



MEMORANDUM

TO: Cape Cod Commission Climate Action Subcommittee

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DATE: October 28, 2020

RE: Outline of Select Federal and Massachusetts Laws regarding the Reduction of Greenhouse Gas Emissions

This memorandum provides a high-level overview of aspects of federal and Massachusetts law relevant to the mitigation, *i.e.* reduction, of greenhouse gas (“GHG”) emissions. In particular, the review focuses on laws that address emissions from the building, transportation, and electricity sectors. This is not a comprehensive review of all relevant laws, regulations and policies that could affect emissions of GHGs, and the memorandum does not address the full range of voluntary programs or funding opportunities for municipal action. Similarly, there are examples of local laws noted throughout the memorandum, but these are only representative of relevant city and town actions.¹

The system of existing federal and state laws leaves room for municipalities and regional planning agencies in Massachusetts to take action to reduce GHG emissions, however, there is generally no mandate to do so. While communities across the Commonwealth are adopting

¹ In some instances, the local examples discussed are actions by cities for which the relevant legal authority or consistency with state laws has not been analyzed by a court or other official body, and thus the existence of a city ordinance on a topic is not a guarantee that a similar action would be possible if adopted by a town. This is because bylaws passed by towns, including zoning bylaws, are reviewed by the Attorney General’s Office for consistency with state law and the state constitution. One issue the Attorney General’s Municipal Law Unit will consider in these reviews is whether a town bylaw is preempted by a state law, such as the Building Code. City ordinances are not subject to the same review; any preemption analysis of a City ordinance would only occur if someone challenges the City law in court. Thus, examples of activities in cities are useful precedent but not necessarily a guarantee that an equivalent town requirement would survive review by the Attorney General’s Office. It is possible that a town could adopt a requirement relevant to GHG emissions that already exists in a city ordinance and still have the Attorney General’s Office conclude that the town bylaw is inconsistent with state laws.

Climate Action Plans and other measures targeting GHG emissions reduction, state laws targeting GHG emissions do not appear to create independent authority for municipalities to take action that would otherwise be prohibited by another state law, such as local regulation of building construction techniques and material.

In some communities, GHG mitigation efforts are focused primarily on reducing their own emissions, including from the buildings they own or manage, the energy they use, and their vehicle fleets. Other cities and towns also look to reduce GHG emissions from the private sector. These latter efforts are often voluntary in nature, such as zoning incentives, or part of revised project review standards. While local mandates relevant to reducing GHG emissions from the private sector, such as reporting requirements and project development requirements, are less common, there is continued exploration regarding the viability of such approaches, including via zoning requirements and stand-alone laws. The scope of municipal and regional authority in this field continues to be explored.

Although the examples of local action in this memorandum come from municipalities, it is also feasible for other political subdivisions, such as regional planning organizations and counties, to take steps relevant to reducing GHG mitigations. For instance, the Pioneer Valley Planning Commission, which covers Hampden and Hampshire counties, issued a Pioneer Valley Climate Action and Clean Energy Plan in 2014, which included the first GHG inventory at the regional level in Massachusetts. Regional organizations can also play a role in supporting actions by their member communities. For example, the Metropolitan Area Planning Council is engaged in a multi-municipality project with three communities (Arlington, Natick and Melrose) to develop or update their GHG inventories and draft net zero plans for each jurisdiction; one goal of this coordinated approach is to support the communities learning from each other and sharing best practices. The role of regional bodies may differ from that of towns and cities for multiple reasons, including different scopes of authority and laws within their control (*e.g.*, regional bodies do not have the authority to adopt zoning laws).

The rest of this memorandum reviews laws relevant to six aspects of mitigating GHG emissions: (i) reporting GHG emissions; (ii) economy-wide emission reduction targets; (iii) reducing emissions from the building sector; (iv) reducing emissions from vehicles; (v) reducing emissions from electric generation facilities and retail electric suppliers; and (vi) reducing emissions from other sectors. The last section of the memorandum includes a brief discussion of laws relevant to the siting of fossil fuel power plants and infrastructure.

