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HOW DURABLE IS A LOCKBOX FOR CARBON TAX REVENUE?

*Janet E. Milne**

Debates about carbon taxes in political and policy circles inevitably involve discussions about how to use the revenue from carbon taxes. Revenue choices will turn on the complex interaction of political strategies, the broader fiscal picture, equity and economic concerns, and environmental considerations. The ultimate choice will mold politicians' statements to constituents and the public as they describe and promote carbon taxes. Those statements become particularly important when they purport to dedicate the revenue to a specific purpose. Voters and stakeholders will wonder whether promises can and will be kept. Can the revenue actually be put into a secure lockbox to ensure that it is used as promised? Will that lockbox endure over time?

This Article focuses on three types of revenue dedication: revenue-neutral tax reform, revenue recycling through "dividends" or rebates, and dedication of revenue to spending on climate-related matters. The pages that follow examine these revenue options from a legal perspective to explore the extent to which legislation can effectively execute each approach to using carbon tax revenue. Each of these options reflects the premise that the revenue will be secure for a specific purpose, in effect placed in a policy lockbox for that purpose. In the case of a revenue-neutral tax shift, the transfer in and out of the lockbox is metaphorical in fiscal terms. Without any physical transfer of funds, carbon tax revenue will fill a fiscal hole left by forgone revenue from tax-reform measures. The tax reductions will cause the government to forgo revenue and the carbon tax will fill that gap. For the other two options, the transfer in and out is real in physical terms.

The central focus reduces to a basic question: how do the legal design details of a carbon tax and the surrounding budget rules affect the ability to

* Professor of Law and Director of the Environmental Tax Policy Institute at Vermont Law School. The author thanks Vermont Law School students Emma Akrawi, Lea Kieffer, and Erika Gerstenberger for their assistance and Thomas Barthold for his comments on part of this Article. All faults remain at the author's door.

definitively commit carbon tax revenue to specific uses? Framed in terms of a lockbox, the inquiry explores the lockbox's design, who controls the keys to the lockbox as revenue goes in and comes back out, whether all the revenue that flows into the lockbox comes back out, the timing for revenue flows, and accountability for the revenue flows. This exploration takes readers into carbon tax design—how legislative drafters capture these revenue options in statutory terms. It ventures into seemingly arcane budget rules that can affect the ability to translate a simple concept for carbon tax revenue into reality. The pages that follow do not advocate for specific policy or political choices about how to use carbon tax revenue. The goal instead is to assess whether decisions about how to use carbon tax revenue hold up when theory is translated into statute in the real world—whether the proverbial policy lockbox operates as hoped. This Article accepts the potential for change in the governing legislation over the course of time.¹ It concentrates on how precisely and durably the lockbox, as originally constructed, can execute the original plan to dedicate the revenue.

The Article serves two practical purposes. First, its examination of legal design details can help inform the drafting of carbon tax proposals that seek to designate specific revenue uses. Second, its analysis of the ruggedness and vulnerabilities of lockboxes may sensitize speakers and listeners to the merits of simple statements about how the revenue will be used. While drawing on examples of carbon-pricing measures and proposals in North America, the Article strives to identify issues that might be relevant in other countries as well. Regardless of jurisdiction, policymakers and carbon tax advocates should consider whether their aspirations can translate into legally durable reality when they seek to dedicate carbon tax revenue.

Part I starts with an introduction to carbon taxes in order to set the scene for readers who are not familiar with carbon taxes. It briefly outlines three

¹ The U.S. Supreme Court has stated that “statutes enacted by one Congress cannot bind a later Congress, which remains free to repeal the earlier statute, to exempt the current statute from an earlier statute, to modify the earlier statute, or to apply the earlier statute but as modified.” *Dorsey v. United States*, 567 U.S. 260, 274 (2012). For discussions about the constitutional origins of the principle, see Charles L. Black, Jr., *Amending the Constitution: A Letter to a Congressman*, 82 YALE L.J. 189 (1972); Michael Doran, *Legislative Entrenchment and Federal Fiscal Policy*, 81 LAW & CONTEMP. PROBS. 27 (2018); John O. McGinnis & Michael B. Rappaport, *The Constitutionality of Legislative Supermajority Requirements: A Defense*, 105 YALE L.J. 483 (1995); Eric A. Posner & Adrian Vermeule, *Legislative Entrenchment: A Reappraisal*, 111 YALE L.J. 1665 (2002); John C. Roberts & Erwin Chemerinsky, *Entrenchment of Ordinary Legislation: A Reply to Professors Posner and Vermeule*, 91 CALIF. L. REV. 1773 (2003).

specific choices that legislators sometimes select if they want to dedicate the revenue to specific uses. The Article then turns to the central question of how design details of a carbon tax and budget rules may influence the dedication of carbon tax revenue to these three uses. Part II examines carbon taxes that finance revenue-neutral tax reform, or a “tax shift.” Part III evaluates two types of proposals for carbon taxes that use the revenue for spending programs. One recycles the revenue back to the citizenry as dividends. The other uses the revenue to finance environmentally oriented spending programs. These two approaches share a common design feature—the use of a dedicated fund. Part IV considers how institutional budget rules can affect the revenue-dedication analysis. Finally, Part V offers general conclusions.

