov/2030CECP afterwards.
- ▶ All lines will be muted during the presentation.
- ▶ The line will be open for oral comments after the presentation.
- ▶ If you have a clarifying question or a logistical issue, please type it into the Chat box.

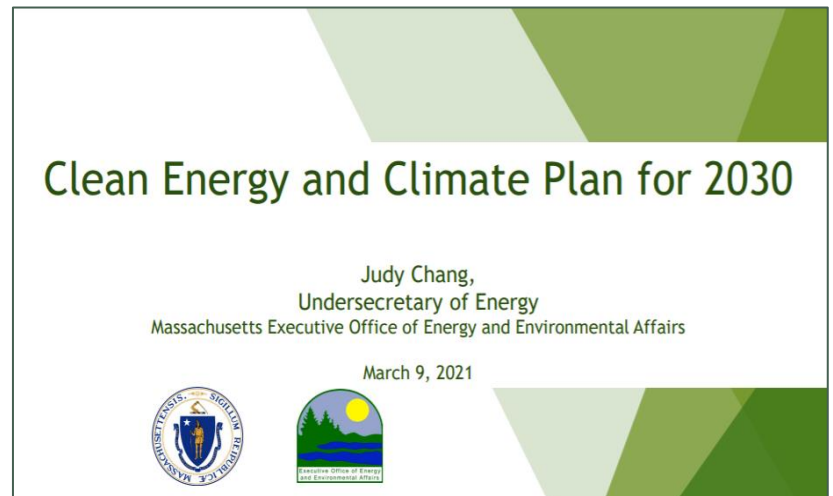
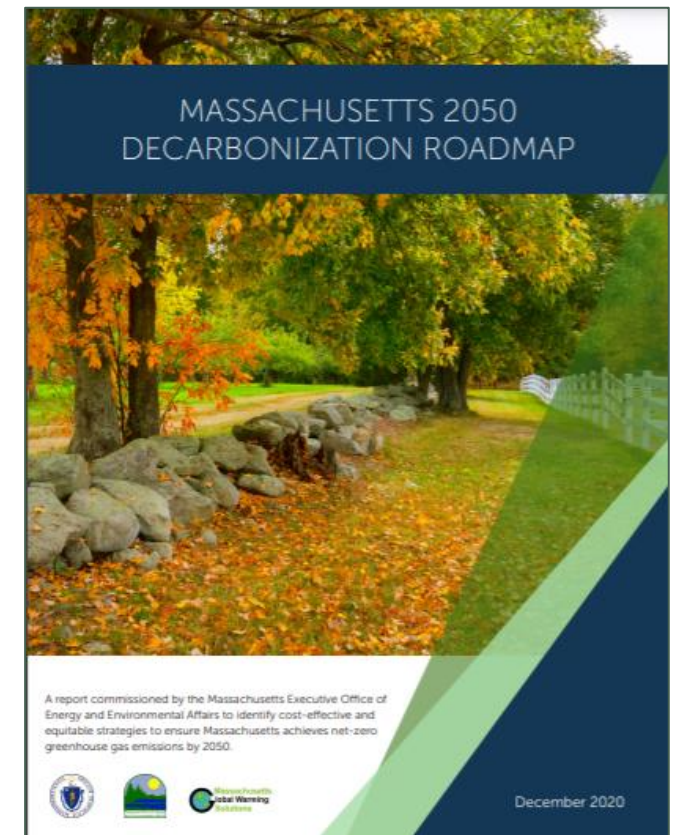


Overview

- ▶ Received public feedback on the Interim Clean Energy and Climate Plan for 2030
- ▶ New statutory requirements
- ▶ EEA's approach to set emissions limits, sublimits, and complete the Clean Energy and Climate Plan for 2025 and 2030
- ▶ Opportunities for additional input

