**G.L. c. 25 § 1A**

*[Text of section added by 2021, 8, Sec. 15 effective June 24, 2021.]*

Section 1A. In discharging its responsibilities under this chapter and chapter 164, the department shall, with respect to itself and the entities it regulates, prioritize safety, security, reliability of service, affordability, equity and reductions in greenhouse gas emissions to meet statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N.

Below are the items that need to be added to sections in Chapter 164 (other than in section 145) to allow GSEP to function to meet the above mandates of Chapter 25, Section 1A.

Maintain safety while a plan is created

* **Prioritize** leak-prone pipes for **repair** or renewal wherever safe, rather than for replacement with new gas infrastructure. This is allowed in statute but should be strengthened throughout Chapter 164 into a mandate.
* I**ncrease mobile gas surveys during winter** for safety. Small diameter cast iron pipes are the pipes considered the most hazardous, since they can break catastrophically from frost heaves. Before GSEP was enacted, gas companies maintained safety through mobile gas surveys during winter, especially during extreme cold, to ensure that any such event was caught quickly. Since GSEP was enacted, the percentage of cast iron pipes in the Commonwealth has been cut nearly in half, making the overall situation safer than it was before GSEP.

Create an integrated energy plan that is phased, granular & location specific

* Create an annual integrated energy plan to tactically transition off combusting fuels (with the exception of hard-to-convert industrial processes). The plan maximizes the potential for avoided costs, speed and synergies by mapping street-level constraints and capabilities of electric and gas infrastructure, local geology, building stock, energy use intensity, etc. to create a granular and phased decarbonization plan that meets the Department’s six mandates. Permit municipalities, the Dept. of Environmental Protection and other stakeholders to review the plan and make recommendations. Update the energy plan annually to show progress. Incentivize enactment through performance based ratemaking.

**Allow gas companies to install infrastructure & sell energy that does not combust**

* **Redefine “gas company”** to authorize the installation of utility-scale non-combusting thermal energy infrastructure and the sale of non-combusting thermal energy.
* **Change the obligation to serve** (i.e. the requirement to supply customers with service) so it can be met by providing non-combusting thermal service.
* Permit gas companies to **expand infrastructure and to acquire new customers** so long as the infrastructure and service are non-combusting.

Pay for the retrofits in buildings to enable an equitable transition of entire streets

* Procure a loan from the federal Dept. of Energy Loan Program Office loans to lend that very low-interest funding to gas companies to cover the debt portion of the thermal infrastructure with the stipulation that the cost savings (calculated over the timeframe of the long-term debt) pay for customer retrofits (through Mass Save) and worker retraining (through MassCEC). Assuming an $800 million expenditure per year on GSEP and a 0.5% reduction in interest over 30 years, this would raise ~62 million in funding per year.
* **Create a per-therm renewable energy surcharge** equivalent to the existing renewable energy surcharge on electric kilowatt hours. This surcharge would cost the average residential gas customer approximately $12 per year and would raise ~$41 million per year to fund customers’ transition to thermal networks.
* Investigate the potential for electric companies to pay for a portion of the customers’ transition, given the electric-grid services provided by those customers through peak demand reduction, as well as the increase in load factor and kilowatt-hour revenue.
* **Allow gas companies to pay for street segments worth of customer transition to air source heat pumps wherever utility-scale thermal infrastructure isn’t financially viable,** using the funds that would otherwise pay for the local gas infrastructure operations, maintenance and required upgrades.

Maintain ratio of customers to utility infrastructure to avoid skyrocketing gas bills

* Create a single merged gas/thermal rate base. Thermal customers would automatically become part of the pre-existing gas customer rate base. This merged rate base would make up for the revenue lost from customers defecting off the gas system, thus reducing the slide toward stranded assets. Since networked geothermal is predicted to result in a low energy bill, the customer bill will stay low.
* Allow for gas companies to proactively **retrofit** customers’ buildings on leak-prone gas infrastructure. In order to maintain customers, gas companies are allowed to proactively offer retrofits to customers with aging HVAC mechanicals on leak-prone gas streets. The retrofits are paid by the financing methods explained above with the services offered through Mass Save. Any participating customer gets a multi-source heat pump (a heat pump which can pull temperature from either the air or the ground). The multi-source heat pump in the building is connected at first to an outside compressor to pull temperature from the air. When the leak-prone infrastructure is replaced with thermal infrastructure, the customer’s heat pump is connected to the infrastructure to pull temperature from the ground. The outside compressor is no longer needed and can be moved to the next leak-prone street for use with another customer.

Reduce **investment in new gas infrastructure**

* **Require a competitive bid for a non-combusting alternative as a precondition to approval of any combusting infrastructure** proposed by a gas company. The winning bid must deliver non-combusting thermal service for the same or lower customer energy bill (and meet the other DPU mandates).
* **Set a date by which no new gas services may be installed** in the state.
* **Mandate no depreciation of any kind of gas infrastructure** past 2050.

