CARBON PRICING IN THE NORTHEAST:
LOOKING THROUGH A LEGAL LENS

Janet E. Milne

This article explores carbon pricing in seven states in the Northeast. It surveys existing measures, focusing on the regional cap-and-trade program (the Regional Greenhouse Gas Initiative, or RGGI) and fuel taxes. It then looks at RGGI and bills that have been introduced in six states in the Northeast that call for carbon taxes, fees, or charges. It pays particular attention to how legal considerations may influence decisions about RGGI and the design of carbon taxes, fees, and charges.

Keywords: carbon price, cap-and-trade, carbon taxes, state taxation, United States, constitutional law
JEL Codes: H23, H71, Q54

I. INTRODUCTION

When President Trump announced on June 1, 2017, that he would withdraw the United States from the 2015 Paris Climate Change Agreement, states across the country countered with their pledge to meet or exceed the United States’ goal of reducing greenhouse gas emissions by 26 to 28 percent below 2005 levels by 2025. Governor Inslee’s Communications Office, Inslee, New York Governor Cuomo, and California Governor Brown announce formation of United States Climate Alliance (June 1, 2017), http://www.governor.wa.gov/news-media/inslee-new-york-governor-cuomo-and-california-governor-brown-announce-formation-united.

The bipartisan Climate Alliance they formed started with three states on June 1 and climbed to 13 states by June 5. Governor Inslee’s Communications Office, United States Climate Alliance adds ten new members to coalition committed to upholding the Paris Accord (June 5, 2017), http://governor.wa.gov/news-media/united-states-climate-alliance-adds-10-new-members-coalition-committed-upholding-paris.

President Trump’s June 1 announcement that “as of today, the United States will cease all implementation of the non-binding Paris Accord” and his

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previous executive order to reevaluate the Clean Power Plan\textsuperscript{4} de facto have shifted the challenge of climate change policymaking to the state and local level. Some states may choose to step up, as evidenced by the coalition in the Climate Alliance. Others may choose not to initiate new policies. But in either case, this new development builds on a foundation of policies that some states have already started to construct. Well before President Trump’s decision, states in the Northeast and elsewhere had demonstrated a commitment to reducing greenhouse gas emissions from the electricity sector, and legislators had introduced proposals for carbon taxes or fees. It remains to be seen what measures states will pursue in the future, but this article explores the bricks in the foundation that has already been laid for carbon pricing.

The pages that follow explore state-level carbon pricing policies in a contiguous block of seven Northeast states — Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York. These states share similar carbon footprints and some overlapping climate change policies. After briefly reviewing the states’ carbon emissions profiles in Section II, the article focuses in Section III on the existing regional cap-and-trade program, known as the Regional Greenhouse Gas Initiative (RGGI). In Section IV, it considers fuel taxes and proposals for carbon taxes or fees. It views these programs and proposals through a legal lens. It describes their legal characteristics, but it also discusses legal factors that can influence the design of the programs and their paths toward enactment into law. It leaves to economists the task of evaluating the environmental or economic impact of these states’ carbon pricing concepts and their relative role among other policy instruments — admittedly important issues that are better addressed by others.

A legal perspective may be useful at this time as states and tax policy analysts think about how to achieve climate change goals in the absence of federal action and whether to pursue carbon pricing on a regional or single-state basis. RGGI’s legal structure illustrates how states can work together to create a common carbon price through a cap-and-trade regime. The experience in the Northeast also identifies the importance of considering how individual states’ climate change goals may interact with a regional pricing program. Proposals for carbon taxes in the Northeast illustrate legal design issues, including whether to coordinate tax policies among states and how to coordinate a carbon tax with a trading program within one state. The article cannot serve as a legal design manual but it strives more modestly to remind readers of how law influences the translation of carbon pricing from theory into practice.

\section{II. THE REGIONAL CARBON FOOTPRINT}

The seven states in the Northeast have relatively low emissions of carbon dioxide per capita when measured against the national average, ranging from a low of 8.6 metric tons in New York to a high of 11.3 tons in New Hampshire compared to the national

average of 16.9 tons.\textsuperscript{5} The distribution of carbon dioxide emissions across sectors also varies from the average national pattern. As illustrated in Figure 1, the electricity and industrial sectors account for a relatively low percentage of total emissions, whereas the commercial, residential, and transportation sectors contribute a larger share than the national average.

These profiles set the stage for carbon pricing in several respects. Although per capita emissions are relatively low, a number of the Northeast states are committed to reducing emissions further (Georgetown Climate Center, 2015). The challenge is improvement, not maintaining the status quo. For example, the Massachusetts and Rhode Island legislatures have set goals that call for reducing greenhouse gas emissions in the aggregate to at least 80 percent below the 1990 level by 2050.\textsuperscript{6} Finally, the distribution of emissions across the sectors highlights the region’s need to reduce emissions from the transportation and residential sectors, which are proportionately higher than for the nation on average.\textsuperscript{7} Carbon pricing can play a potential role in reaching emissions at the consumer level, whether in these or other sectors.\textsuperscript{8}


\textsuperscript{7} Note, however, that Figure 1 uses percentages of total emissions. As a result, lower emissions in one sector, such as the electricity sector, will yield higher percentages in other sectors. In other words, the percentages are relative values, not absolute values.