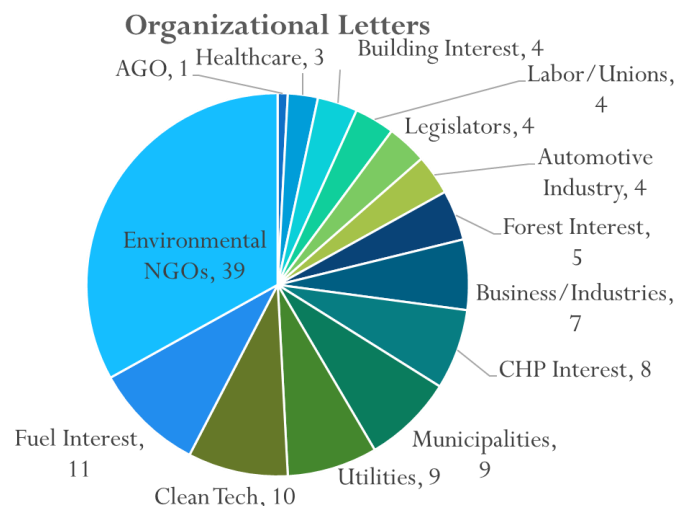
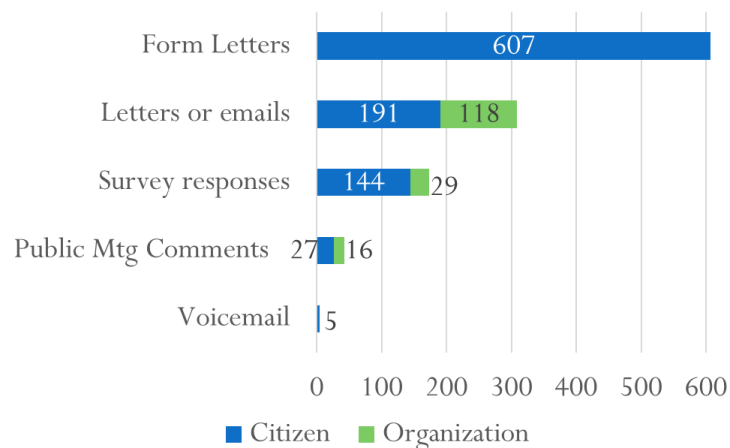
Quick Refresher

- ▶ Dec. 30, 2020:
 - ▶ Massachusetts 2050 Decarbonization Roadmap (2050 Roadmap) reports released on www.mass.gov/2050Roadmap
 - ▶ Secretary Theoharides set the 2030 emissions limit at 45% below the 1990 baseline level
 - ▶ Interim Clean Energy and Climate Plan for 2030 (Interim 2030 CECP) released on www.mass.gov/2030CECP
- ▶ January 7 to March 22, 2021:
 - ▶ Public comment period on the Interim 2030 CECP
 - ▶ January 15: Public webinar on the 2050 Roadmap
 - ▶ March 9 & 15: Public webinars on the Interim 2030 CECP



Key Themes/Topics from Received Public Comments on the Interim 2030 CECP

Breakdown of Total Responses



- ▶ Over 1,100 comments on the Interim 2030 CECP during the public comment period.
- ▶ Significant request for more commitment and specificity around:
 1. Equity and Environmental Justice in policy and support
 2. Just transition/workforce development and training programs, for both workers in fossil-based industries/businesses and environmental justice populations
 3. Funding and financing programs to support decarbonization
- ▶ Many support raising the 2030 emissions limit from 45% to 50%

On March 26, 2021

- ▶ Governor Baker signed into law “An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy” (Chapter 8 of the Acts of 2021), which requires the following (among other requirements):
 - ▶ Statewide greenhouse gas emissions limits for every 5 years between 2020 and 2050
 - ▶ Sector-based statewide emissions sublimits
 - ▶ A roadmap plan to realize each emissions limit





New Statutory Requirements

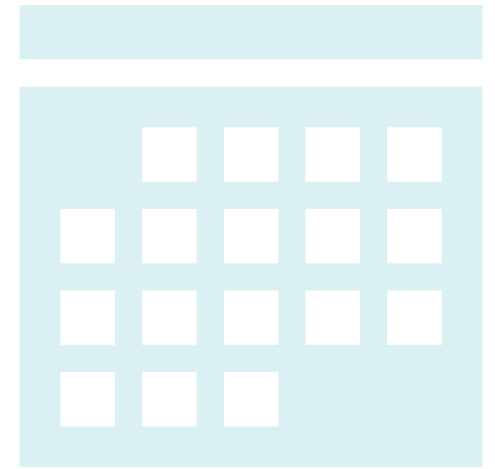
Emissions Limits:

- ▶ Interim 2030 statewide emissions limit of “at least 50% below the 1990 level”
- ▶ Interim 2040 statewide emissions limit of “at least 75% below the 1990 level”
- ▶ Statewide emissions limit for 2050 that “achieves at least net zero statewide greenhouse gas emissions; provided, however, that in no event shall the level of emissions in 2050 be higher than a level 85 per cent below the 1990 level” [M.G.L. Chapter 21N, Section 3(b)]

Emission Sublimits:

- ▶ Adopt sector-based statewide emissions sublimits as components of each emissions limit for the following sectors:
 - ▶ Electric power
 - ▶ Transportation
 - ▶ Commercial and industrial heating and cooling
 - ▶ Residential heating and cooling
 - ▶ Industrial processes
 - ▶ Natural gas distribution and service
 - ▶ “any other sector or source the secretary may designate”

New Statutory Requirements



Roadmap Plans:

- ▶ “Each limit shall be accompanied by publication of a comprehensive, clear and specific roadmap plan to realize said limit.”
- ▶ Each “roadmap plan” have many requirements, including the following requirements for natural and working lands (NWL):
 - statewide baseline measurement and tracking of current carbon flux on NWL
 - statewide goals to reduce greenhouse gas emissions and increase carbon sequestration on NWL
 - a NWL plan that outlines actions to meet these statewide goals

Deadlines:

- ▶ **JULY 1, 2022**
 - 2025 and 2030 emission limits, sublimits, and plans
- ▶ **JANUARY 1, 2023**
 - 2050 sublimits and plan
- ▶ **JANUARY 1, 2028:**
 - 2035 emissions limits, sublimits, and plan
 - Updates/revisions to 2050 sublimits and plan
- ▶ **JANUARY 1, 2033:**
 - 2040 emissions limits, sublimits, and plan
 - Updates/revisions to 2050 sublimits and plan
- ▶ **JANUARY 1, 2038:**
 - 2045 emissions limits, sublimits, and plan
 - Updates/revisions to 2050 sublimits and plan

Completing the 2025/2030 CECP

- ▶ We will continue to accept comments and questions on emissions limits and sublimits, plans to achieve them, and other related topics at GWSA@mass.gov
- ▶ We are committed to:
 - ▶ Developing strategies, policies, and programs that can help Massachusetts reach 50% emissions reduction by 2030, with more specificity and clearer timeline;
 - ▶ Significantly expanding discussion of equity and just transition, and developing equitable policies and programs;
 - ▶ Improving tracking of CECP implementation on www.mass.gov/gwsa
- ▶ Please visit www.mass.gov/2030CECP for updates on the 2025/2030 CECP development.

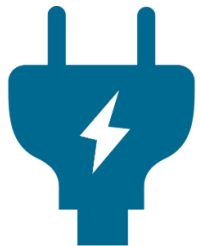
Major Transformations for this Decade, from Interim 2030 CECP



- ❑ **New Buildings:** Highly-efficient new construction
- ❑ **Existing Buildings:** ~1,000,000 Homes and ~350 million sq-ft of commercial property retrofitted with clean heating, high-efficiency insulation
- ❑ **Building Heat:** Significantly less residential and commercial gas usage than today



- ❑ **Light-Duty:** Over 750,000 *new* zero emission cars & trucks on the road
- ❑ **Med. & Heavy:** 20,000 *new* zero emission vehicles (ZEV) on the road + cleaner diesel fuel blends
- ❑ **Miles Travelled:** 15% reduction in light-duty commuter miles traveled



- ❑ **Generation:** 6,000 MW of new clean energy built and interconnected
- ❑ **Transmission:** First of several new regional transmission lines operational
- ❑ **System:** New ISO-NE transmission planning & clean energy markets are ready to add 1 GW offshore wind & 500 MW of solar every year, plus 2 or 3 more large transmission lines, through 2050

What Could Getting to 50% in 2030 Look Like?