I. THE CARBON TAX REVENUE CHALLENGE

A. *Brief Introduction to Carbon Taxes*

As global attention increasingly focuses on the threats of climate change and the need to reduce greenhouse gas emissions,² many heads, but admittedly not all, turn to carbon taxes as an important instrument to address climate change. The reason is simple: economists submit that putting a price on greenhouse gas emissions will reduce emissions in a cost-effective way.³ A tax will add that price onto transactions in the marketplace and allow the marketplace to adjust its behavior accordingly. The new higher price, for example, will encourage more efficient energy use, switches to cleaner alternatives, and the development of new technologies that will avoid or reduce emissions. According to the World Bank, twenty-nine governments

² *E.g.*, Summary for Policymakers, in INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, GLOBAL WARMING OF 1.5°C (2018).

³ *E.g.*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SYNTHESIS REPORT 107 (2014) [hereinafter SYNTHESIS REPORT]; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE 11 (2007); NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW, at xviii, 353 (2007); Joseph E. Aldy & Robert N. Stavins, *Using the Market to Address Climate Change: Insights from Theory & Experience*, 141 DAEDALUS 45, 45–46 (2012); William D. Nordhaus, *An Optimal Transition Path for Controlling Greenhouse Gases*, 258 SCIENCE 1315, 1315, 1319 (1992); *Economists’ Statement on Carbon Pricing*, EUR. ASS’N OF ENVTL. & RESOURCE ECONOMISTS, <http://www.eaere.org/statement/> (last visited Jan. 9, 2020) (signed by 1,701 economists as of January 9, 2020).

have implemented carbon taxes, primarily at the national level.⁴ The United States has not yet taken that step either at the federal or state level. The lack of action, however, does not suggest a lack of interest in some quarters. Legislators in Congress have introduced numerous carbon tax bills in recent years, including some bipartisan proposals.⁵ A conservative coalition has proposed a federal carbon fee.⁶ State legislators are also exploring the potential for carbon taxes.⁷ Even if it is politically challenged at the moment, the carbon tax concept is alive in the United States.

A carbon tax⁸ consists of the same fundamental components as taxes in general. It has three basic parts: something that is taxed (the tax base), a defined rate at which that something is taxed (the tax rate), and the revenue that the tax then produces when the tax rate is applied to the tax base (tax revenue).⁹ For a carbon tax, the tax base is usually the tons of emissions that will occur as a result of identified activities, such as the combustion of fossil fuels. The emissions are usually measured in terms of tons of carbon dioxide (CO₂) or tons of carbon dioxide equivalents (CO₂e) for other greenhouse

⁴ WORLD BANK GROUP, STATE AND TRENDS OF CARBON PRICING 2019, at 21 (2019).

⁵ See JONATHAN L. RAMSEUR, CONG. RESEARCH SERV., R45472, MARKET-BASED GREENHOUSE GAS EMISSION REDUCTION LEGISLATION: 108TH THROUGH 116TH CONGRESSES (2019) (summarizing carbon tax and cap-and-trade bills).

⁶ See JAMES A. BAKER, III ET AL., CLIMATE LEADERSHIP COUNCIL, THE CONSERVATIVE CASE FOR CARBON DIVIDENDS (2017).

⁷ See *Carbon Pricing*, NCEL, <https://ncel.net/carbon-pricing/#news> (last visited Jan. 9, 2020) (summarizing state proposals for carbon pricing).

⁸ Carbon taxes have also been called carbon pollution taxes, carbon dioxide taxes, carbon fees, greenhouse gas taxes, carbon emissions charges, and other permutations. The choice of name can depend on political considerations. It may also have legal implications. For example, a tax can be legally distinct from a fee, which customarily is a charge for the government's provision of services or benefits. For the sake of simplicity, this Article often refers to these pricing mechanisms generically as carbon taxes, but in doing so, it does not intend to erase potentially important distinctions.

