



GWSA Implementation Advisory Committee (IAC) Meeting

April 29, 2022

1:00PM – 3:00PM



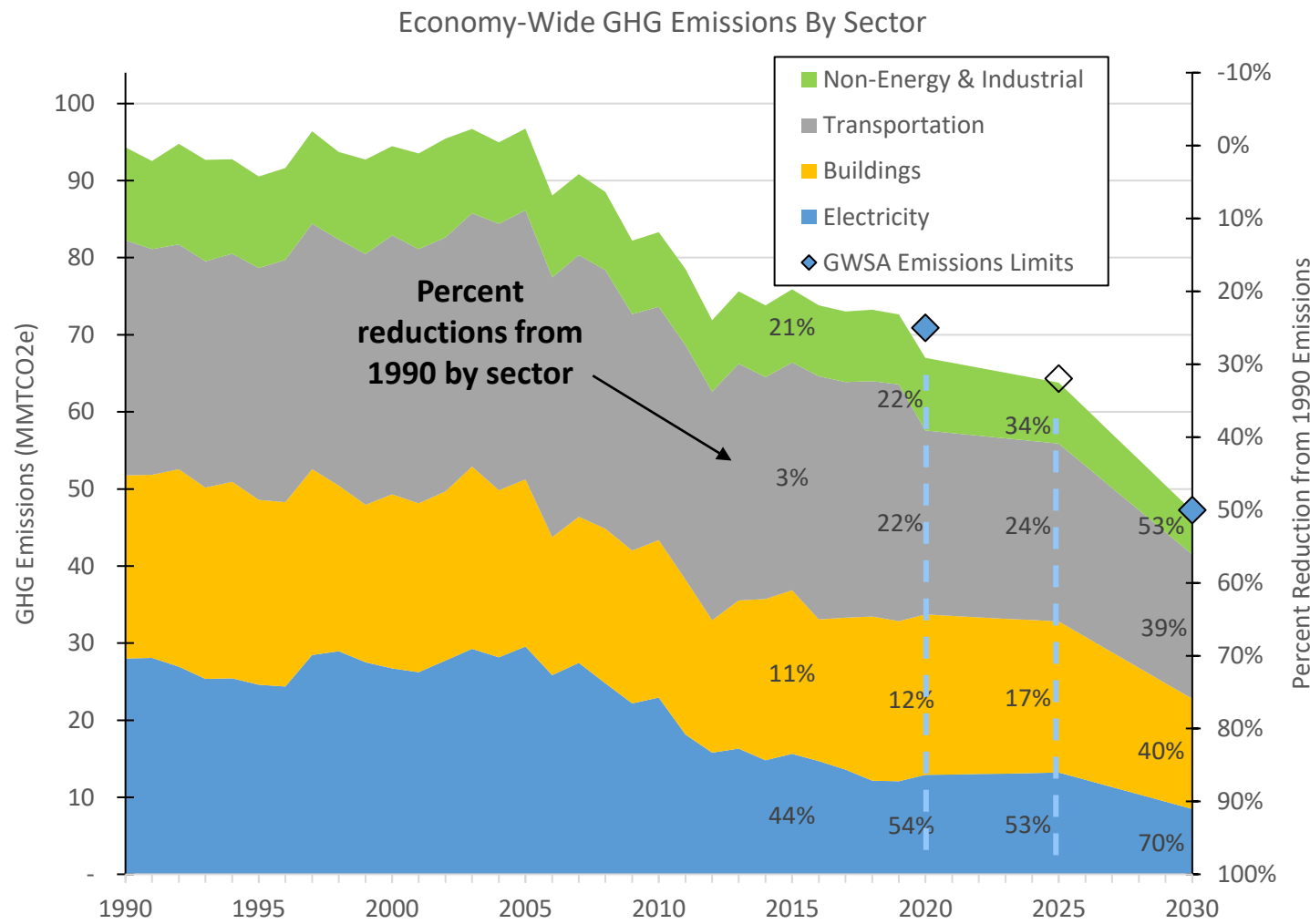
Agenda

- Review and call to approve the 2/28/2022 IAC meeting minutes
- Overview of EEA's proposal for the 2025/2030 CECP and next steps
- IAC feedback on EEA's proposal for the 2025/2030 CECP
- Other IAC business
- Public comment

