August 2020. Comparison House (H.4933) and Senate (S.2500) Climate Bills

Green= Preferred policy support.

Red= Bad policy oppose

Blue = Good policy, can support but others may take lead or this policy is less of priority than others

Senate	**House**
Goals: Greenhouse Gas Emissions must fall: • 50% from 1990 baseline by 2030 • 75% from 1990 baseline by 2040 • Net zero from 1990 baseline by 2050 + Must set GHG emission goals for 2020-2025-2035-2045 PLUS Set 5-year targets by sector for Electricity Transportation Residential Cooling and Heating Commercial Cooling and Heating Industrial Processes Agriculture Solid Waste Natural gas distribution and service	**Goals:** Greenhouse Gas Emissions must fall: • 50% from 1990 baseline by 2030 • 75% from 1990 baseline by 2040 • Net zero from 1990 baseline by 2050 + Increase Renewable Portfolio Standard 3% each year from 2024 to 2029 so that 40% of electricity is renewable by 2030.
Planning process: Requires, among other requirements, Benchmarks and tracking of adoption of technologies/solutions to include: Efficiency Electric vehicle/charging PV/solar thermal Carbon sequestration Energy storage Heat pumps, and other	**Planning process:** **Road Map:** Road map must include: • **Quantitative modelling** of economy and emissions • **Public inspection** of modelling, including assumptions and data • **Multiple plans for emissions reduction** • **Economic, environmental and public health impacts** of each plan ○ including any impacts on **low income and EJ communities**
Accountabililty: **Certificate of compliance**: After each target date (2025, 2030…), EOEA must file Certificate,	**Accountability:** **Public inspection** of modelling, including assumptions and data

indicating whether it complied with emissions target. If State did not lower emissions by projected amount, State must provide plans of how it excess emissions and how it will meet next target. *(See also Energy Benchmarking and large buildings below)* **Climate Policy Commission:** Commission independent from any Executive branch agency, reviews data, policy, analysis, makes recommendations, & issues reports. Reviews certificates of compliance, monitors implementation Suggests changes to state agency data collection and reporting practices, central repository for data and analysis + Advisory Committee of stakeholders including youth Climate Policy Commission has Executive Director and staff, funded with up to $5 million from market-based mechanism	
LMI impact—how addressed in plans **Consider** disproportionate impact on LMI communities and **recommend actions** to provide benefits or cost savings or otherwise eliminate impact **Regulations shall be designed to ensure** that emissions reduction is equitable and "mitigates the effect of increased energy and transportation costs on LMI, improves their economic condition, where feasible, and creates additional employment and economic development in the commonwealth."	**LMI impact—how addressed in plans** **economic, environmental and public health impacts** of each plan including any impacts on **low income and EJ communities**
Re**porting on LMI Impact** Climate Commission shall assess, review any policy or program, under its purview including implications for, and risks to, underserved communities and communities with a high	**Reporting on LMI Impact** Reports submitted every 5 years " to include a detailed summary of the steps taken by the commonwealth to improve or mitigate economic,

percentage of low income households, together with a summary and review of preview and regions of the commonwealth, together with a summary and review of past actions taken to protect, mitigate and, where feasible, improve the condition of low-income and moderate-income persons;	environmental and public health impacts on low or moderate-income individuals and environmental justice populations"
Market based mechanism Shall be established for: Transportation sector, commercial/industrial/institutional sector, residential building sector Same language as for plans re: mitigate the effect on LMI Identify manufacturing sectors at risk for adverse impact due to mechanism and mitigate impacts Address characteristics of urban, suburban and rural households	