Proposed redline changes to Chapter 164, Section 145

**G.L. c. 164 § 145: Plan for replacement or improvement of aging or leaking natural gas infrastructure**

Section 145. (a) For the purposes of this section, the following words shall, unless the context clearly requires otherwise, have the following meanings:--Additional definitions needed:

* “Networked geothermal system”, a utility-scale non-emitting renewable thermal energy infrastructure consisting of underground distribution pipelines that connect distributed thermal sources or thermal storage, including geothermal boreholes and non-combusting electric heat pumps, to provide a customer or network of customers with thermal energy for heating and cooling.
* “Non-emitting renewable thermal energy”, thermal energy that provides heating or cooling without combustion and that does not release greenhouse gas emissions as defined in section 1 of chapter 21N.
* “Non-emitting renewable thermal infrastructure project”, a utility-scale project that replaces natural gas distribution infrastructure with distribution infrastructure that supplies non-emitting renewable thermal energy. A non-emitting renewable thermal infrastructure project may include, but is not limited to, a networked geothermal system.

"Customer'', a retail natural gas or thermal customer.

*[Definition of "Eligible infrastructure replacement'' of subsection (a) effective until August 11, 2022. For text effective August 11, 2022, see below.]*

"Eligible infrastructure replacement'', a replacement or an improvement of existing infrastructure of a gas company that: (i) is made on or after January 1, 2015; (ii) is designed to improve public safety or infrastructure reliability; (iii) does not increase the revenue of a gas company by connecting an improvement for a principal purpose of serving new customers; (iv) reduces, or has the potential to reduce, lost and unaccounted for natural gas through a reduction in natural gas system leaks; and (v) is not included in the current rate base of the gas company as determined in the gas company's most recent rate proceeding.

*[Definition of "Eligible infrastructure replacement'' of subsection (a) as amended by 2022, 179, Sec. 58 effective August 11, 2022. For text effective until August 11, 2022, see above.]*

"Eligible infrastructure replacement'', a replacement or an improvement of existing infrastructure of a gas company that: (i) is made on or after January 1, 2015; (ii) is designed to improve public health, public safety or infrastructure reliability; (iii) does not increase the revenue of a gas company by connecting an improvement for a principal purpose of serving new customers with gas or of increasing gas pipeline capacity; (iv) reduces, or has the potential to reduce, lost and unaccounted for natural gas through a reduction in the natural gas system **or a reduction of** leaks; (v) is not included in the current rate base of the gas company as determined in the gas company's most recent rate proceeding; (vi) shall include, whenever feasible, retiring gas infrastructure and replacing such infrastructure with non-emitting renewable thermal infrastructure; (vii) shall include, wherever retiring gas infrastructure and replacing it with non-emitting renewable thermal infrastructure is not feasible, use of advanced leak repair technology approved by the department to repair an existing leak-prone gas pipe to extend the useful life of the such gas pipe by no less than 10 years.

"Plan'', a targeted infrastructure replacement program construction plan that a gas company files pursuant to subsection (b).

"Project'', an eligible infrastructure replacement project proposed by a gas company in a plan filed under this section.

(b) A gas company shall file with the department a plan **(i)** to address aging or leaking natural gas infrastructure within the commonwealth and the leak rate on the gas company's natural gas infrastructure in the interest of public safety, (ii) to reduce lost and unaccounted for natural gas through a reduction in natural gas system leaks, and (iii) to reduce or retire natural gas infrastructure, and (iv) to reduce greenhouse gas emissions to meet statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N. Each company's gas infrastructure plan shall include interim targets for the department's review. The department shall review these interim targets to ensure each gas company is meeting the appropriate pace to reduce the leak rate on and to replace or retire the gas company's natural gas infrastructure in a safe and timely manner, and to reduce greenhouse gas emissions to meet statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N. The interim targets shall be for periods of not more than 6 years or at the conclusion of 2 complete 3-year walking survey cycles conducted by the gas company. The gas companies shall incorporate these interim targets into timelines for reducing greenhouse gas emissions and removing or retiring all leak-prone infrastructure filed pursuant to subsection (c) and may update them based on overall progress. The department may levy a penalty against any gas company that fails to meet its interim target in an amount up to and including the equivalent of 2.5 per cent of such gas company's transmission and distribution service revenues for the previous calendar year.

(c) Any plan filed with the department shall include, but not be limited to: (i) **all** eligible infrastructure replacement of mains, services, meter sets and other ancillary facilities composed of **no**n-cathodically protected steel, cast iron and wrought iron, prioritized to implement the federal gas distribution pipeline integrity management plan annually submitted to the department and consistent with subpart P of 49 C.F.R. part 192; (ii) an anticipated timeline for the completion of each project; (iii) the estimated cost of each project; (iv) rate change requests; (v) a description of customer costs and benefits under the plan; (vi) the relocations, where practical, of a meter located inside of a structure to the outside of said structure for the purpose of improving public safety; any other information the department considers necessary to evaluate the plan.