\textsuperscript{8} For an analysis of how investment of revenue from carbon pricing in transportation programs can reduce emissions, see Pacyniak et al., 2015.
III. RGGI

The Regional Greenhouse Gas Initiative (RGGI) has been a key program designed to reduce the carbon footprint in the Northeast. The nation’s first cap-and-trade program for greenhouse gas emissions, it went into effect in 2009 (see generally RGGI Inc., 2017a; EDF et al., 2015; Ramseur, 2017). As a regional effort, RGGI is the product of the cooperative action of nine states to reduce carbon dioxide emissions from fossil-fuel-fired electric power plants that have a capacity of at least 25 megawatts. RGGI sprang from a Memorandum of Understanding (MOU) that seven states signed in 2005 and now encompasses the seven states that are the focus of this article plus Delaware and Maryland.9

A. The Legal Structure of RGGI’s Cap-and-Trade Program

The MOU established the initial annual regional caps on emissions from power plants for the region, measured in terms of tons of carbon dioxide emissions. Under the MOU, each participating state was allocated a share of the emissions, which in the aggregate total the regional cap (initially 188 million short tons per year (Ramseur, 2017)). Each ton of emissions is represented by one allowance and entities subject to the cap must acquire and periodically submit allowances equal to their actual emissions to ensure that emissions match the regional cap.

As a result of a program review in 2012 (Farnsworth et al., 2016), the prospective annual caps on emissions were tightened in recognition of the fact that the caps during the initial years exceeded actual emissions (EDF et al., 2015). The revised 2014 cap, set at the equivalent of 2012 emissions levels (EDF et al., 2015), will decrease by 2.5 percent a year between 2015 and 2020,10 although the cap has also been adjusted downward to take account of surplus allowances that had been accumulated and banked for future use prior to 2014 (Potomac Economics, 2017). The 2017 adjusted cap for the region is 62.45 million metric tons of carbon dioxide.11 Figure 2 shows the original cap, the revised cap, and its adjustments relative to emissions to date.

Under the MOU, regulated entities have the ability to use offsets (investments in other projects that will reduce emissions) instead of emissions allowances to satisfy their compliance obligations (EDF et al., 2015). However, no offsets had been awarded as of May 2017 (Potomac Economics, 2017).

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9 Memorandum of Understanding, Regional Greenhouse Gas Initiative, dated December 20, 2005, as amended by an Amendment to Memorandum of Understanding dated August 8, 2006; Amendment to Memorandum of Understanding, August 8, 2006; Second Amendment to Memorandum of Understanding dated April 20, 2007. New Jersey was a member but withdrew. Letter from Bob Martin, Commissioner, State of New Jersey, to Governor Dannel Malloy et al., November 29, 2011.


Almost all of the RGGI emissions allowances are distributed by auction.\textsuperscript{12} RGGI Inc., a nonprofit corporation, acts as the auctioning agent for the participating states. The states’ allowances are pooled into a common, regional auction, conducted quarterly. Clearing prices have varied significantly over time from a low of $1.86, which was then the minimum or “reserve” price, to a high of $7.50, and $4.35 at the most recent auction in September 2017, above the $2.15 reserve price (RGGI Inc., 2017b). A cost containment reserve mechanism now allows for the release of 10 million allowances per year into the market if the auction price exceeds a trigger price, set at $10 for 2017. The cost containment reserve has only been used once, in 2014, when five million allowances were released at a $4 trigger price under the rules then in effect (EDF et al., 2015). Participants in auctions are not limited to the regulated power plants, and once the allowances enter the market, they can be traded on the secondary market either as allowances or financial derivatives. In 2016, the price of allowances in the secondary market generally tracked the clearing price at auctions (Potomac Economics, 2017).

\textsuperscript{12} Through 2016, 94 percent of the allowances had been auctioned (Potomac Economics, 2017, p. 5).
Revenue from the auctions is distributed to the states according to their share of the regional emissions cap. One of the principles established in the MOU is that states should invest some portion of the revenue in strategic energy and consumer benefit programs.\textsuperscript{13} According to a 2016 study, auctions held through 2014 generated $1.8 billion for the nine participating states, which have used $1.4 billion for energy efficiency, clean and renewable energy, greenhouse gas abatement, and direct bill assistance (RGGI Inc., 2016). Auctions through the end of 2016 had increased the total revenue to $2.6 billion (Potomac Economics, 2017), yielding additional revenues for energy-related programs. Thus, RGGI serves as an important source of revenue for states’ investments in climate-friendly programs.\textsuperscript{14}

RGGI has recently undergone its second comprehensive program review,\textsuperscript{15} which allowed stakeholders to consider adjustments in RGGI’s design for the 2020–2030 period. In August 2017 the participating states recommended reducing the cap by an additional 30 percent beyond the 2020 levels by 2030 and raising the trigger price for the cost containment reserve.\textsuperscript{16} In addition, they would add an emissions containment reserve that would allow states to withhold up to 10 percent of their allowances from auctions if prices fall below a certain level ($6 in 2021) to reinforce the carbon pricing signal. Thus, these recommendations would make the RGGI program more stringent and extend it by an additional decade. The review did not evidence a significant appetite for expansion to extend RGGI to other sectors that generate carbon dioxide emissions.\textsuperscript{17}

\textbf{B. Legal Governance Considerations}

RGGI offers a useful legal model for constructing a regional approach to carbon pricing. The governors’ MOU and its amendments built the foundation for the regional enterprise, and RGGI is often perceived as regional entity. As a matter of law, however, each participating state must adopt legal regimes to implement both the agreement and

\textsuperscript{13} 2005 Memorandum of Understanding, § 2.G.
\textsuperscript{14} Although an evaluation of the environmental effectiveness of RGGI lies beyond the scope of this article, others have evaluated its impact on emissions (e.g., Ramseur, 2017; Murray and Maniloff, 2015).
\textsuperscript{17} This does not mean to suggest that no one has proposed expanding RGGI to cover other sectors. For example, in a pending rulemaking in Massachusetts, some commenters have suggested that Massachusetts might use a cap-and-trade approach for other sectors. See Letter from Rebecca David, Metropolitan Area Planning Council, to Martin Suuberg, MassDEP, Comments on the Draft GWSA Section 3(d) Regulations, February 24, 2017 (suggesting a cap-and-trade program or carbon tax for transportation sector); Letter from Daniel Gatti, Union of Concerned Scientists, to Martin Suuberg, MassDEP, February 24, 2017 (suggesting a cap-and-trade program for the transportation sector, building on RGGI). See generally Georgetown Transportation and Climate Initiative, Reducing Greenhouse Gas Emissions From Transportation (2015).
the Model Rule negotiated pursuant to the agreement, which specifies practical implementation details. The governors chose not to delegate the states’ sovereign authority to a regional entity with governance power. In other words, from a legal perspective, RGGI is the product of synchronized state action, not regional regulation.