Clean Energy Workforce Development and Training
• "Promote" job training, placement for people displaced by emissions reduction and transition to green technology
• Workforce transition plan to help develop and inform the CEWDT program, with estimates of education, training and support available; # of workers at facilities likely to be displaced; wages, benefits at facilities
	$12 million for **Clean Energy Equity Workforce and Market Development Program** to include:
	• Job training, placement, start up opportunity, grants to:
	  ○ Minority Women Small Business Enterprises (MWSBE)
	  ○ People in EJ communities
	  ○ Workers in fossil fuel industries
	• Goals: increase employment and also increase clean energy at MWSBE

Energy efficiency and cost effectiveness Per GWSA, electric and natural gas utilities required to pursue all cost-effective energy efficiency strategies first to meet demand. Senate bill requires utilities to **consider social benefit of GHG emissions in cost-benefit analysis**	
Develop municipal opt in stretch code Adopt stretch code as amendment to Building Code within 1 year Consider staggered implementation of Stretch Code by building type	

Green Communities: expand to include: technical and financial assistance for energy efficiency measures in green communities to include: energy conservation, management, demand side management, storage/microgrids/district energy, EV charging, coordination of residential or small business clean energy outreach (compare to current)	
Energy Use Benchmarking • Commercial buildings and state-owned buildings > 35,000 s.f. • Annual submission of data • State (or if delegated) municipality shall gather data and provide information including incentive programs to improve performance, data posted publicly	
	Solar net metering: No caps for non-governmental Tier II/Tier III solar facilities as long as providing own energy (Tier II/III are larger solar arrays); May net meter to any distribution company in state ***Utility owned solar (and battery storage)*** *may be approved by municipalities at high risk from climate change *cost recovery from DPU *priority for EJ communities ***Solar taxation*** Residential solar producing 125% or less of bldg. needs not taxable. Other solar and wind: Taxable by local municipality unless have arranged Payment in Lieu of Taxes
Low Income Support Solar EOEA to develop grant program totaling $500,000/year to enable nonprofits offering services related to homelessness, food security, and shelter to install solar energy generating equipment	Allows gas and electric utilities to support, as part of energy efficiency plans: • Affordable housing: Whole house retrofits done by weatherization/Fuel Assistance network for low income (<80% median income) housing including

	housing administered by DHCD or that receives funding from DHCD. • Audit/outreach re: needs for energy efficiency/whole house retrofit at affordable housing units • Low Income Whole House Retrofit Taskforce • Recommendations to increase participation of low income people residing in affordable housing units
Solar programs and low income For any program created: • Portion of capacity block must be allocated to solar tariff generation units that primarily serve low income people • Maintain solar incentives that benefit solar tariff generation units primarily serving low income customers. • Outreach program, accessible, user friendly, and in languages other than English	DOER Solar Incentive Programs must • Provide equitable access to all rate payers, including low income • Address solar income access and affordability for low income communities • Include effective consumer protections • Make information accessible, including to limited English proficient people
BBRS: Expand to 12, add 3 building technology experts w expertise in energy efficiency	**BBRS:** expand from 11 to 15, include head of DOER, 1 expert in commercial bldg efficiency and one in residential bldg efficiency
	Environmental Justice Defines EJ communities Requires environmental impact statement whenever projects proposed within 1 mile (or 5 miles for air polluting project) of EJ community Sets standards for meaningful public process Establishes EJ Advisory Board
	Municipal Light Plants Must reduce GHG emissions 50% non-carbon emitting sources by 2030, 75% by 2040 Net zero by 2050