I. LAWS RELEVANT TO REPORTING GREENHOUSE GAS EMISSIONS

A. Federal Law

i. Greenhouse Gas Reporting Program

- The Greenhouse Gas Reporting Program (“GHGRP”) requires reporting of GHG data from large GHG emission sources, fuel and industrial gas suppliers, and carbon dioxide (CO₂) injection sites in the United States.

- 41 categories of reporters are covered by the GHGRP. Facilities determine whether they are required to report based on the types of industrial operations located at the facility, their emission levels, or other factors. Facilities are generally required to submit annual reports if:
 - GHG emissions from covered sources exceed 25,000 metric tons of carbon dioxide equivalent (“CO₂e”) per year.
 - Supply of certain products would result in over 25,000 metric tons CO₂e of GHG emissions if those products were released, combusted, or oxidized.
 - The facility receives 25,000 metric tons or more of CO₂ for underground injection.
- Approximately 8,000 facilities are required to report their emissions to the federal Environmental Protection Agency (“EPA”), and the reported data are made available to the public.

B. Massachusetts Law

i. Global Warming Solutions Act

- Pursuant to the Global Warming Solutions Act, the Massachusetts Department of Environmental Protection (“DEP”) collects GHG emission data from all facilities that:
 - (i) Have air emission permits under the federal and state clean air acts, or
 - (ii) Emit more than 5,000 tons per year of carbon dioxide equivalent. This encompasses facilities that do not have to report emissions under the federal law.
- Reporting requirements for retail sellers of electricity apply to municipal electric departments and light boards, as well as electric utilities.

C. Local Laws

- Several communities, including Boston and Cambridge, also require buildings to report their energy use/greenhouse gas emissions.

II. LAWS THAT ESTABLISH DIRECT LIMITS ON GREENHOUSE GAS EMISSIONS ON AN ECONOMY-WIDE SCALE

A. Federal Law

- There is no federal law requiring a cap on or reduction of greenhouse gas emissions at an economy-wide scale. As discussed below, there are federal regulations that require GHG emission reductions from specific activities.

- There is a federal executive order, adopted by President Obama in 2015, that requires federal agencies to develop targets for agency-wide reductions of GHG emissions by the end of fiscal year 2025 (using 2008 as a baseline). (E.O. 13693, “Planning for Federal Sustainability in the Next Decade.”)
 - The Executive Order includes provisions specific to building energy conservation and efficiency.

B. Massachusetts Law

i. Global Warming Solutions Act

- Passed in 2008, the Global Warming Solutions Act (“GWSA”) sets a state-wide target to reduce GHGs.
 - These targets were interpreted as mandatory by the Massachusetts Supreme Judicial Court (the highest court in Massachusetts), meaning that the Commonwealth can be sued for not meeting the targets.
- The Executive Office of Energy and Environmental Affairs (the “EOEEA”) and DEP are primarily responsible for implementing the GWSA, including setting the emission limits.
- The GHG emission limits were originally set at:
 - A 25% reduction in GHG emissions from all sectors of the economy by 2020 (from a 1990 baseline emission level); and
 - At least an 80% reduction by 2050.
- The emission target for 2050 was increased this year to “net zero,” which is defined as:

“A level of statewide greenhouse gas emissions that is equal in quantity to the amount of carbon dioxide or its equivalent that is removed from the atmosphere and stored annually by, or attributable to, the Commonwealth; provided, however, that in no event shall the level of emissions be greater than a level that is 85 percent below the 1990 level.”²
- The emission target for 2030 will be determined by the EOEEA Secretary by the end of 2020.
 - This limit will be accompanied by a 2050 Roadmap that will address at least four “pillars” of decarbonization and net zero:

² EOEEA, Determination of Statewide Emissions Limit for 2050 (April 22, 2020); *available at* <https://www.mass.gov/doc/final-signed-letter-of-determination-for-2050-emissions-limit/download>.