The federal constitution may have influenced this choice of legal structure. The compact clause in the federal constitution prohibits states from entering into “any Agreement or Compact with another State” without consent of Congress. Although this language seems expansive enough to cover an agreement among governors, the United States Supreme Court has applied a functional test, rather than a literal reading, focusing on whether an agreement among states will encroach on federal sovereignty. As commentators have noted when evaluating RGGI (Funk, 2009; Note, 2007; Joroff and Konschnik, 2015), the states’ retention of their individual powers to adopt or reject regulations and to withdraw from the agreement at any time is relevant to finding that an agreement does not require congressional consent under the compact clause.

As a result of this legal structure, changes to RGGI require legal action by each state to import new terms into state law. Eight of the nine states passed legislation to authorize their participation in RGGI and to revise the terms with the passage of time. Only New York used its existing statutory authority to adopt its legal requirements through a rulemaking process — an administrative action unsuccessfully challenged in court on the grounds that the creation of a system that auctioned allowances was tantamount to a tax that only the legislative body could authorize. Following the first comprehensive program review in 2012, changes to the Model Rule required legislation in two states and regulatory revisions in seven states (EDF et al., 2015). As a result of the second comprehensive review, the changes recommended in August 2017 will undergo review by stakeholders and will be subject to similar state implementation measures.

The need for all the participating states both to agree in principle to changes and to adopt implementing statutes or regulations may have a quiet stabilizing effect on RGGI. It may tilt the scale toward adjustments in the basic structure rather than major expansions or renegotiations, which might subject RGGI to new political debates and threaten its stability. In short, it is possible that legal procedural requirements reinforce the fundamental structural status quo. In addition, the fact that RGGI auctions generate revenue may help buttress its continued existence. Participating states have used the revenue primarily to fund energy-related programs, as suggested by the MOU,

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18 U.S. Constit. Art. 1, § 10, cl. 3.
20 United States Steel Corp., 434 U.S. at 473.
21 Thurn v. Cuomo, No. 516556, Memorandum and Order, N.Y. App. Div. 3rd Dept., December 5, 2013. The court found that the case was barred by the statute of limitations and did not reach the merits. An earlier law suit also alleged that auctioning constituted an unlawful tax but settled without reaching the merits. Indeck Corinth, L.P. v. Paterson, Index No. 5280/2009 (N.Y. Sup. Ct. Albany Co). A challenge to California’s cap-and-trade program also unsuccessfully claimed that the auctioning of allowances is a tax (and therefore illegal without a supermajority vote of the legislature as required by the California constitution). California Chamber of Commerce v. State Air Resources Board, 216 Cal. Rptr. 3d 694 (2017).
and withdrawal of funding would require either termination of programs or finding new sources of revenue as a practical matter. The fiscal aspect of RGGI may serve as a binding adhesive.

**C. The Legal Influence of State Climate Change Goals**

As a regional carbon pricing program, RGGI nonetheless operates in conjunction with state climate change programs, which can include state-specific emissions-reduction goals. A recent decision by the highest court in Massachusetts, *Kain v. Department of Environmental Protection,*\(^\text{22}\) illustrates the potential tension between a regional carbon pricing program designed to reduce greenhouse gas emissions in the region as a whole and an individual state’s legal obligation to reduce its in-state greenhouse gas emissions to meet its specific goals. A regional cap-and-trade program envisions cost-effective emissions reductions on a regional basis, while a state-specific goal assumes emissions reductions within the confines of the state.

Some background is required to understand the potential import of the case for RGGI and for regional carbon pricing regimes more generally. The Commonwealth of Massachusetts’ Global Warming Solutions Act requires the Commonwealth to reduce its greenhouse gas emissions by at least 80 percent below 1990 levels by 2050.\(^\text{23}\) It charges the Department of Environmental Protection (the Department) with setting interim limits and emissions reduction plans for 2020, 2030, and 2040 that would build toward achievement of the 2050 limit.\(^\text{24}\) Section 3(d) of the statute specifically required the Department to “provide regulations establishing a desired level of declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gas emissions” for the period running through 2020.\(^\text{25}\) Pursuant to section 3(d), the Department set a target of reducing emissions by at least 25 percent below 1990 levels by 2020 and identified measures that it believed would satisfy its statutory obligation, including RGGI. In *Kain v. Department of Environmental Protection,* plaintiffs alleged that the Department had not met its obligation under section 3(d).

The court rejected the Department’s argument that Massachusetts’ participation in RGGI helped it comply with the section 3(d) mandate for the period running through 2020. The court reasoned in part that section 3(d) requires that emissions reductions must occur within Massachusetts.\(^\text{26}\) In the court’s eyes, RGGI’s regional trading of allowances would allow emissions reductions to occur within the region in the aggregate but would not assure quantifiable emission reductions in the Commonwealth that would satisfy the 2020 target.\(^\text{27}\)

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\(^\text{22}\) 49 N.E.3d 1124 (Mass. 2016).

\(^\text{23}\) Mass. Gen. Laws ch. 21N, § 3(b) (4).

\(^\text{24}\) Mass. Gen. Laws ch. 21N, § 3(b) (1)-(3).


\(^\text{26}\) *Kain,* 49 N.E.3d at 1140-41.