	Bad: Defines non-carbon emitting to include: Actual renewable sources-fine Biomass Landfill methane gas, anaerobic digestion Any emitting source that emits 50% of what a highly efficient natural gas facility would emit Generation from resources otherwise determined
	Appliance Standards: Efficiency standards for specific residential and commercial electric and plumbing fixtures
	Gas Infrastructure/Safety: Array of measures to increase infrastructure safety, require repair of leaks, and accurate reporting/data
	Utility Grid Commission: Evaluate investments needed to grid so it can accommodate shift to increased electrification/clean energy
	Natural Lands Commission: plans to increase carbon sequestration and reduce GHG emissions on natural lands every 5 years;
	Electrification Study/maps routes for EV charging expansion: municipal guide EV curbside charging, feasibility study: electricity and ferries; battery storage
Timeline 2/1/2021 Set 2020, 2030, 2040, 2050 emission limits Secure benchmarking tool: 6/31/21 First year of energy use reporting: 1/1/22-12/31/2022 2025 and 2030: Emission limits and sector sublimits and plan to realize 2025 and 2030 limits and sublimits adopted and published; 1/1/22 2025 Energy plan as required by EO569 Energy demands and strategies to get to net zero and additional plans every 5 years: 12/31/25	**Timeline** 12/31/21: Set 2030 and 2040 emission limits; Publish results of quantitative modelling. 12/31/22: Adopt 2050 Road Map plan 12/31/23: Set regulations for 2050 Road Map plan

2035: emission limits, sector sublimits and plan: 1/1/28 Regulations for implementation of market-based mechanisms: Transportation:1/1/22; Commercial cooling/heating sector1/1/25 Residential cooling/heating sector 1/1/30 2040: emission limits, sector sublimits and plan: 1/1/33 2045: emission limits, sector sublimits and plan: 1/1/38 2050: 1/1/23 but subject to revision	

House Climate Bill: Summary

1. Greenhouse Gas Emissions must fall:

    - 50% from 1990 baseline by 2030
    - 75% from 1990 baseline by 2040
    - Net zero from 1990 baseline by 2050

2. **Road Map:** Executive Office of Energy and Environmental Affairs must produce a Road Map re: how MA will get to 2030, 2040, 2050 emission reductions. Road map must include:
    - **Quantitative modelling** of economy and emissions
    - **Public inspection** of modelling, including assumptions and data
    - **Multiple plans for emissions reduction**
    - **Economic, environmental and public health impacts** of each plan
        - including any impacts on **low income and EJ communities**

3. **Natural and Working lands:**
    - Measure/assess GHG emissions and carbon sequestration in natural and working lands and their products.
    - Create plan to reduce GHG emissions and increase carbon sequestration
    - Report every 5 years

4. **Workers:** $12 million for Clean Energy Equity Workforce and Market Development Program to include:
    - Job training, placement, start up opportunites and grants to:
        - Minority Women Small Business Enterprises (MWSBE)
        - People in EJ communities
        - Workers in fossil fuel industries
    - Goals: increase employment and also increase clean energy uptake at MWSBE

5. Low income efficiency
    - Allows gas and electric utilities to support, as part of energy efficiency plans:
    - Affordable housing: Whole house retrofits done by weatherization/Fuel Assistance network for low income (<80% median income) housing including housing administered by DHCD or that receives funding from DHCD.
    - Audit/outreach re: needs for energy efficiency/whole house retrofit at affordable housing units
    - Low Income Whole House Retrofit Taskforce
    - Recommendations to increase participation of low income people residing in affordable housing units
      (This appears to be only people in public/subsidized housing, does not address needs of low income people in market housing. Most low income people are not in public/subsidized housing.)

6. **Regional Portfolio Standard:** Increase RPS 3% each year from 2024 to 2029 so 40% renewable electricity by 2030

7. **Municipal Light Plants**
   Must have:
   50% non-carbon emitting energy by 2030
   75% by 2040 and
   net zero by 2050

   But **defines non-carbon emitting energy** to include:

   - Actual non-carbon emitting energy (solar, wind, nuclear, hydroelectric
   - **Woody biomass,** methane gas, anaerobic digester gas
   - RECS
   - Generation source that produces, over 20 years, 50**% of GHG emissions compared to a new gas-powered generation facility using most efficient technolog**y
   - **Generation from resources otherwise determined** (seems to allow Administration to declare that anything as non-carbon emitting)

   Alternative Compliance Payment required for municipal light facilities that do not meet reduction targets. ACPs will fund GHG reducing projects.