- i. Increase Energy Efficiency, Reduce Energy Consumption: Building weatherization, passive house construction, public transit, etc.
 - ii. End-Use Fuel Switching: Electric cars, hydrogen trucks, heat pumps, biofuels, etc.
 - iii. Expand Clean Energy: Renewable electricity, grid storage, advanced biofuels, etc.
 - iv. Increased Carbon Sequestration: Conserving natural lands, best management practices.³
- The emission target for 2040 will be determined by the EOEEA Secretary by the end of 2030.

C. Local Laws

- Obligations to implement the GWSA rest exclusively with state agencies (*e.g.*, requirements to promulgate regulations, develop implementation plans, or reduce their own emissions) and currently apply to a limited number of industries (*e.g.*, electric power plants and certain natural gas infrastructure.)
 - The law does not require any actions by municipalities or regional planning authorities, although it does not prohibit GHG emission reduction actions at the local level.
 - The GWSA does not create independent authority for municipalities (and by extension regional planning authorities) to take action that would otherwise be prohibited by another state law, such as local regulation of building construction techniques and material.
- Some municipalities have adopted local GHG emission reduction goals.
 - Within the greater Boston area, examples of communities that have pledged to achieve carbon neutrality or net zero by 2050 include Somerville, Cambridge, Boston and Lexington.
 - Some communities also have interim mitigation goals and emission reduction goals specific to particular sectors of the economy; for example, Somerville has a goal of reducing residential energy consumption 20% by 2020.
- These local goals are often adopted in a non-binding format, as opposed to creating a law with enforceable targets.

³ <https://www.mass.gov/doc/march-public-meeting-slide-deck-for-2050-roadmap/download>

- While resolutions do not have legal power, they can express the principles of a local government and can encourage a municipality to take significant action.
- Enacting laws with enforceable targets may create legal exposure for municipalities and regional planning authorities, as it has done at the state level.
- Particular steps towards achieving net zero targets may be (i) enumerated in executive orders or resolutions or (ii) incorporated into zoning or other bylaws. For example, with respect to limiting GHG emissions from the building sector:
 - Boston’s Mayor issued an executive order requiring all new municipal buildings to target a Zero Net Carbon standard; and
 - Amherst adopted a Zero Energy Town Buildings Bylaw that requires certain new and renovated municipal buildings to be powered and heated entirely with renewable energy.

III. LAWS THAT POTENTIALLY AFFECT EMISSIONS FROM THE BUILDING SECTOR

Many of the laws addressed below present an opportunity to review and address greenhouse gas emissions from the building sector. Less common are laws that directly require a reduction or avoidance of GHG emissions from either existing or new building stock. The following is *not* a comprehensive review of all laws that could affect GHG emissions from development projects or the building sector. For example, how a wetlands law is implemented could affect emissions from a building project, *e.g.*, if wetlands that act as carbon sinks are allowed to be altered that could result in a release of GHG emissions.

A. Project Review

i. Federal Law

a. The National Environmental Policy Act

- The National Environmental Policy Act (“NEPA”), which was enacted in 1969, requires federal agencies to consider environmental and related social and economic impacts for many of their proposed actions
 - Projects subject to NEPA review can include private actions that require federal permits or funding.
- Prior to July 2020, the regulations implementing NEPA provided that the analysis of a project’s environmental effects had to consider “reasonably foreseeable” direct, indirect and cumulative effects.
 - The Obama administration issued guidance clarifying that this analysis had to consider GHG emissions and climate change.