As part of each plan filed under this section, a gas company shall include a timeline for repairing, retiring or removing all leak-prone infrastructure on an accelerated basis specifying an annual replacement pace and program end date with a target end date of: (i) not more than 20 years from the filing of a gas company's initial plan; or (ii) a reasonable target end date considering the allowable recovery cap established pursuant to subsection (f). The department shall not approve a timeline as part of a plan unless the allowable recovery cap established pursuant to subsection (f) provides the gas company with a reasonable opportunity to recover the costs associated with removing or retiring all leak-prone infrastructure on the accelerated basis set forth under the timeline utilizing the cost recovery mechanism established pursuant to this section. After filing the initial plan, a gas company shall, at 5-year intervals, provide the department with a summary of its replacement or retirement progress to date, a summary of work to be completed during the next 20 years and any similar information the department may require. The department shall require a gas company to file an updated long-term timeline as part of a plan if it alters the cap established pursuant to subsection (f).

(d) If a gas company files a plan on or before October 31 for the subsequent construction year, the department shall review the plan within 6 months. The plan shall be effective as of the date of filing, pending department review. The department may modify a plan prior to approval at the request of a gas company or make other modifications to a plan as a condition of approval. The department shall consider the costs and benefits of the plan including, but not limited to, impacts on ratepayers, reductions of lost and unaccounted for natural gas through a reduction in the natural gas system and the natural gas system leaks and usage, in compliance with the mandates of chapter 21N to reduce greenhouse gas emissions, and improvements to public health and public safety. The department shall give priority to plans narrowly tailored to addressing leak-prone infrastructure most immediately in need of replacement.

(e) If a plan is in compliance with this section and the department determines the plan to reasonably accelerate eligible infrastructure repair, retirement or replacement and to provide benefits, the department shall issue preliminary acceptance of the plan in whole or in part. A gas company shall then be permitted to begin recovery of the estimated costs of projects included in the plan beginning on May 1 of the year following the initial filing and collect any revenue requirement, including depreciation, property taxes and return associated with the plan.

(f) On or before May 1 of each year, a gas company shall file final project documentation for projects completed in the prior year to demonstrate substantial compliance with the plan approved pursuant to subsection (e) and that project costs were reasonably and prudently incurred. The department shall investigate project costs within 6 months of submission and shall approve and reconcile the authorized rate factor, if necessary, upon a determination that the costs were reasonable and prudent. Annual changes in the revenue requirement eligible for recovery shall not exceed (i) 1.5 per cent of the gas company's most recent calendar year total firm revenues, including gas **and thermal** revenues attributable to sales and transportation customers, or (ii) an amount determined by the department that is greater than 1.5 per cent of the gas company's most recent calendar year total firm revenues, including gas and thermal revenues attributable to sales and transportation customers. Any revenue requirement approved by the department in excess of such cap may be deferred for recovery in the following year.

(g) All rate change requests made to the department pursuant to an approved plan, shall be filed annually on a fully reconciling basis, subject to final determination by the department pursuant to subsection (f). The rate change included in a plan pursuant to section (c), reviewed pursuant to subsection (d) and taking effect each May 1 pursuant to subsection (e) shall be subject to investigation by the department pursuant to subsection (f) to determine whether the gas company has over collected or under collected its requested rate adjustment with such over collection or under collection reconciled annually. If the department determines that any of the costs were not reasonably or prudently incurred, the department shall disallow the costs and direct the gas company to refund the full value of the costs charged to customers with the appropriate carrying charges on the over-collected amounts. If the department determines that any of the costs were not in compliance with the approved plan, the department shall disallow the costs from the cost recovery mechanism established under this section and shall direct the gas company to refund the full value of the costs charged to customers with the appropriate carrying charges on the over collected amounts.

(h) The department may promulgate rules and regulations under this section. Such regulations shall include a performance-based financial incentive to a gas company to reduce and retire miles of gas infrastructure and to build utility-scale non-emitting renewable thermal energy infrastructure eligible under subsection (c)(2), provided, however, that such infrastructure complies with the mandates of chapter 21N to reduce greenhouse gas emissions. Such regulations shall be promulgated within 12 months of the effective date of this provision. The department may discontinue the replacement program and require a gas company to refund any costs charged to customers due to failure to substantially comply with a plan or failure to reasonably and prudently manage project costs.

(i) The department shall develop standards to inform a decision by a gas company whether to retire gas infrastructure and replace it with non-emitting renewable thermal energy infrastructure, repair the gas infrastructure, or replace the gas infrastructure with new gas infrastructure. Given the developing industry, these standards shall be annually adjusted for the first 10 years. The department shall require a gas company to adhere to such standards and shall conduct audits to ensure compliance with such requirement. If a gas company’s eligible infrastructure replacement does not comply with the standards developed pursuant to this subsection, the gas company shall not be permitted to recover the cost of the eligible infrastructure replacement.