\(^\text{27}\) The court also found that another section of the statute, section 3(c), addressed emissions from the electricity sector, so the Department could not rely on RGGI to meet its section 3(d) obligations. *Kain,* 49 N.E.3d at 1140-41.
The court’s 2016 opinion left the Department with the challenge of deciding how to comply with the court’s interpretation of the statute, as did an executive order from the governor.28 In late 2016, the Department proposed a set of measures to meet the 2020 emissions reduction target.29 One proposed regulation set a cap on aggregate emissions from large electric power plants in Massachusetts, as well as limits on individual plants that total the aggregate cap, in effect creating a state-based cap on emissions within RGGI’s regional trading system.30 Power plants in Massachusetts would have to satisfy their individual limits and could earn tradable “over compliance certificates” if their emissions were lower than their individual limits.31 The Department reasoned that these limits on power plants in Massachusetts would produce emissions reductions within the state in compliance with Kain,32 and it solicited comments on the proposal’s compatibility with RGGI.33

Some comments filed in response to this invitation argued that requiring in-state remissions reductions would disrupt the efficient operation of the regional market, shifting electricity generation to out-of-state power plants that would produce a higher level of emissions.34 A comment on behalf of the New England Power Generators Association succinctly made this point. Because the proposed rules “would result in more efficient generation in Massachusetts being replaced with less efficient generation outside Massachusetts, but still within the other RGGI states …, they violate the fundamental organizing principle of RGGI, which is to ensure that [greenhouse gas] emission reductions are attained in a cost-effective manner and that the most efficient generators have the opportunity to displace less efficient generators.”35 Another warned that “Massachusetts, which is a founding RGGI member, risks sending a signal that

29 Commonwealth of Massachusetts, Department of Environmental Protection, Background Document on Proposed New and Amended Regulations, 310 CMR 7.00, 310 CMF 60.00, Air Pollution Control for Stationary and Mobile Sources (December 16, 2016) (hereinafter DEP Background Document).
31 The Department requested comments on whether the state-level limits should instead be implemented through the issuances of emissions allowances. DEP Background Document, p. 38.
32 DEP Background Document, p. 34 n. 31.
33 DEP Background Document, p. 36.
34 See, e.g., Letter from Institute for Policy Integrity to Jordan Garfinkle, MassDEP, Reducing Greenhouse Gas Emissions under Section 3(d) of the Global Warming Solutions Act, February 24, 2017; Letter from ISO New England to Marin Suuberg, Commissioner, MassDEP, February 20, 2017; Letter from Shawn Konary, NRG Energy, Inc., to Margin Suuberg, Commissioner, and Jordan Garfinkle, MassDEP, Comments on Proposed 310 CMF 7.74, February 24, 2017. Some comments also contended that the statute, as interpreted by Kain, does not require or allow the Department to apply emissions limits to the electric power plants, given the Act’s references in section 3(c) to the electricity sector and the existence of RGGI.
RGGI is not the optimal means of controlling emissions in the power sector and that each state should operate as an island.”36 In its final regulations, released in August 2017, the Department maintained its position. Relying on economic models, it found that its emissions limits on power plants would not impact RGGI, but it also called for a review in 2021.37

Although the court’s decision in Kain turns on the details of the Massachusetts statute and the state and regional market, it stands more generally as a symbol of the potential for tension between regional carbon pricing approaches that offer flexibility and state-specific goals — an issue that may be relevant if, or when, other states contemplate regional trading programs and legally binding climate goals. It also illustrates how RGGI functions in conjunction with a broad, complex sphere of environmental policy instruments and market factors — including carbon taxes if states choose to introduce them into the policy mix — that can vary significantly from state to state and change over time. RGGI does not operate in an isolated policy universe, but the program review process provided for by RGGI’s MOU can respond to changes at the state level (Farnsworth et al., 2016).

IV. CARBON TAX PROPOSALS

Proposals for carbon taxes have been introduced in most of the Northeastern states, although none has yet become law. Before delving into those proposals, it is useful to consider the context of current law. Existing fossil fuel taxes create the baseline for considering future carbon taxes, because they constitute what some call an effective carbon price (see, generally, OECD, 2017).

A. The Baseline: Existing Fossil Fuel Taxes

Excise taxes on fossil fuels are prevalent among the states. These taxes are not designed as carbon taxes because the tax rate is not explicitly linked to the carbon content of the fuel. However, fuel taxes impose an implicit or effective price on carbon dioxide emissions associated with the combustion of the fuel. For example, one gallon of gasoline will generate approximately 20 pounds of carbon dioxide emissions when combusted. If a state were to impose a carbon tax, each $10 of tax per metric ton of carbon dioxide would translate into approximately 9 cents per gallon of gasoline. Thus, a 9-cent-per-gallon tax on gasoline is comparable to a carbon tax imposed at the rate of $10 per metric ton.

36 Letter from Robert Viola and Joe Wadsworth to Jordan Garfinkle, MassDEP, Comments of Vitol Inc. on Reducing GHG Emissions under Section 3(d) of the Global Warming Solutions Act, February 24, 2017, p. 10.
Although fuel taxes can take numerous forms, taxes and fees on gasoline and diesel illustrate the extent of the existing tax burden on fossil fuels in the Northeast states. In April 2017, the national average for state taxes and fees on gasoline and diesel was 31.09 cents for gasoline and 31.00 cents for diesel. States in the Northeast fell on both sides of this average. As Table 1 indicates, these states already impose effective carbon prices on gasoline ranging from $26 to $48 per metric ton of carbon dioxide. Revenue from transportation taxes such as these is often devoted to transportation infrastructure purposes, which may allow one to characterize these taxes as user fees. Whether regarded as taxes or fees, however, the mere fact of an existing price, even if intended for non-climate purposes, is relevant to the question of the extent to which states government are already choosing to impose a price on fossil fuels and their externalities — and the extent to which they might want to add an explicit carbon price on top of the existing effective carbon price.