8. **Board of Buildings and Regulatory Standards**: expand from 11 to 15, include head of DOER, 1 expert in commercial bldg efficiency and one in residential bldg efficiency

9. **Taxes and solar:** Residential solar producing 125% or less of bldg needs not taxable.
   Other solar and wind: Taxable by local municipality unless have arranged Payment in Lieu of Taxes

10. **Utility owned solar (and battery storage)**
    *may be approved by municipalities at high risk from climate change
    *cost recovery from DPU
    *priority for development in EJ communities

11. **Appliance Standards**

Identifies efficiency standards for range of residential/commercial electric and plumbing fixtures

12. Gas Infrastructure/Hazards

- Public database of complaints about gas providers
- Increase in fines for utility providers and subcontractors for violation of laws @ excavation, emergency preparation and restoration of service, and storage, transportation and distribution of gas
- Inspection, reporting, repair of gas pipelines: Timelines for fixing gas leaks (Grade 2 (non-hazardous) within 6 months or 12 months if there is a delay in getting permits.)
- Monthly reporting of Grade 3 leaks
- Regulations must be developed to improve emergency preparedness and response, and for maintenance, updating, accuracy of gas maps,
- Updated data provided to gas company workforce and subcontractors—and delays/disruptions of more than 30 min recorded
- Gas companies must provide leak rates and plans to repair aging/leaking infrastructure with interim targets every 5 years and penalties for not meeting targets
- Additional technical requirements to improve safety of gas infrastructure

13. Environmental Justice

- EJ definition: Neighborhood in which:
    - Annual median household income not more than **65% state annual median household income**
    - **40% or more minority residents**
    - 25% or more limited English proficient residents
    - 25% or more minority residents and annual median income of municipality in which neighborhood is located has an annual median income of not more than 150% state median income

If a neighborhood does not meet criteria but one geographic portion does, that portion can be designated an EJ area upon the petition of 10 or more residents,

The secretary of EOEA may determine that a neighborhood or geographic portion is <u>not</u> an EJ area if:

- Annual median household income is greater than 125% state annual median household income
- Majority of residents over 25 have college education
- Area does not have an unfair burden of environmental pollution AND
- Has more than limited access to natural resources

- Environmental impact report identifying public health and environmental impacts of all development projects proposed to be sited within 1 mile of EJ population, 5 miles for projects with air impacts.
- Must include assessment of existing unfair burdens
- Must include assessment of how a new project will affect the community's impact from climate change
- Must provide meaningful public involvement to include: environmental notification, and, if there are limited English speaking populations, notices in languages other than English, translation at meetings.
- Meetings must be in accessible locations near public transportation, and project information must be made available for public
- Consider EJ principles in making project decision, policy, project review

- Environmental Justice Council

14. **Solar net metering** can be applied to any distribution company in MA

Exempts certain solar facilities over 60 kw from net metering caps

15. **DOER Solar Incentive Programs** must

- Provide equitable access to all rate payers, including low income
- Address solar income access and affordability for low income communities
- Include effective consumer protections
- Make information accessible, including to limited English proficient people

16. **Utility Grid Commission**

DPU shall establish commission to study and make recommendations re: long term grid modernization of gas and electric grid to meet state's renewable energy/climate targets including needed infrastructure investments, interconnection agreements. To begin meeting 1/2021.

17. SMART Land Use Commission

To develop land use recommendations within SMART that encourage the conservation of farm, forest and natural lands. To report by 7/2021.