Sector	Gross GHG Emissions (MMTCO ₂ e)			GHG Reductions from 2017	Key topics to achieve 50% emissions reduction by 2030
	1990	2017	2030 (45%)		
Buildings	23.8	19.7	10.3	9.4	To be explored through Commission on Clean Heat and Regulatory process at Department of Public Utilities
Transportation	30.5	30.5	22.5 - 22.7	7.8 - 8	Explore opportunities to limit light-duty vehicle fleet growth
Electricity	28.2	13.6	8.5 - 9.4	4.2 - 5.1	2021 Climate Law increased RPS and created municipal light plants’ commitments to reducing GHG emissions
Non-Energy & Industrial	12.0	9.2	7.8 - 9.7	(0.5)* - 1.4	Federal action on HFCs, complemented by additional action from MassDEP.
Total Gross Emissions	94.5	73.0	49.1 - 52.1	20.9 - 23.9	50% Emissions Limit: 47.3 MMTCO ₂ e (1.8 – 4.8 MMTCO ₂ e additional reductions)
% Reduction from 1990	-	23%	45% - 48%		
*Negative reduction indicates an increase -- this reflects partial mitigation of emissions growth.					

Preliminary Timeline of Clean Energy and Climate Plan

Task (* denotes public meetings)	2021												2022											
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12				
Clean Energy and Climate Plan (CECP)																								
Update energy pathways analysis																								
Assess macroeconomic and jobs impacts																								
Develop CECP for 2025 & 2030							*																	
Set limits and sublimits for 2025 & 2030																								
Submit 2025/2030 CECP to Legislature																								
Set sublimits and develop CECP for 2050																*		*						
Natural and Working Lands (NWL)																								
Extend forest carbon analysis																								
NWL inventory improvements																								
Develop NWL Plan as part of 2025/2030 CECP and 2050 CECP							*									*		*						
Set NWL baseline & NWL goals for 2025, 2030, 2050																								
Commission on Clean Heat																								
Develop E.O. establishing Commission																								
Convene Commission																								
Develop Clean Heat Recommendations							*									*								

* Denotes public meetings

Preliminary Timeline of Related Initiatives

Task	2021												2022																					
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12														
Environmental Justice																																		
Develop EJ Strategy													*																					
Update MEPA environmental impact regs						*																												
Develop Cumulative Impact Assessment regs													*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*						
Power Sector																																		
Offshore Wind 83C Round 3 RFP (1,600 MW)																																		
Submit OSW long term contracts for DPU approval																																		
Assess technical potential of solar																																		
Wholesale market reform																																		
Transportation Sector																																		
Develop TCI-P model rule																																		
Expand EV incentives & charging infrastructure						*							*			*																		
Develop recommendations on mode shift and land use																																		
Buildings Sector																																		
Develop GHG goal for 2022-2024 EE Plan																																		
DPU considers EE plan with GHG value											*																							
Develop specialized Stretch Energy Code regs													*																					
Implement Stretch Energy Code municipal opt-in																																		
Develop Appliance Efficiency Standards regs													*																					
Utilities develop reg. proposal on gas future																																		

* Denotes public meetings

Input on Related Initiatives

- ▶ Visit www.mass.gov/2030CECP for more information on ways to provide input on key initiatives that feed into the 2025/2030 CECP, including:
 - ▶ Clean Heat Commission
 - ▶ Specialized Stretch Energy Codes
 - ▶ Forest carbon goals and policies
 - ▶ Environmental Justice Strategy
 - ▶ Environmental Impact Review of Development Projects
 - ▶ Cumulative Impact Assessment for Certain Permits and Approvals

Public Engagement

Below is a directory of public processes that inform the 2025/2030 CECP. EEA will update this directory regularly as more information of new public processes become available.