### Table 1
State Taxes and Fees April 2017 (Cents per Gallon)

<table>
<thead>
<tr>
<th></th>
<th>Gas Taxes and Fees</th>
<th>Diesel Taxes and Fees</th>
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<tbody>
<tr>
<td>Maine</td>
<td>30.01</td>
<td>31.21</td>
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<tr>
<td>New Hampshire</td>
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<td>23.83</td>
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<tr>
<td>Vermont</td>
<td>30.46</td>
<td>32.00</td>
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<tr>
<td>Massachusetts</td>
<td>26.54</td>
<td>26.54</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>34.00</td>
<td>34.00</td>
</tr>
<tr>
<td>Connecticut</td>
<td>40.15</td>
<td>41.70</td>
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<tr>
<td>New York</td>
<td>43.54</td>
<td>42.59</td>
</tr>
<tr>
<td>National average</td>
<td>31.09</td>
<td>31.00</td>
</tr>
<tr>
<td>Federal excise tax</td>
<td>18.40</td>
<td>24.40</td>
</tr>
</tbody>
</table>

Source: American Petroleum Institute, State Motor Fuel Taxes: Rates Effective 04/01/2017 (2017)

**B. Proposals for Carbon Taxes, Fees and Charges: Legal Design Features**

The idea of carbon taxes is percolating among some legislators in all of the North-eastern states except Maine, although the proposals often use names other than “tax.” (See Appendix A for thumbnail sketches of the bills.) A bill in New Hampshire calls for a study of design options for a carbon reduction charge, taking a preliminary step in legislative purposes. Four bills in Vermont propose carbon fees or carbon pollution fees, all of which would finance revenue-neutral tax reform of various types. The bills were introduced in “short form” as concepts to test the waters. If the legislature is interested, it can expand the bills into longer form. One bill in Massachusetts (S 1821) would impose
a revenue-neutral greenhouse gas emissions charge and distribute the revenue in the form of rebates to residents and employers, building on a proposal introduced in the previous legislative session. The two other bills in Massachusetts, H 1726 and H 3473, respectively, use a portion of the revenue from their charges or “prices” for rebates or dividends to employers and households, but they also dedicate some revenue to green infrastructure and clean energy spending. Bills in Rhode Island and Connecticut call for fees and also would use the revenue for a combination of “dividends” paid to employers and residents and climate-related spending, infrastructure, or energy spending. Proposals for a carbon dioxide emissions tax in New York would split the revenue between tax relief and climate-related spending. As this brief description and additional details in Appendix A indicate, the proposals are at different points in development, and proponents in different states have chosen various policy approaches to the use of the revenue. The proposed tax rates also vary, as do the boundaries of the tax bases (see discussion in this section and Section IV.D).

From a legal drafting and tax policy perspective, these bills offer several noteworthy approaches to design details beyond the fundamental decisions about what to tax and how to use the revenue. These illustrations may be useful as other policymakers consider how to craft carbon tax legislation.

The Rhode Island and Connecticut bills contain a mechanism for triggering the effective date of the fee that gives a regional complexion to the carbon pricing measures. States are understandably sensitive to the tax-competition risks of being the first mover for a new tax or fee and may want to seek comfort in coordinating with other states. The Rhode Island proposals provide that the fee will take effect 30 days after certification that a bordering New England state with a population of at least five million (i.e., Massachusetts) has enacted a carbon pricing fee or tax on fossil fuels at a rate of at least $15 dollars per ton of carbon dioxide equivalent (CO$_2$e). The Connecticut bill then links its effective date to enactment of a fee in both Massachusetts and Rhode Island at a rate of at least $10 per ton. As a result, Massachusetts can trigger a climate-friendly domino effect.

Some of the bills contain interesting provisions that require evaluation of the environmental effectiveness of the rate of the tax or fee over time, reinforcing the tax’s environmental credentials. For example, one Massachusetts bill (S 1821) sets the charge at $10 per ton of CO$_2$e, increasing $5 a year to $40. Starting in the sixth year, when the charge is almost fully phased in, administrators must provide periodic reports to legislative committees analyzing whether adjustments in the charges are advisable to address inflation, to ensure progress toward achieving the Commonwealth’s statutory emissions reduction goals, and to address economic impacts. The New York bills also call for periodic reports to the legislature on the need to adjust for inflation or achievement of

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38 Note, however, that H 3473 would apply revenue to clean energy spending only to the extent that the per-person dividends do not use all the revenue.

39 CO$_2$e is used when the tax base includes greenhouse gas emissions other than CO$_2$. CO$_2$e adjusts the other emissions for according to their global warming potential relative to CO$_2$.

40 The effective date is also subject to approval of the amount of the fee by Carbon Pollution Council.

41 See also H 1726.
climate goals. The Connecticut bill takes a different approach, placing authority over the level of the fee in the hands of an administrative body. The bill proposes a fee that starts at $15 per ton of CO$_2$e, increasing by $5 per year, but the amount of the charge is subject to the control of a Carbon Pollution Council that the bill would establish. The Council would have the power to determine the fee and any adjustments in the fee required to achieve Connecticut’s statutory emissions reduction goals. Thus, the Massachusetts and New York bills open the door to rate adjustments but leave the decision to the legislature; the Connecticut bill delegates discretion to an administrative body, which would be a more unusual approach.