- Several courts have also concluded that NEPA reviews must consider GHG emissions and climate change.
- The Trump Administration rescinded the Obama NEPA climate change guidance and finalized new NEPA-implementing regulations in July 2020.
 - The new regulations limit the mandate to consider climate change, including by removing and substantially limiting the requirement to analyze cumulative and indirect impacts respectively.
 - The Trump administration’s regulations are currently being challenged in several courts.

ii. Massachusetts Law

a. The Massachusetts Environmental Policy Act

- The Massachusetts Environmental Policy Act (“MEPA”) requires that projects with (i) defined impacts and (ii) state involvement (such as permits, financial assistance or land disposition) use all feasible measures to avoid, minimize and mitigate damage to the environment to the greatest extent practicable.
 - One trigger for MEPA review, *i.e.*, a defined impact, is projected GHG emissions above regulatory thresholds.
 - Damage to the environment includes GHG emissions.
- In considering and issuing permits, agencies must consider reasonably foreseeable climate change impacts, including additional GHG emissions, and effects, such as predicted sea level rise.
- Projects that must consider GHG emissions as part of a MEPA review must:
 - (i) Quantify their GHG emissions;
 - (ii) Identify measures to avoid, minimize and mitigate such emissions;
 - (iii) Evaluate project alternatives that could lower GHG emissions; and
 - (iv) Quantify the impact of any proposed mitigation measures in terms of emissions and energy savings.
- For developments before the Cape Cod Commission for which an Environmental Impact Report is required, the Commission will have all of these MEPA submissions as part of its record for review.

iii. Local Laws

- As part of zoning reviews, municipalities can consider environmental attributes of proposed projects. As an example:
 - Some communities require categories of proposed buildings to demonstrate compliance with Leadership in Energy and Environmental Design (“LEED”) green building rating systems.
 - More specific to climate change, Boston requires large projects to (i) consider and analyze the impacts of future climate conditions and (ii) incorporate measures to avoid, eliminate, or mitigate GHG emissions and impacts related to climate change in planning, design and construction.
 - One step in this process is the requirement for project proponents to complete a Climate Resiliency Checklist, which incorporates MEPA’s protocol for calculating GHG emissions.

B. Project Construction Materials & Methods

i. Federal Laws

- The federal government sets energy efficiency requirements for various types of appliances, such as HVAC systems, that can affect the amount of energy used in operating a building.

ii. Massachusetts Laws

a. Building Code (and Specialized Codes)

- The Building Code regulates the construction of buildings in the Commonwealth, focusing on construction processes and materials.
 - The Building Code has two base volumes: (i) the International Building Code 2015 (“IBC”), as amended by 780 CMR 1.00 *et seq.*; and (ii) the International Residential Code 2015 (“IRC”), as amended by 780 CMR 51.00, which applies to one- and two-family dwellings. These are generally referred to collectively as the Building Code.
 - The Building Code also incorporates the International Energy Conservation Code, which includes provisions relevant to energy efficiency, such as the use of insulation.
 - The Building Code is revised periodically by the Board of Building Regulations and Standards (“BBRS”).
 - The BBRS is currently reviewing proposals for Net Zero development standards.

- The Massachusetts law that created the Building Code provides that:
 - i. The Building Code “shall be binding and have the full force and effect of law [] in all cities and towns notwithstanding any special or general law to the contrary;” and
 - ii. “All by-laws and ordinances of cities and towns in conflict with the state building code [at the date of its adoption] shall cease to be effective.”
- The law establishing the Building Code is interpreted as prohibiting local or regional laws that would mandate more stringent actions than those required by the Building Code.
 - While communities can regulate building design aspects such as height and setbacks via local zoning laws, they cannot regulate or restrict the use of materials, or method of construction, of structures regulated by the Building Code.
- The Building Code includes a Stretch Code, which creates more stringent energy standards for new buildings and renovation projects.
 - Towns and cities may choose to adopt the Stretch Code (as discussed below regarding the Green Communities Act, adopting the Stretch Code may be required for eligibility for certain state funds).
- Specialized construction codes, like the Gas Code (which regulates gas fittings in buildings), are considered part of the Building Code, and thus subject to the same preemption analysis.

b. M.G.L. ch. 164: Regulating the Manufacture and Sale of Gas

- The law regulating the manufacture and sale of gas does not directly regulate the construction or operation of buildings, but can be an obstacle to local actions that seek to reduce GHG emissions from the building sector.
 - The Attorney General’s office recently concluded that an attempt by Brookline to limit the use of fossil fuel infrastructure in new buildings was preempted by the legislative objective in Chapter 164 for uniform provision of energy services.
- Prior cases examining the preemptive nature of Chapter 164 have focused on municipal efforts to regulate the safety of natural gas pipelines, including via requirements to address or reduce leaks that are also relevant to GHG emissions.

c. Green Communities Act

- The 2008 Green Communities Act encourages and incentivizes municipalities to make “clean energy” decisions; this supports actions that reduce GHG emissions.
 - The Green Communities Act is administered by the Department of Energy Resources (“DOER”).