Overview of EEA's proposal for the 2025/2030 CECF and next steps



Key Findings from 2025 & 2030 Pathways Analysis (Updated in 2021-2022)



- Realistic approach: Achieve 32% GHG emissions reduction in 2025; 50% reduction in 2030
- Power sector has decarbonized significantly in the last decade; other sectors need to carry the burden into 2030
- Estimated 2020 Transportation sector GHG emissions reflects COVID effect (down from 42% of statewide GHG emission in 2018)
- Policies to drive emissions down by 2025 are already in action
- Greater reductions are largely left to the second half of the decade unless we can further reduce emissions from electrification of Transportation



Proposed 2025 and 2030 Sector Sublimits

Sector	1990 GHG Emissions MMTCO ₂ e	2020 GHG Emissions MMTCO ₂ e	2025 GHG Emissions Proposed Sublimits		2030 GHG Emissions Proposed Sublimits		
			MMTCO ₂ e % change from 1990		In Interim 2030 CECP MMTCO ₂ e % change from 1990		
Power* (including all building & transportation electricity)	28.0	12.9	13.2	53%↓	8.5 - 9.4	8.5	70%↓
Transportation	30.5	23.9	23.1	24%↓	22.5 - 22.7	18.7	39%↓
Residential Heating	15.3	12.9	11.4	25%↓	6.1	8.6	44%↓
Commercial & Industrial Heating	14.2	11.7	11.1	22%↓	7.8	7.5	47%↓
Industrial Processes	0.7	4.1	3.6	449%↑	2.5 - 4.4	2.5	281%↑
Natural Gas Distribution & Service	2.3	0.5	0.4	82%↓	0.4	0.4	82%↓
<i>All Other Sources (Waste & Agriculture, no sublimits)</i>	3.4	1.2	1.0	72%↓	0.9	0.9	73%↓
TOTAL	94.3	67.2 (29%↓)	63.8	32%↓	49.1 – 52.1 (48% – 45%↓)	47.2	50%↓

Sublimits shown may be updated with additional policy feedback. Modeling will also be updated to reflect proposed changes to MassDEP GHG Inventory protocols.



Transportation Sector



	In Interim 2030 CECP	New for 2025 CECP	New for 2030 CECP
Key Elements of Policy Portfolio ✓ Ongoing ✓ Completed • Not Started	✓ Provide technical assistance for medium and heavy duty (MDHD) fleets ✓ Launch MDHD electric vehicle (EV) Incentive ✓ Adopt California Advanced Clean Cars 2 and Advanced Clean Truck standards. ✓ Explore point of sale rebate ✓ Investigate low-moderate income incentive ✓ Explore residential charging ✓ Propose revised rate structures and time-varying rates. ✓ Rideshare regulation to reduce commute vehicle miles traveled (VMT) by 15% by 2030 ✓ EV ready building codes	• Proposed in MassTRAC: ✓ Launch program to electrify school bus fleets • Launch program to electrify vehicles for hire • Launch zero-emission delivery program. ✓ Reform MOR-EV to create a point-of-sale incentive and additional incentive targeting high mileage or low- and moderate-income drivers • Increase support for outreach and education ✓ Build fast charging stations along highways • Create residential charging infrastructure program • Launch program on hard to electrify segments ✓ Implement MBTA Communities and Housing Choice ✓ Fully fund MBTA Bus Modernization Program ✓ Increase support to Shared Streets and Complete Streets Program • Launch E-bike Incentive.	
GHG Emission Sublimits	22.5 - 22.7 MMTCO ₂ e (26% - 28% below 1990)	23.1 MMTCO ₂ e (24% below 1990)	18.7 MMTCO ₂ e (39% below 1990)
Key Targets & Metrics	• 750,000 passenger EVs on road by 2030 • Light-duty-vehicle miles traveled stabilized at 56 billion miles per year	• 200,000 passenger EVs on the road • 15,000+ public, level 2 and direct current fast charging (DCFC) EV chargers installed.	• 900,000 passenger EVs on the road • 50,000 MDHD EVs on the road • 7% reduction in VMT against baseline • 75,000 public, level 2 and DCFC EV chargers installed