Under either approach, ongoing evaluation can serve an important function by holding carbon pricing accountable for its environmental results. The linkage of the rates to climate goals in these bills can also bring the taxes or fees somewhat closer to the cap-and-trade approach at a conceptual level. In the debate over the relative merits of carbon taxes and cap-and-trade regimes (e.g., Congressional Budget Office, 2008; Nordhaus 2007), a key theoretical distinction has been that carbon taxes can set a predictable price but not a predictable result, while cap-and-trade can offer a more certain result but at an unpredictable price. The periodic calibration of the tax rate to actual environmental results adds a tempering element to this debate, injecting more environmental certainty into the tax approach. Switzerland has taken a similar rate-adjustment approach to the design of its carbon tax.42

Technical but important design questions also flow from the question whether to tax out-of-state emissions associated with products consumed within the state, such as emissions from the out-of-state production of electricity that is imported into the state. If the carbon price applies to out-of-state emissions, drafters will have to determine how to define those emissions in a manner that will be administratively feasible. The issue is complex because electricity entering a state comes from an electricity grid that pools the electricity supply and does not physically segregate electricity based on the emissions characteristics of the energy used to produce it. The bills in Rhode Island impose a fee on electricity distributed in the state based on the fuel mix for generators operating in the regional grid. Authorities in New York are currently exploring various technical design alternatives and informational issues involved in applying a carbon price to imported electricity and, conversely, adjustments for exported electricity (Newell et al., 2017).43

Finally, at a detailed level that may be significant to tax analysts, one of the bills (H 3473 in Massachusetts) addresses the tax treatment of dividends paid to households and employers. Revenue from the carbon price would be distributed as a “dividend” to households on a per-person basis and to employers on a per-employee basis according to a statutory formula. The bill specifies that the dividends would not be deemed to be income for Massachusetts state tax purposes, thereby preserving the real value

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42 Schweizerisches Zivilgesetzbuch [ZBG], Code civil suisse [Cc], Codice civile Swizzero [Cc] [Civil Code] June 21, 1996, SR 641.71, RS 641.71, arts. 29-30 (Switz) (status as of January 1, 2013); Ordinance for the Reduction of CO$_2$ Emissions 641.711 (status as of May 1, 2016).

43 Section IV.D discusses the coordination of a carbon tax with RGGI if a carbon tax applies to emissions covered by RGGI.
of the dividends. The bill also scripts a statement that the state must send out with the checks distributing the dividends. The statutory wording of the statement includes the fact that the payment is exempt from tax, ensuring that residents and businesses are aware of this benefit.

C. Constitutional Considerations

From a constitutional perspective, the design features of carbon pricing instruments may affect the legal procedures for enactment. A number of state constitutions, as well as the federal constitution, contain what is commonly known as the origination clause, which requires that certain fiscal measures must originate in the House of Representatives. If a carbon pricing measure is subject to the origination clause, the Senate’s hands (and the hands of carbon pricing champions in the Senate) are tied until the House chooses to send a revenue measure to the Senate. This procedural limitation may be politically significant if Senate action would help build momentum for the concept and break down resistance in the House. If the measure is designed to avoid the reach of the origination clause, champions in the Senate can press the measure forward.

One of the carbon pricing bills in Massachusetts (S 1821) illustrates the potential impact of a state origination clause on carbon pricing design and the path toward enactment. The proposal for a “greenhouse gas emissions charge,” which would impose a price on each ton of emissions, was introduced in the Senate. If the charge falls outside the scope of the origination clause, it can sidestep the risks of the origination clause’s procedural limitation.

The Massachusetts constitution provides that “money bills” must originate in the House of Representatives. Interpreting this language, the Supreme Judicial Court of Massachusetts has adopted Justice Story’s conclusion about the federal origination clause in his 1833 Commentaries on the Constitution: that the clause “‘has been confined to bills to levy taxes, in the strictest sense of the word, and has not been understood to extend to bills for other purposes, which may incidentally create revenue.’” Although the question of the scope of the origination clause could encompass an article in itself, several arguments lend credibility to a conclusion that the origination clause does not apply to the Massachusetts carbon pricing bill. The primary purpose of the greenhouse gas emissions charge is not to raise revenue; the revenue-raising function is incidental to its climate-related purposes, which are its raison d’être. Moreover, all of the revenue is returned to residents and businesses in the form of cash rebates (not tax benefits), distinguishing the mechanism from a traditional tax that raises revenue for the general fund or to finance tax reform. Finally, the charge is not administered by the state tax authorities; the Commissioner of Energy Resources instead holds primary responsibility.

Note that other constitutional issues, such as the federal dormant commerce clause, may also be relevant to state-level carbon taxes. This article does not attempt a full constitutional analysis.

Mass. Const., Part II, c.1, §3, art. 7.

Opinion of the Justices, 32 N.E.3d 287, 295 n.18 (Ma. 2015); Opinion of the Justices, 152 N.E.2d 90, 95 (Ma. 1958).
It remains to be seen whether the Supreme Judicial Court of Massachusetts, or the courts in other states, will need to decide whether these carbon pricing instruments fall within the origination clause’s reach. The Massachusetts example serves as a reminder, however, that carbon tax advocates and legislators should not overlook the potential procedural significance of a state’s origination clause if the political will for a proposal lies in the Senate, not the House. There is a fragile line between a tax, a fee, and other pricing instruments, but the legal contours of that line in any particular jurisdiction can become significant. Its potential to serve as a procedural hurdle may influence decisions about the theory and structure of the carbon pricing instrument.

D. Coordinating RGGI and Carbon Taxes

As noted earlier, RGGI operates within the context of a tapestry of state-level policies that vary from state to state and may influence the market for RGGI allowances. RGGI does not attempt to harmonize state-level policies but operates as a common denominator for emissions limits and carbon pricing among the participating states. The presence of RGGI, however, puts front and center the question of whether or how to coordinate a state carbon tax with RGGI.47

With RGGI covering electric power plants in the Northeast, policymakers will need to consider whether carbon taxes or fees should apply only to other sectors or whether a role remains for carbon taxes or fees in the electricity sector. The pending carbon tax proposals in the Northeast illustrate an array of approaches, a menu for others who are considering drafting options.