Public Processes informing the Clean Energy and Climate Plan for 2025 a

Topic	Agency/Office	Public Meeting/Comment Period	More Information
Environmental Justice Strategy in accordance with the Environmental Justice Policy (updated June 2021)	Environmental Justice	Early 2022	www.mass.gov/environmental Sign up to get Environmental Ju https://www.mass.gov/forms/updates-notices
New regulations requiring Environmental Impact Report for projects within 1 mile of an Environmental Justice community	Massachusetts Environmental Policy Act (MEPA) Office	October 12 and 13, written public comment accepted until Oct. 20, 2021	www.mass.gov/mepa

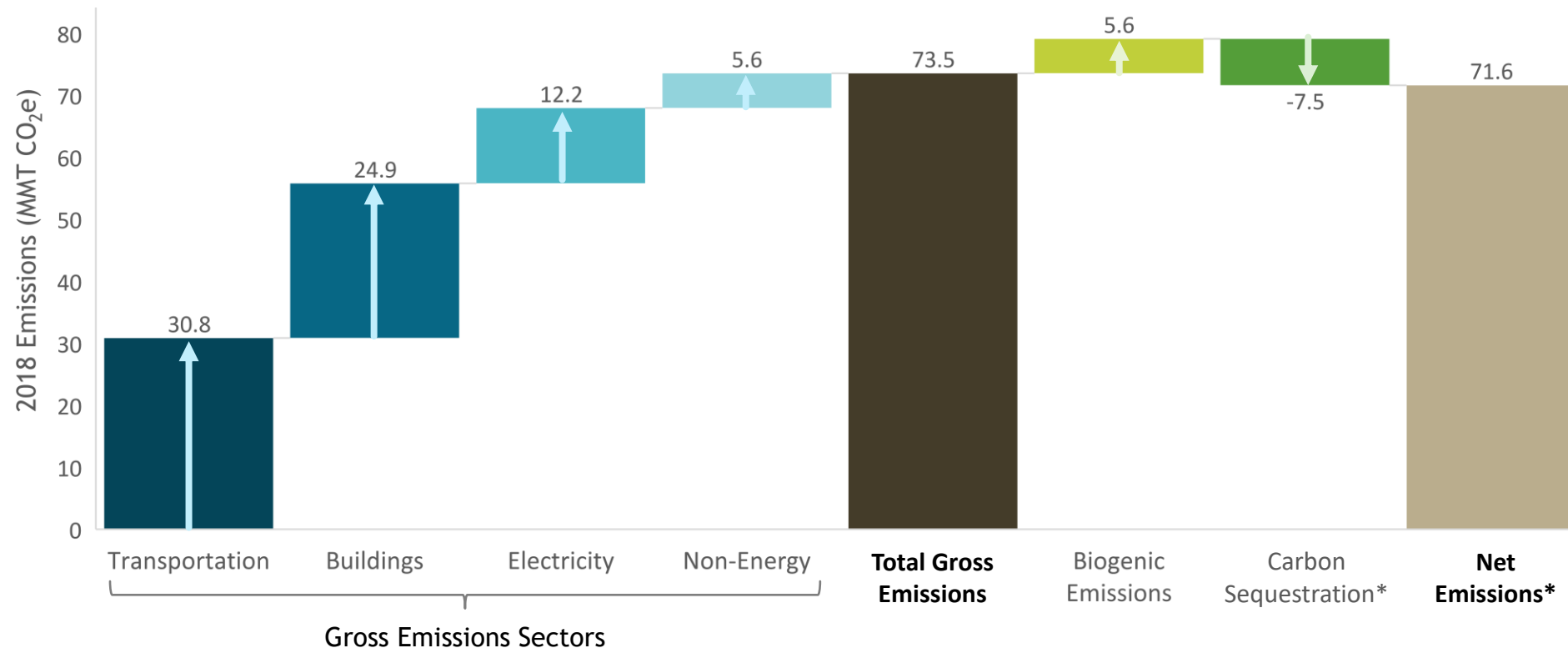
Targets for 2022

- ▶ In March 2022, we will present and gather feedback on:
 1. Proposed emissions limits and sublimits for 2025 and 2030;
 2. Proposed goals for reducing emissions from and increasing carbon sequestration on natural and working lands (NWL)
 3. Proposed policy portfolio that aim to achieve these emission limits, sublimits, and NWL goals.



Input on Emissions Accounting and Tracking

- ▶ PROPOSAL: Set the emissions limits for 2025 and 2030 as a percentage of gross emissions reduction from the 1990 baseline level
- ▶ PROPOSAL: Track net emissions on an annual basis starting from 1990 to help us track progress towards Net Zero by 2050



* Preliminary Estimates

What are Gross Emissions and Net Emissions?