⁹ Janet E. Milne, *Carbon Taxes in the United States: The Context for the Future*, 10 VT. J. ENVTL. L. 1, 3–5 (2008). For more expansive discussions of carbon tax design, see DARRAGH CONWAY ET AL., THE PARTNERSHIP FOR MARKET READINESS, CARBON TAX GUIDE: A HANDBOOK FOR POLICY MAKERS (2017); IMPLEMENTING A US CARBON TAX: CHALLENGES AND DEBATES (Ian Perry et al. eds., 2015); INT'L MONETARY FUND, FISCAL MONITOR: HOW TO MITIGATE CLIMATE CHANGE (2019); JONATHAN L. RAMSEUR & JANE A. LEGGETT, CONG. RESEARCH SERV., R45625, ATTACHING A PRICE TO GREENHOUSE GAS EMISSIONS WITH A CARBON TAX OR EMISSIONS FEE: CONSIDERATIONS AND POTENTIAL IMPACTS (2019).

gases.¹⁰ The scope of the tax base will depend on which greenhouse gas emissions from which sources policymakers choose to target. For example, a carbon tax could apply only to CO₂ emissions from the combustion of fossil fuels, or it could also apply to other greenhouse gas emissions associated with fossil fuels, such as methane, measuring the tax base in terms of tons of CO₂e. The carbon tax could extend to greenhouse gases from other sources, such as hydrofluorocarbons.

The tax rate is often defined as a dollar amount for each ton (or metric ton) of CO₂ or CO₂e. A number of factors can influence policymakers' choice of the level of the tax rate. Policymakers may design the tax rate to fully internalize the external social costs of greenhouse gas emissions or to generate a given degree of behavioral change, and they will consider political and economic acceptability. The tax rate may phase up over time to give the economy and consumers time to adjust, and it should contain an explicit or implicit inflation adjustment to preserve its value over time. In addition, policymakers may calibrate the level of the tax rate to the status of emissions reductions, increasing the tax rate if emissions reductions do not meet goals.¹¹

Figure 1: Basic elements of a carbon tax

TAX BASE		TAX RATE		TAX REVENUE
CO ₂ e EMISSIONS	X	\$ PER TON OF CO ₂ e	=	\$\$\$

By virtue of its nature as a tax, a carbon tax will generate revenue. The amount of revenue will depend, of course, on the size of the tax base and the level of the tax rate. At the national level, a carbon tax can generate a substantial amount of revenue. For example, the Congressional Budget Office estimates that a federal tax of twenty-five dollars per ton of CO₂e

¹⁰ When the tax base includes emissions from other greenhouse gases, carbon dioxide equivalents (CO₂e) serve as the common denominator for the volume of the tax base. Greenhouse gases have differing potential to contribute to climate change, defined by international authorities as their relative global warming potential (GWP) over one hundred years. Carbon dioxide is deemed to have a GWP of one, while methane, for example, has a GWP of twenty-eight. Thus, one ton of methane emissions is twenty-eight times more potent in its contribution to climate change than one ton of carbon dioxide. As a result, international authorities define volumes of greenhouse gas emissions in terms of CO₂e. See SYNTHESIS REPORT, *supra* note 3, at 87 (explaining GWP).

¹¹ See GILBERT E. METCALF, IMPLEMENTING A CARBON TAX (2017) (discussing various approaches to setting the tax rate).

emissions from fossil fuel use and large manufacturing facilities would generate \$1.1 trillion over ten years.¹² A carbon tax bill introduced in Congress, which calls for a tax rate of forty-nine dollars per ton of carbon dioxide from fossil fuels but no other greenhouse gases, would generate approximately \$1.8 trillion over ten years.¹³ At a subnational level, the carbon tax in effect in British Columbia, Canada, currently applies a rate of forty Canadian dollars per ton.¹⁴ It will yield an estimated C\$1.7 billion in carbon tax revenue just during the fiscal year starting July 1, 2019.¹⁵ The ability of a carbon tax to raise a substantial amount of new revenue leaves policymakers and stakeholders with very interesting choices about how to use that revenue, as discussed below.

Carbon taxes are not the only way in which government can attach a marketplace price to pollution. Government can create what is known as a cap-and-trade system or an emissions-trading scheme for greenhouse gas emissions. The term “carbon pricing” covers both carbon taxes and cap-and-trade.¹⁶ A carbon tax will generate revenue for the government; cap-and-trade will generate government revenue if the government auctions the allowances. This Article focuses on carbon taxes, but to the extent that cap-and-trade systems also generate revenue, some of its analysis may be relevant to cap-and-trade proposals.

¹² CONG. BUDGET OFFICE, *OPTIONS FOR REDUCING THE DEFICIT: 2019 TO 2028*, at 292 (2018). The estimate assumes that the tax rate would increase by two percent annually to adjust for inflation. *Id.*

¹³ John Larson, *The America Wins Act*, U.S. REP. JOHN LARSON, <https://larson.house.gov/issues/america-wins-act> (last visited Jan. 9, 2020). The tax rate is adjusted for inflation. America Wins Act, H.R. 4209, 115th Cong. § 2 (2017).