Two bills in Massachusetts (S 1821 and H 1726) take a sectoral approach. They do not apply the emissions charge to the electricity sector to the extent that it is covered by RGGI. Hence, they neatly divide carbon pricing into two spheres or, in tax terms, tax bases: emissions covered by RGGI and emissions outside RGGI. The two carbon pricing approaches do not overlap.

The third Massachusetts bill (H 3473) and bills in Rhode Island, Connecticut, and New York take the opposite approach. They extend the carbon price to the electricity sector regardless of coverage by RGGI. Electricity generation subject to RGGI will pay the tax, as will facilities that are not covered by RGGI. For electricity covered by RGGI, tiering of the fixed tax price on top of the fluctuating RGGI cap-and-trade price would result in a total carbon price for the electricity sector that is higher than the carbon tax price on power plants or other sectors outside of RGGI — unless there is a compensating measure. The bills in Rhode Island and Connecticut and the bill in Massachusetts (H 3473) adjust for this tiering effect, using two different approaches.

The Rhode Island and Connecticut bills allow for RGGI-related deductions from the amount of the fees otherwise due. In the Rhode Island bills, electricity suppliers can deduct amounts paid “on account of” RGGI auctions. In the Connecticut bill, the fee

47 Other carbon tax coordination issues exist that are not addressed here, such as the interaction of carbon pricing with renewable energy credits. See, for example, the discussion in Newell et al., 2017.
owed by electricity suppliers and distributors would be reduced by the amounts paid “for the purpose of” RGGI auctions. In broad brush, these deductions seem to allow the electricity sector to reduce the amount owed in carbon fees by the cost of RGGI allowances. This approach of tiering but allowing a deduction in effect would establish the carbon fee price as the prevailing price for carbon emissions, consistent across sectors. However, implementation details are important. For example, do these deductions only apply to the amounts paid directly by fee payers for allowances purchased at a RGGI auction? Or do they also cover the cost of RGGI allowances passed through from electricity generating units (and are those costs measurable)? The answers will depend on the meaning of “on account of” and “for the purpose of” RGGI auctions, which may encompass the broader interpretation. A broader interpretation would be consistent with wanting to avoid the application of both the carbon fee and costs associated with RGGI compliance.

The Massachusetts bill (H 3473) adopts a somewhat different approach. It requires a direct reimbursement for eligible costs, rather than a deduction. It applies to entities in the state that have “bought carbon allowances through the regional greenhouse gas initiative clearing auctions,” up to the amount the entities paid under the charge system. Thus, the language seems clear that the state would only reimburse direct participants in the auction. In addition, unlike the Rhode Island and Connecticut bills, the class of beneficiaries is not limited to electricity suppliers or distributors but includes any entity in the state that bought allowances at auction.48

These compensatory approaches raise the question whether the allowance-related amounts eligible for relief take into account transactions involving RGGI allowances after the initial purchase at auction. For example, if an entity purchases allowances at auction and then sells the allowances or their derivatives, its net cost would change accordingly. Tracing the real cost of allowances through the market and down to the suppliers and distributors is not necessarily a simple task, which is perhaps why the Rhode Island and Connecticut proposals vest regulatory oversight over fee calculations and the compensatory measures in the hands of government officials.49

Regardless of the policy considerations about whether to impose two carbon prices on one sector, the discussion earlier illustrates some of the issues involved in designing measures that can harmonize carbon prices across sectors in an administratively feasible manner. Figure 3 summarizes basic questions that policymakers should answer if they

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48 As a result, investors that choose to engage in the allowance market by purchasing allowances at auction could seek reimbursement to the extent of their liability for the carbon charges even if those charges are not related to the generation of electricity that is also subject to RGGI compliance costs. In that situation, however, the potential double carbon price on electricity will not be mitigated unless the investors’ ultimate sale of allowances to compliance entities reflects the cost saving due to the reimbursement.

49 In the Rhode Island bills, the fee payers would claim the deduction, but the electricity suppliers’ fee calculations are subject to review by the Public Utilities Commission in a docketed proceeding. In the Connecticut bill, the Commissioner of Revenue Services would calculate the deduction into the amount due from the fee payers.
choose to apply both a cap-and-trade system and a carbon tax or fee to the same emissions. Legislators in different jurisdictions may reach different conclusions on these and other issues, but during these earlier years of debate over state-level carbon prices, it is useful to watch the evolution of thinking and approaches as legislators submit and debate bills.

V. CONCLUSION

Carbon pricing is alive in the Northeast — in actual law in the case of RGGI and in the earlier stages of discussion in terms of carbon taxes, charges, and fees. It is difficult and risky to predict whether carbon-based fiscal measures will ultimately take hold, but RGGI seems to have grown firm roots and there appears to be increasing interest in fiscal measures. Carbon pricing policy choices in the Northeast ultimately will be the product of politics, environmental policy, economics, and fiscal policy. However, as explored earlier, the law frames the canvas on which policymakers work and legal drafting techniques help them execute their choices. Legal considerations can play a significant role if state policymakers increasingly look toward carbon pricing.
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DISCLOSURES

The author has no financial arrangements that might give rise to conflicts of interest with respect to the research reported in this paper.