- Communities participating in the Green Communities Act must comply with the following requirements, the last of which is particularly relevant to development in the private sector:
 - Allow as-of-right siting of renewable or alternative energy generating, R&D or manufacturing facilities in designated areas, and create an expedited application and permitting process for siting such facilities;
 - Calculate municipal energy use, in order to establish a baseline, and adopt an Energy Reduction Plan to reduce energy use 20% within five years;
 - Purchase fuel-efficient vehicles for municipal use, to the extent commercially available and practicable. As part of this requirement, local governments and school districts must adopt Fuel-Efficient Vehicle Policies; and
 - Minimize the life-cycle cost of all newly constructed homes and buildings. DOER recommends that communities do this by adopting the “Stretch Code” provisions of the Massachusetts Building Code.
- Participation in the Green Communities Program is optional, but may result in access to resources, such as training, technical support and financial assistance that support local GHG emission reduction efforts.

iii. Local Laws

- Approximately 284 communities have adopted the Stretch Code, including many of the communities in the Cape Cod Commission.
- Several municipalities, particularly cities, have used their zoning laws to either incentivize or require the use of building design features that would reduce GHG emissions.
 - Examples of such design features include green roofs, solar-ready roofs, electric vehicle charging stations, use of or connection to district energy, or net zero design.

IV. LAWS RELEVANT TO GREENHOUSE GAS EMISSIONS FROM VEHICLES

A. Federal Laws

i. Fuel Efficiency Standards

- Congress first established Corporate Average Fuel Economy (“CAFÉ”) standards in 1975 via the Energy Policy and Conservation Act.
 - These fuel economy standards applied to new passenger cars and were intended to approximately double the average fuel economy by model year 1985.

- The Department of Transportation first set CAFÉ standards for light trucks (*i.e.*, pickups, minivans and SUVs) beginning with model year 1978.
 - The CAFÉ standards for light trucks were increased for model year 2007.
- In 2007, Congress passed the Energy Independence and Security Act, which raised fuel economy standards above the 2007 levels and required standards to be set at maximum feasible levels through 2030.
- Pursuant to the Clean Air Act, the EPA also sets pollution standards for new light-duty vehicles, including global warming pollution standards for vehicles.
- Under the Trump Administration, the EPA and the National Highway Traffic Safety Administration issued new regulations that relaxed the prior fuel economy standards for cars and light trucks.
 - This rollback of the Obama Administration’s standards is being challenged in court.

ii. Renewable Fuel Standard Program

- Pursuant to the Clean Air Act, EPA sets Renewable Fuel Standards that mandate the total volume of renewable fuels that must be blended into gasoline and diesel, including volume standards for biomass-based diesel.

iii. Financial Incentives for Alternative Vehicles (examples)

- Purchases of new all-electric and plug-in hybrid vehicles in or after 2010 may be eligible for a federal income tax credit up to \$7,500 (the actual amount of the credit depends on the capacity of the car’s electric battery).
 - The tax credit program, first established in 2008, is the federal government’s main policy for promoting electric cars.
- There is also an alternative fuel infrastructure tax credit available for fueling equipment for electricity (and other alternatives sources) installed through the end of 2020. The tax credit extends to 30% of a project cost, up to \$30,000.

