



MASSACHUSETTS INSTITUTE OF TECHNOLOGY
GRADUATE STUDENT COUNCIL

Statement on An Act combating climate change and An Act to promote green infrastructure, reduce greenhouse gas emissions, and create jobs

The Graduate Student Council (GSC) of the Massachusetts Institute of Technology (MIT), which represents MIT's 6,900 graduate students, recognizes the consensus in the scientific community that climate change is caused by human activity. The evidence to achieve this consensus has been reported by researchers across many disciplines, around the world, and affirmed by rigorous processes of peer review. Climate change is a matter of growing public concern, and the GSC commends local, state, national, and global efforts to address climate change. **Therefore, the GSC strongly supports the bills S.1821, *An Act combating climate change*, and H.1726, *An Act to promote green infrastructure, reduce greenhouse gas emissions, and create jobs*, which add fees to carbon pollution from fossil fuels to reduce greenhouse gas (GHG) emissions.** As stated by MIT's President, Rafael Reif, in a letter announcing MIT's membership in the Carbon Pricing Leadership Council, "putting a price on carbon is one of the surest mechanisms available to accelerate the transition to low- and zero-carbon energy sources."¹

With the lack of national leadership to address climate change, particularly the recent rollback of the Clean Power Plan and withdrawal from the Paris Climate Agreement, it is the responsibility of state and local governments to take legislative and/or regulatory action to combat climate change. Massachusetts is already a leader for this cause, committing to reductions in GHG emissions 25% below the 1990 baseline emission level by 2020 and at least 80% below the baseline by 2050.² However, the Commonwealth is not on track to reach its 2050 target without implementation of additional policies to reduce emissions.³

Putting a price on carbon is widely accepted by economists and policy experts as an efficient, market-based, and cost-effective policy instrument to reduce GHG emissions.^{4,5} S.1821 and H.1726 would price carbon by placing a GHG emissions fee on fossil fuels (excluding the electricity sector, which is already subject to the Regional Greenhouse Gas Initiative cap and trade program), thereby directly correcting the negative externality that GHG emissions impose on society by including this cost in the price of fossil fuels. This would incentivize energy consumers to shift away from fossil fuels without mandating a specific approach. Furthermore, all or most of the revenue generated from the carbon fees would be returned to employers and residents in a progressive manner, addressing some concerns of equity for low-income households and minimizing economic disruption.

About 40 national jurisdictions and over 20 cities, states, and regions have already implemented a carbon pricing scheme.⁶ British Columbia often serves as a textbook example of a successful revenue-neutral carbon tax (a similar system to the fees featured in S.1821 and H.1726). The tax has been reported to reduce fuel consumption and GHG emissions 5–15% in the region, while having little net impact on the economy.⁷ California has a cap and trade system that prices carbon, but no state currently has a carbon fee in effect. By enacting a carbon fee, Massachusetts would take a leading role in combating climate change and demonstrate to other states and the federal government that putting a price on carbon can reduce

¹ ["MIT joins Carbon Pricing Leadership Coalition."](#) MIT News Office (2015).

² ["Global Warming Solutions Act."](#) Massachusetts Legislature (2008).

³ ["2015 update to the Massachusetts Clean Energy and Climate Plan for 2020."](#) Executive Office of Energy and Environmental Affairs' (2015).

⁴ W. D. Nordhaus. ["An Optimal Transition Path for Controlling Greenhouse Gases."](#) *Science* (1992).

⁵ M. S. Feldstein, T. Halstead, and N. G. Mankiw. ["A Conservative Case for Climate Action."](#) New York Times (8 Feb 2017).

⁶ ["States and Trends of Carbon Pricing."](#) World Bank Group (2016).

⁷ B. Murray and N. Rivers. ["British Columbia's Revenue- Neutral Carbon Tax: A Review of the Latest 'Grand Experiment' in Environmental Policy."](#) NI WP 15-04. Durham, NC: Duke University (2015).



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GHG emissions while enhancing economic output; economic analyses suggest that a carbon fee and rebate system would increase the number of jobs and real disposable personal income.⁸ Additionally, Massachusetts has an opportunity to help catalyze New England-wide action, as both Connecticut and Rhode Island are currently considering carbon fee legislation conditional on passage in Massachusetts.⁹

While enacting S.1821 or H.1726 would be a positive step toward reaching Massachusetts' 2050 emissions target, more may need to be done. In a 2014 report commissioned by the Massachusetts Department of Energy Resources,⁸ emissions cuts of 10% below the baseline were estimated to occur only if a fee rate of \$100/ton of CO₂ equivalent is achieved by 2040. From the report, it is clear that the greatest benefits — both in GHG emissions reductions and in economic performance — materialize when a higher fee rate is levied and continually increased beyond \$40/ton. **Thus, the GSC urges the legislature to strongly consider continuing to increase the fee rate beyond \$40/ton to truly achieve the GHG emissions reductions necessary to meet the Commonwealth's legal mandates established in the Global Warming Solutions Act.**¹⁰

Climate change is an urgent problem that all levels of government, the private sector, and individuals have a responsibility to help solve. Putting a price on carbon is a well-studied, widely-accepted policy mechanism to reduce GHG emissions and mitigate climate change. **Therefore, the GSC urges the swift passage of a carbon fee scheme, such as those detailed in S.1821 and H.1726.**

Prepared by the External Affairs Board on behalf of the MIT Graduate Student Council, October 2017

⁸ M. Breslow, Ph.D., Hamel Environmental Consulting, S. Hamel, Hamel Environmental Consulting, P. Luckow, Synapse Energy Economics, and S. Nystrom, Regional Economic Models, Inc., "[Analysis of a Carbon Fee or Tax as a Mechanism to Reduce GHG Emissions in Massachusetts](#)." Prepared for the Massachusetts Department of Energy Resources (December 2014).

⁹ C. Harvey. "[Defying Trump, these state leaders are trying to impose their own carbon taxes](#)." The Washington Post (12 May 2017).

¹⁰ [Global Warming Solutions Act](#). Massachusetts Legislature (2008).