Buildings Sector



	In Interim 2030 CECP	New for 2025 CECP	New for 2030 CECP
Key Elements of Policy Portfolio ✓ Ongoing ✓ Completed • Not Started	✓ High-performance stretch energy code for Green Communities opt-in <u>Mass Save®</u>: ✓ Limiting fossil fuel heating system incentives in the 2022-2024 Plan ✓ Phase out fossil fuel heating incentives in next plan ✓ State appliance standards by statute • Declining emissions cap on heating fuels by 2023 in consultation with the <u>Commission on Clean Heat</u> regarding the cap structure and levels	• Declining cap on building heat emissions and develop approaches to meet the cap, including a Clean Heat Standard by 2024 • Develop comprehensive Energy Transition approach to enhance Mass Save®, recommendation to legislature by Dec. 2023 • Develop building performance reporting methodology for the State no later than Dec. 2023 • Explore frameworks to provide clear guidance, technical assistance, and financial resources for all relevant state programs • Long-term utility infrastructure planning aligned with decarbonization; balance and mitigate consumer costs by 2024 ✓ Enhance consumer outreach and workforce development programming • Municipal Opt-In building scorecards at point of sales and lease in 2028 <i>(All above policies are in development based on discussion with the Commission on Clean Heat)</i>	
GHG Emission Sublimits	10.4 MMTCO ₂ e (56% below 1990)	19.6 MMTCO ₂ e (17% below 1990)	14.3 MMTCO ₂ e (40% below 1990)
Key Targets & Metrics	• Deep weatherization in 20% of stock by 2030 • Electric heating in ~1 million residences • Equivalent effort (300-400 million square feet) in Commercial Sector. • 20% blend for fuel oil, 5% for pipeline gas by 2030	• Deep weatherization in 10% of stock by 2025 • Electric heating in ~500,000 residences: both whole home and hybrid heat (~400,000 households as of 2019) • Equivalent effort (100 million square feet) in Commercial Sector	• All metrics the same as in Interim 2030 CECP, except: • Expanded definition of electric space heating to explicitly include hybrid heating solutions (e.g., a heat pump serving greater than 50% of heating demand, with a back-up fossil fuel system)



Electricity Sector



	In Interim 2030 CECP	New for 2025 CECP	New for 2030 CECP
Key Elements of Policy Portfolio ✓ Ongoing ✓ Completed • Not Started	✓ Execute existing solar programs and offshore wind procurements ✓ Complete the New England Energy Connect project ✓ Develop and coordinate regional planning and market; work with New England states on ISO-New England direction ✓ Raise Clean Energy Standard to 60% by 2030 (MassDEP rulemaking) ✓ Ensure that municipal electricity suppliers are decarbonized on pace ✓ Initiate solar siting and interconnection studies ✓ Make investments in offshore wind industry ✓ Monitor and drive forward distribution system planning and grid modernization	• Required by 2021 Climate Law: ✓ Additional offshore wind capacity procurements authorized • Renewable Portfolio Standard raised to 40% by 2030 ✓ Municipal GHG Emissions Standard set into law ✓ Funding allocated to MassCEC for workforce development ✓ Equity and environmental justice required to be included in siting board decisions • All other policy elements progressing incrementally since 2020	
GHG Emission Sublimits	9.4 MMTCO ₂ e (67% below 1990)	13.2 MMTCO ₂ e (53% below 1990)	8.5 MMTCO ₂ e (70% below 1990)
Key Targets & Metrics	• 7 GW of new capacity (including all new solar, hydro, and offshore wind (OSW)) • Project pipeline of 8 GW of additional clean energy projects for 2030 in planning. • Emissions intensity from imported electricity limited to 2 MMTCO₂e	• First OSW farm in operation • Various clean energy standard regulation updates completed • Comprehensive planning completed by 2024	• 2.8 GW OSW operating by 2030 + other clean resources in region + project pipeline for 2030's. • 50,000 GWh of clean electricity used by MA customers in 2030 • Preliminary modeling: >16,000 jobs by 2030