B. Massachusetts Laws

Massachusetts is a participant in the Transportation and Climate Initiative, which is a multistate collaboration of thirteen Northeast and Mid-Atlantic states that seek to jointly reduce carbon emissions from the transportation sector. A final Memorandum of Understanding (“MOU”) is expected to be issued in the fall of 2020, at which point Massachusetts will decide whether to sign and commit to participating in the multistate cap on transportation emissions. Should Massachusetts sign the MOU, it is likely that state agencies would then adopt additional regulations, beyond those noted below, to address GHG emissions from the transportation sector.

i. Fuel Efficiency Standards

- The Clean Air Act authorizes California to set vehicle emission standards that are more stringent than the federal requirements. Pursuant to this authority, California developed global warming pollution standards for light-duty vehicles in 2004.
 - Massachusetts adopted the California standards in lieu of the less stringent federal standards set by EPA.
- In September 2019, EPA withdrew California’s waiver, which in turn ended Massachusetts’ ability to utilize California’s standards.
 - Local and other subdivisions of government may not adopt more stringent fuel efficiency standards.
 - The reversal of California’s waiver has been challenged and the litigation is ongoing.

ii. Building Code

- The Building Code requires buildings in a broad range of categories with 15 or more parking spaces to include 1 electric vehicle ready parking space. (Covered buildings include many used for business, education, institutional, mercantile or certain residential uses.)
 - The Building Code provides that electric vehicle ready spaces are not required for detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane.

iii. Global Warming Solutions Act (“GWSA”)

- The GWSA requires the Massachusetts Department of Transportation (“MassDOT”) to meet enforceable limits on CO₂ emissions from the combustion of fuels in:
 - Mobile equipment owned by MassDOT and the Massachusetts Bay Transportation Authority (“MBTA”); and
 - Heating fuels used at MassDOT and MBTA facilities.
- Pursuant to the GWSA, DEP issued regulations to reduce CO₂ Emissions from State Fleet Passenger Vehicles, *i.e.*, from vehicles owned or leased by Executive Offices of the Commonwealth.
 - This regulation, which was adopted in 2017, establishes mass-based annual limits on CO₂ emissions that decline from 2018 through 2025.

- Regulations adopted by DEP pursuant to the GWSA also include provisions applicable to Regional Transit Authorities, Metropolitan Planning Organizations, DEP and the Executive Office of Energy and Environmental Affairs (310 CMR 60.05).

iv. Financial Incentives⁴

- The “Massachusetts Offers Rebates for Electric Vehicles” program (“MOR-EV”) provides rebates of up to \$2,500 for the purchase or lease of battery electric vehicles and fuel-cell electric vehicles and rebates of up to \$1,500 for plug-in hybrid electric vehicles.
 - This program is funded by the Department of Energy Resources and administered by the Center for Sustainable Energy.
 - In 2019, the MOR-EV program was re-funded with an annual budget of \$27 million for at least two years.
 - In July 2020, the program was expanded to provide incentives to nonprofit and business fleet vehicles.
- DEP’s Electric Vehicle Incentive Program (“MASSEVIP”) includes grants for fleets and infrastructure.
 - Municipalities are among the public entities eligible for grants to acquire electric vehicles and charging stations.
 - Grants are also available to employers that acquire specified electric vehicle charging stations.

C. Local Laws

- Some municipalities have adopted their own targets and/or requirements for use of non-traditional vehicles.
 - As an example, electric vehicles may also be incentivized via zoning requirements favorably adjust parking requirements or restrictions based on the voluntary inclusion of electric vehicle spaces and/or charging infrastructure.

V. LAWS THAT LIMIT GREENHOUSE GAS EMISSIONS FROM ELECTRIC GENERATING FACILITIES AND RETAIL ELECTRIC SUPPLIERS

A. Federal

- Regulation of carbon dioxide emissions from new and existing power plants.

⁴ This section does not address any relevant programs or incentives administered by utility companies.

- EPA’s “Affordable Clean Energy Rule” regulates emissions from existing coal facilities, primarily by requiring heat rate improvements.
 - The Affordable Clean Energy Rule replaced the Obama administration’s “Clean Power Plan,” which would have regulated carbon dioxide emissions from both coal and gas-fired power plants.
 - The Affordable Clean Energy Rule has been challenged and is the subject of ongoing litigation.
- The Obama-era regulation for emissions from new and modified power plants remains in effect, and includes emission limits for natural gas plants as well as coal-fired plants.