REFERENCES


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<th>Use of Revenue</th>
<th>Legislative Committee Referral</th>
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<td><strong>New Hampshire</strong></td>
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<td>Senate Bill 123</td>
<td>Carbon reduction charge</td>
<td>Carbon Reduction Investment Program Study — study design options</td>
<td>Study</td>
<td>Study</td>
<td>Energy and Natural Resources</td>
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<td>Passed by Senate and referred to House</td>
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<tr>
<td>House Bill 528</td>
<td>Carbon fee</td>
<td>CO₂ emissions from fossil fuels (NGOs, municipalities exempt)</td>
<td>Rate required to provide revenue-neutral tax relief</td>
<td>Double earned income tax credit; reduce lowest personal income tax rate; exempt business with income less than $400,000 from corporate tax</td>
<td>Ways and Means</td>
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<td>(short form bill)</td>
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<tr>
<td>House Bill 531</td>
<td>Carbon pollution fee</td>
<td>CO₂ emissions from fossil fuels</td>
<td>$10 per ton increasing to social cost of carbon</td>
<td>Distribute back to residents and businesses on a revenue-neutral basis in proportion to each sector’s payments</td>
<td>Natural Resources, Fish and Wildlife</td>
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<td>(short form bill)</td>
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<tr>
<td>House Bill 532</td>
<td>Fee on carbon dioxide pollution</td>
<td>CO₂</td>
<td>Rate required to provide revenue-neutral tax relief</td>
<td>Reduce statewide education property tax by replacing Education Fund revenue with carbon fee</td>
<td>Ways and Means</td>
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<td>House Bill 533</td>
<td>Carbon fee</td>
<td>CO₂ from fossil fuels (NGOs, municipalities exempt)</td>
<td>Rate required to provide revenue-neutral relief</td>
<td>Eliminate sales and use tax more than six years by reducing tax 1% each year</td>
<td>Ways and Means</td>
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### Appendix A, Continued

Summary of Proposals for Carbon Taxes, Fees and Charges in the Northeast States (as of April 2017)

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<td>Joint House Resolution 6</td>
<td>Regional carbon tax</td>
<td>Requests Governor to advocate for regional carbon tax on greenhouse gas emissions and convene RGGI states to discuss</td>
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<td>Natural Resources, Fish and Wildlife</td>
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<tr>
<td>House Bill 394</td>
<td>Joint Fiscal Office Study</td>
<td>Study relative impacts of carbon tax, cap-and-trade for greenhouse gas emissions from transportation, heating, cooling and ventilation</td>
<td>Consider options</td>
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<td>Natural Resources, Fish and Wildlife</td>
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<td>Massachusetts</td>
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<tr>
<td>Senate Bill 1821</td>
<td>Greenhouse gas emissions charge</td>
<td>(\text{CO}_2), from greenhouse gas-emitting priorities (deemed to include fossil fuels, but not electricity under RGGI)</td>
<td>$10 per ton, increasing $5 per year to $40, with reevaluation in sixth year and thereafter</td>
<td>Greenhouse gas emissions charge rebate fund — rebate back to residents (with adjustments for rural residents) and employers (with adjustments for employers at risk due to charge) in proportion to each sector’s payments</td>
<td>Joint Telecommunications, Utilities and Energy</td>
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## Appendix A, Continued

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<tr>
<td>House Bill 1726</td>
<td>Greenhouse gas pollution charge</td>
<td>CO₂e from greenhouse gas-emitting priorities (deemed to include fossil fuels, but not electricity under RGGI)</td>
<td>$20, plus $5 per year to $40 with reevaluation in fourth year and thereafter</td>
<td>20% to green infrastructure fund, 80% for rebates to households (with adjustments for income level and rural location) and employers (with adjustments for affected sectors) in proportion to each sector’s payments</td>
<td>Joint Telecommunications, Utilities and Energy</td>
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<td>House Bill 3473</td>
<td>Carbon pollution price</td>
<td>CO₂e from fossil fuels and electricity consumed in state based on fuel mix, including fugitive emissions from natural gas</td>
<td>$15 per ton, increasing by $10 per year, adjusted for inflation</td>
<td>Clean energy dividend fund for dividends for households (with rural adjustment) and employers (per employee) based on average increase in single-person household energy costs at 60th percentile due to the carbon price, remainder if any to the clean energy fund</td>
<td>Joint Economic Development and Emerging Technologies</td>
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### Appendix A, Continued

**Summary of Proposals for Carbon Taxes, Fees and Charges in the Northeast States (as of April 2017)**

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<td>Senate Bill 0365</td>
<td>Fee (carbon price)</td>
<td>CO$_2$e from fossil fuels and electricity based on fuel mix; includes fugitive methane emissions; exempts fuel for public transport companies</td>
<td>$15 per ton, increasing $5 per year adjusted for inflation (minus amounts paid for purposes of RGGI auctions and certificates), subject to adjustment by Carbon Pollution Council to meet Global Warming Solutions Act goals</td>
<td>Clean energy and jobs fund — 30% for employers’ dividends; 40% for residents’ dividends; 25% for climate-related programs; up to 5% for administrative costs</td>
<td>Environment &amp; Agriculture, then Referred to Finance</td>
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<td>House Bill 5369</td>
<td>Same</td>
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<td><strong>Connecticut</strong></td>
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<td>Raised House Bill 7247</td>
<td>Fee</td>
<td>CO$_2$e from fossil fuels and electricity based on fuel mix; includes fugitive methane emissions; exempts fuel for public transport companies</td>
<td>$15 per ton, increasing $5 per year (minus amounts paid for purposes of RGGI auctions and certificates), subject to adjustment by Carbon Pollution Council to meet Global Warming Solutions Act goals</td>
<td>Clean energy and jobs fund — 25% for climate-related programs; 30% for employers’ dividend; 40% for residents’ dividend; up to 5% for administrative costs</td>
<td>Joint Committee on Environment</td>
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<td>Senate Bill 02846</td>
<td>Carbon dioxide emissions tax</td>
<td>CO₂e from carbon-based fuel combustion, including fuel used to produce electricity</td>
<td>$35 per ton, increasing $15 per year to $185, with reevaluation by legislature after report in fourth year to consider consistency with state climate policy</td>
<td>Carbon dioxide emissions fund — 60% for income tax credits for low and moderate income taxpayers; 40% for climate related spending</td>
<td>Investigations and Government Operations</td>
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<td>Assembly Bill 00107</td>
<td>Same</td>
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<td>Ways and Means</td>
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