- ▶ **Gross Emissions**: greenhouse gas emissions from the combustion, oxidation, and leakage of fossil fuels and other non-biogenic sources in Massachusetts, plus emissions from out-of-state generation of electric power consumed in Massachusetts.

- ▶ *Major sources*: fossil fuel combustion, industrial processes, natural gas system leaks, agricultural practices, non-biogenic waste

- ▶ **Net Emissions**: the difference between all greenhouse gases released into the atmosphere and those removed from the atmosphere from all sources and sinks in a defined scope, such that:

$$\text{net emissions} = \text{gross emissions} + \text{biogenic emissions} - \text{carbon sequestration}$$

- ▶ **Biogenic Emissions**: emissions resulting from biological processes or the use of biologically-derived materials (excluding fossil fuels, materials of ancient biological origin).

- ▶ *Major sources*: biofuel and biomass combustion, biogenic waste, deforestation, wetland outgassing

- ▶ **Carbon Sequestration**: the uptake of carbon dioxide from the atmosphere combined with long-term storage of the carbon in terrestrial, ocean, geological or durable product reservoirs.

- ▶ *Major sinks*: forest growth, afforestation, wood products

Input on Categories of Emissions Sublimits

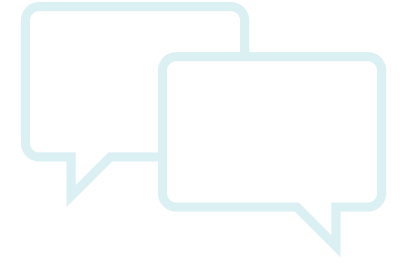
- ▶ PROPOSAL: Set emissions sublimits for 2025 and 2030 for the following categories to be consistent with current statewide greenhouse gas emissions inventory:

Electricity	▶ Electric power (includes electricity use in residential, commercial, industrial, and transportation)
Transportation	▶ Transportation fuel use
Buildings	▶ Residential onsite fuel use
	▶ Commercial onsite fuel use
	▶ Industrial onsite fuel use
Non-Energy & Industrial	▶ Industrial processes
	▶ Methane leaks from natural gas distribution and service

- ▶ Categories in the 2021 Climate Law:

- ▶ Electric power
- ▶ Transportation
- ▶ Commercial and industrial heating and cooling
- ▶ Residential heating and cooling
- ▶ Industrial processes
- ▶ Natural gas distribution and service
- ▶ “any other sector or source the secretary may designate”

Discussion Questions

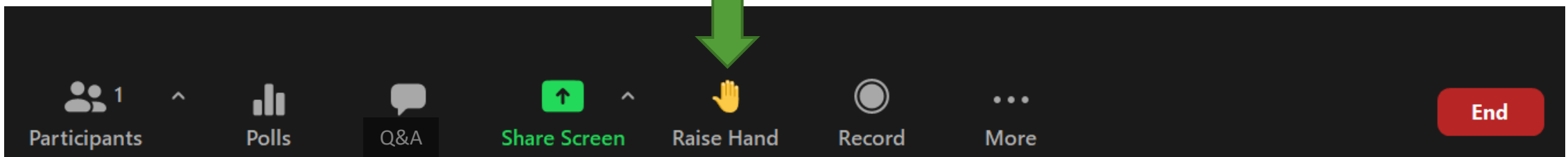


1. Do you have any concerns with EEA setting limits on gross emissions while tracking and lowering net emissions through goal setting and policy development?
2. Do you have any concerns with EEA setting emissions sublimits to be consistent with the categories already in the statewide greenhouse gas emissions inventory?
3. Do you have any concerns regarding moving forward with the approach described today in completing the Clean Energy and Climate Plan for 2025 and 2030?

Please provide your input during this time and/or submit your input to gwsa@mass.gov by December 24, 2021.

Click on “Raise Hand” and we will unmute you

If you are on the phone, press *9 to raise your hand. When we call on you, press *6 to unmute yourself.





Thank You!

Website: www.mass.gov/2030CECP

Email: gwsa@mass.gov