B. Massachusetts

- Fossil-fuel fired electric generating plants in Massachusetts above a certain size are subject to the Regional Greenhouse Gas Initiative, which requires regulated facilities to buy allowances for their GHG emissions.
- DEP’s regulation “Reducing CO₂ Emissions from Electricity Generating Facilities” (310 CMR 7.74) sets annually declining emission limits for 24 large fossil fuel-powered power plants to ensure that emissions reductions achieved via RGGI occur in Massachusetts.
 - Emissions will decline from 9.15 million metric tons of CO₂ in 2018 to 1.8 in 2050.
- The Renewable Portfolio Standard (“RPS”) requires retail electricity suppliers (both regulated distribution utilities and competitive suppliers) to obtain a percentage of the electricity they serve to their customers from qualifying renewable energy facilities. (These requirements do not apply to municipal light companies.)
- In addition to complying with the RPS, retail electricity suppliers must comply with the more recent Clean Energy Standard, which requires retail electricity sellers to annually demonstrate the use of clean energy to generate a specified percentage of their electricity sales (310 CMR 7.75). (These requirements do not apply to municipal light companies.)
 - The Clean Energy Standard sets a minimum percentage of electricity sales that utilities and competitive suppliers must procure from clean energy sources. The requirement began at 16% in 2018 and increases 2% annually to 80% in 2050.
 - Certain compliance with the RPS can counts towards compliance with the Clean Energy Standard, as can compliance with the 2016 Energy Diversity Act, which requires regulated distribution utilities to enter long-term power purchase agreements for offshore wind.

- In 2020, MassDEP finalized the “CES-E”, which requires utilities and competitive suppliers to continue procuring a set amount of electricity from existing clean energy sources each year from 2021 until 2050.
- According to DEP, the regulations at 310 CMR 7.74 and 7.75, taken together, place the Commonwealth on a path toward a fully decarbonized electricity sector in 2050.
 - Reviews for both programs are scheduled for 2021.

C. Local Laws

- Cities and towns that do not have municipal light companies may pursue “municipal aggregation” (also referred to as community choice aggregation). This is a process by which municipalities purchase electricity supply in bulk on behalf of residential and business customers within their community
 - Communities can use municipal aggregation to purchase electricity that has a greater percent of renewable sources than otherwise required by state laws.
- Public aggregations like the Cape Light Compact can apply to the Department of Public Utilities for permission to use the energy efficiency system benefit charge paid by all electricity customers to fund local energy efficiency projects.

VI. LAWS THAT LIMIT GREENHOUSE GAS EMISSIONS FROM OTHER SECTORS

A. Federal Laws

In many instances, the current versions of federal laws regulating GHG emissions reflect rollbacks from the Obama-era version of such regulations. For instance, the Trump administration has narrowed the scope of many such regulations, *e.g.*, limiting application to a smaller subsector of emitting sources, and/or reduced the reduction requirement. Many of these revisions to the Obama-era regulations have been challenged and are subject to ongoing litigation. These regulations focus on several different greenhouse gases, including carbon dioxide, methane and hydrofluorocarbons.

- Regulation of methane emissions and volatile organic compounds from oil and natural gas facilities.
- Leak detection and maintenance programs for hydrofluorocarbons.
- Emission performance standards for methane emissions from municipal solid waste landfills, both new (or modified) and existing landfills. (EPA is in the process of reconsidering these regulations.)

- Pursuant to the Clean Air Act, GHG emissions from certain new, large stationary sources are subject to New Source Review, which requires covered sources to employ the Best Available Control Technology to ensure that all feasible steps to limit GHG emissions are taken.