18. Authorize utility scale renewable thermal pilot

19. Produce municipal guide to curbside EV charging

20. Conduct feasibility study: Battery storage-how to improve and increase use

21. Conduct feasibility study: Converting ferries to electric or hybrid electric

22. Conduct study: Routes/highways that should be high priority locations for EV charging

Timelines: See chart

Senate Climate Bill: Summary

1. **GHG Emissions**
   2030-50% reduction from 1990; 2040-75% reduction from 1990;
   EOEA shall set 2020, 2025, 2030, 2035, 2040, 2045, 2050 emissions limits and plans to achieve each one. Set emissions limits for each sector of economy: electricity, transportation, commercial heating and cooling, residential heating and cooling, industrial, agriculture, solid waste, natural gas

   18-months after each target date (2020, 2025, 2030 etc.): State must file certificate of compliance/non-compliance. If did not meet emissions target, remedial action the State proposes to address and how the State will meet next target.

2. **Plans**
   Five year plans shall quantify emissions reduction by economic sector and shall set metrics for the expansion of specific technologies, including, but not limited to:

efficiency, EV, solar PV, solar thermal, storage, anaerobic digestion, carbon sequestration, heat pumps and other)

- Consider disproportionate impact on LMI communities and recommend actions to provide benefits or cost savings or otherwise eliminate impact

Regulations shall be designed to ensure that emissions reduction is equitable and "mitigates the effect of increased energy and transportation costs on LMI, improves their economic condition, where feasible, and creates additional employment and economic development in the commonwealth."

3. **Market based mechanism**
   Shall be established for:
   Transportation sector, commercial/industrial/institutional sector, residential building sector
   Same language as for plans re: mitigate the effect on LMI
   Identify manufacturing sectors at risk for adverse impact due to mechanism and mitigate impacts
   Address characteristics of urban, suburban and rural households

4. **Climate Policy Commission**
   - With ED, staff, funded by up to $5 million of proceeds from market-based mechanism
   - Independent, review, analysis, reports shall not require approval of any executive agency
   - Review certificates of compliance, review policies and make recommendations, monitor implementation, suggest changes to state agency data collection and reporting practices, central repository for data and analysis
   - Advisory Committee to Climate Policy Commission: representation by wide group of stakeholders (including youth)

5. **Clean Energy Workforce Development and Training**
   - "Promote" job training, placement for people displaced by emissions reduction and transition to green technology
   - Workforce transition plan to help develop and inform the CEWDT program, with estimates of education, training and support available; # of workers at facilities likely to be displaced; wages, benefits at facilities

6. **Energy efficiency and cost effectiveness**
   Per GWSA, electric and natural gas utilities required to pursue all cost-effective energy efficiency strategies first to meet demand. Senate bill requires utilities to consider social benefit of GHG emissions in cost-benefit analysis

7. **Develop municipal opt in stretch code**
   Adopt stretch code as amendment to Building Code within 1 year
   Consider staggered implementation of Stretch Code by building type

8. **Green Communities** expand to include: technical and financial assistance for energy efficiency measures in green communities to include: energy conservation, management, demand side management, storage/microgrids/district energy, EV charging, coordination of residential or small business clean energy outreach (compare to current)

9. **Energy Use Benchmarking**
   - Commercial buildings and state owned buildings > 35,000 s.f.

- Annual submission of data
- State (or if delegated) municipality shall gather data and provide information including incentive programs to improve performance, data posted publicly

10. **Low Income Support Solar**
    EOEA to develop grant program totaling $500,000/year to enable nonprofits offering services related to homelessness, food security, and shelter to install solar energy generating equipment

11. **BBRS:** Expand to 12, add 3 building technology experts w expertise in energy efficiency

12. **Solar programs and low income**
    For any program created:

- Allocate portion of capacity block solar tariff generation units that primarily serve low income people
- Maintain solar incentives that benefit solar tariff generation units primarily serving low income customers.
- Conduct outreach, which must be accessible, user friendly and available in languages other than English

13. **Utility scale renewable thermal pilot**

14. **Heat pump market development program:** Fund and offer training to oil dealers, among others, until Jan 2026, to increase deployment. Funded by Mass Renewable Energy Trust if there are adequate funds

15. **Timelines:** See chart.