Non-Energy & Industrial Sector



	In Interim 2030 CECP	New for 2025 CECP	New for 2030 CECP
Key Elements of Policy Portfolio ✓ Ongoing ✓ Completed • Not Started	✓ Hydrofluorocarbon (HFC) prohibitions in MassDEP regulation 310 CMR 7.76 • Explore additional regulations to minimize SF₆ ✓ Best practices for limiting waste, wastewater, and agricultural emissions	✓ US EPA implementation of international Kigali agreement to gradually reduce the consumption and production of hydrofluorocarbons (HFCs) ✓ Implement the 2030 Solid Waste Master Plan, updated in Oct. 2021 • Change approach for Gas System Enhancement Plans to upgrade leaky pipes and evaluate alternatives to replacement in areas with low gas system utilization (e.g., electrification and retirement)	
GHG Emission Sublimits	9.7 MMTCO ₂ e (19% below 1990)	7.9 MMTCO ₂ e (35% below 1990)	5.7 MMTCO ₂ e (53% below 1990)
Key Targets & Metrics	• Emissions from industrial energy consumption, industrial processes, natural gas distribution system, solid waste, insulated switch gears, wastewater, and agricultural practices remain steady. • F-gas emissions kept below 5 MMTCO₂e, or even rolled back by 2030.	• HFC emissions below 3.5 MMTCO₂e by 2025 (22% reduction from 2020 levels) • Maintain use and capacity of anaerobic digesters	• 30% reduction in waste disposal by 2030 • HFC emissions below 2.4 MMTCO₂e by 2030 (46% reduction from 2020 levels) • Maintain use and capacity of anaerobic digesters

Natural and Working Lands



In Interim 2030 CECF

New for 2025 CECF

New for 2030 CECF

Key Elements of Policy Portfolio

- ✓ **Ongoing**
- ✓ **Completed**
- **Not Started**

- Explore incentive programs designed to achieve no-net-loss of forest and farmland
- Implement and incentivize best soil carbon management practices
- ✓ Study of solar siting that minimizes environmental impacts
- Incentivize the regional use of durable wood products
- ✓ Develop measurement, accounting, and market frameworks necessary to support development of a regional carbon sequestration offset market by the end of 2025

- Propose to MEPA Advisory Board that development projects clearing forest must undergo MEPA environmental impact review
- Evaluate state-funded construction projects on cost of carbon emissions and prioritize native lumber
- Require reporting of where cleared trees are milled
- Study end uses of MA timber, and opportunities and workforce to scale local durable wood market
- Require no-net-loss of carbon in replicated wetlands
- Streamlined permitting for wetland restoration and development in outer 50 ft. of wetland buffer zone
- **Discussed in Resilient Lands Initiative:**
 - Expand state land acquisition, conservation and planning grants, tree planting, farmland protection, and healthy soils incentives
 - Launch Forest Resilient & Forest Viability Programs
 - Designate a portion of the [Municipal Vulnerability Preparedness \(MVP\)](#) grants for greening projects.

Key Targets & Metrics

N/A

- 28% of NWL in MA permanently protected from conversion
- At least 5,000 acres of new tree cover

- 30% of NWL in MA permanently protected from conversion
- 20% of private forest & farmlands managed for carbon and resilience
- At least 16,100 acres of new tree cover
- No net loss of stored carbon in wetlands
- 20% of MA wood used as durable wood products in MA



Next Steps

- Listen to oral comments on the proposed emissions limits, sublimits, goals, and policies for the 2025 and 2030 CECP.
- Receive written comments until April 30, 2022.
 - Submit written comments at [this portal](#) or email gwsa@mass.gov
- Review and synthesize submitted comments.
- Update the proposed emissions limits, sublimits, goals, and policies based on final modeling results.
- Submit 2025 and 2030 CECP to Legislature and post on www.mass.gov/2030CECP by July 1, 2022.

IAC feedback on EEA's proposal for the 2025/2030 CECF

1. Economy-wide emissions limits & sector-specific sublimits
2. Electric Power policies
3. Transportation policies
4. Buildings policies
5. Non-Energy and Industrial policies
6. Natural and Working Lands goals and policies
7. Additional Climate Justice considerations

Other IAC Business

1. IAC meetings after July 15, 2022
2. IAC work group leadership
3. Other?

Public Comment