B. State Laws

The Global Warming Solutions Act directs the Commonwealth and its agencies to promulgate regulations that reduce energy use, increase efficiency and encourage renewable energy in the energy generation, building and transportation sectors. Pursuant to this mandate, the DEP has adopted several mitigation-based regulations in addition to the regulations noted above regarding emissions from the transportation sector and electric generating facilities. Additional regulations are expected in the future and will likely apply to sectors of the economy that are not currently the primary target of GHG-emission reducing regulations.

- Reducing Sulfur Hexafluoride (“SF6”)⁵ Emissions from Gas-Insulated Switchgear
 - SF6 is an insulator often found in gas-insulated switchgear and equipment used in high-voltage electrical systems to control the flow of electric current. SF6 routinely leaks from closures and joints in such switchgear equipment.
 - Companies and municipalities that own, lease, operate, or control gas-insulated switchgear (GIS) that contains SF6 must comply with a maximum leak rate. Additional requirements apply to the two largest electric distribution utilities in Massachusetts.
- Reducing Methane Emissions from Natural Gas Distribution Mains and Services
 - These regulations (i) impose mass-based, annually declining methane emission limits on natural gas mains and services for individual gas distribution system operators in 2018, 2019 and 2020 and (ii) require gas operators to annually report the total miles of their main and service pipelines by material type.
 - These requirements apply to gas operators with a Gas System Enhancement Plan order from DPU, which details the schedule for replacement of older leak prone distribution system pipe for each gas operator.
 - DEP is currently evaluating whether this program should be amended or extended. This review includes consideration of whether DEP should require the use of feasible technologies to detect and quantify gas leaks.

⁵ SF6 is a strong GHG with a global warming effect nearly 24,000 times greater than carbon dioxide. SF6 also lasts in the atmosphere for more than 3,000 years after it is released.

VII. Laws relevant to the Siting of Fossil Fuel Power Plants and Infrastructure

Communities seeking to limit land-use for fossil fuel powered plants or infrastructure should consider the federal Natural Gas Act and the Massachusetts Energy Facilities Siting Act. Other laws may also be relevant, but these two are highlighted because they pose potential significant limits on local and regional authority.

- Federal Natural Gas Act:
 - The transportation of natural gas in interstate commerce, including the development of interstate gas pipelines and associated infrastructure, is governed by the Federal Energy Regulatory Commission (“FERC”) pursuant to the Natural Gas Act.
 - FERC issues approvals in the form of a “certificate of public convenience and necessity.” Projects with a certificate generally do not have to comply with state and local laws, including those directed at protecting the environment or public health. (Some exceptions apply for state regulation under the Coastal Zone Management Act, the Clean Air Act, or the Federal Water Pollution Control Act, *i.e.*, the Clean Water Act.)
 - The Natural Gas Act generally does not limit application of state and local zoning to intrastate transportation and distribution facilities for natural gas.
- Massachusetts Energy Facilities Siting Act:
 - The Energy Facilities Siting Board (“EFSB”) is an independent state board that reviews proposed large energy facilities including power plants, electric transmission lines, intrastate natural gas pipelines, and natural gas storage tanks.
 - The EFSB is supposed to assure that approved facilities minimize environmental impacts such as air emissions, noise, traffic, waste, electric and magnetic fields, wetlands and water quality degradation, visual intrusions, and risks to public health and safety.
 - The EFSB supervises a mandatory economic and environmental review and evaluation of alternative sites or routes with some authority to override or provide exceptions to local laws, including those relative to zoning, public health or the environment.
 - Special siting approval procedures apply to any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more.
 - EFSB may issue a certificate of environmental impact and public interest to facilities for several reasons, including upon finding that a local agency has imposed a “burdensome condition” on any license or permit that has a substantial impact on EFSB’s responsibilities.

- Once EFSB issues such a certificate, local governments cannot require any approval, consent, permit or condition for the construction, operation or maintenance of the facility for which the certificate was issued.

A few communities in the country, including Portland, Oregon and South Portland, Maine, have adopted local laws to limit the development of new fossil fuel infrastructure. These have faced a plethora of legal challenges, some of which are still ongoing.