¹⁴ B.C. MINISTRY OF FIN., *BUDGET AND FISCAL PLAN 2019/20–2021/22*, at 119 tbl.A5 (2019) [hereinafter *BUDGET AND FISCAL PLAN 2019*].

¹⁵ *Id.* at 28 tbl.1.14. Carbon tax revenue constitutes almost three percent of provincial revenue. *Id.*

¹⁶ Carbon taxes and cap-and-trade regimes share the idea of putting a price on emissions, but they do so in very different ways. A carbon tax will apply a set price, determined by the tax rate; cap-and-trade will create a fluctuating price set by market demand for the supply of allowances. A carbon tax will not yield a definitive amount of emissions reductions; the cap in cap-and-trade will regulate the volume of emissions if price-relief safety valves do not adjust the tightness of the cap.

B. A Brief Introduction to Choices for Use of the Revenue

Policymakers have broad discretion when they decide how to use the revenue from a carbon tax. If the tax is designed as an environmental instrument, not merely as a means to raise revenue, the tax itself should advance the environmental goal of reducing greenhouse gas emissions. The tax base will focus on one or more greenhouse gases and a strong tax rate should discourage their emission. As a result, the environmental rationale does not necessarily compel policymakers to use the revenue for climate change purposes, although they may choose to do so.¹⁷ Policymakers face a variety of options, just as they do with other sources of new tax revenue. Nevertheless, three options have developed a particular kinship with carbon taxes when the revenue is dedicated to a particular use: using the revenue to reduce other tax burdens (a revenue-neutral tax shift), sending the revenue back to members of society through lump-sum distributions (carbon dividends or rebates), and dedicating the revenue to spending that will address climate change and the impacts of the carbon tax (dedicated programmatic spending).¹⁸ Carbon dividends and dedicated programmatic spending share a common design feature—the use of dedicated funds that hold the carbon tax revenue.

These three revenue options serve both different and similar policy goals. From an environmental perspective, the dedicated spending option can directly advance climate change goals by investing in climate-related initiatives. The environmental heft of a revenue-neutral tax shift and a dividend approach comes with the price they place on emissions—the tax itself, not the use of the revenue.

All three options may respond to equity concerns about a carbon tax's potential regressivity, but they do so in different ways. Tax shifting may

¹⁷ One could argue, however, that dedication of the revenue to solving the environmental problem might be consistent with the rationale for a Pigouvian tax or a tax based on the polluter-pays principle. See Janet E. Milne, *Environmental Taxation: Why Theory Matters*, in 1 CRITICAL ISSUES IN ENVIRONMENTAL TAXATION: INTERNATIONAL AND COMPARATIVE PERSPECTIVES 3, 19–24 (Janet Milne et al. eds., 2003).

¹⁸ See generally DONALD B. MARRON & ADELE C. MORRIS, TAX POL'Y CTR., HOW TO USE CARBON TAX REVENUES (2016), <https://www.brookings.edu/wp-content/uploads/2016/07/howtousecarbontaxrevenue marronmorris.pdf>; Melanie Marten & Kurt van Dender, *The Use of Revenues from Carbon Pricing* (OECD Taxation, Working Paper No. 43, 2019).

reduce tax rates for low-income individuals to make the existing tax system more progressive and diminish the regressivity of a carbon tax.¹⁹ Carbon dividends can compensate households for the carbon tax burden.²⁰ Whether dedicated spending helps low-income households will depend on whether some of the revenue is directed toward specific relief programs, such as enhanced aid for fuel assistance or investments in energy efficiency.²¹

Carbon taxes often face the argument that they will dampen the economy and cause industry to leave the jurisdiction.²² The design of the tax base and tax rate will affect the extent to which these economic concerns pose significant threats.²³ Use of the revenue may also counteract adverse effects on the economy. Reducing other tax burdens on business and industry through a tax shift may ameliorate carbon tax burdens.²⁴ Carbon dividends for households do not directly target the business sector,²⁵ but carbon dividends could be directed to businesses as well.²⁶ Dedicated spending can stimulate new job creation by providing assistance for workers in industries

¹⁹ See David G. Duff, *Carbon Taxation in British Columbia*, 10 VT. J. ENVTL. L. 87, 97–98 (2008) (discussing how British Columbia’s carbon tax shift addressed equity concerns); see RAMSEUR & LEGGETT, *supra* note 9, at 16–17 (discussing impact of households of per-capita rebate).

²⁰ See DONALD MARRON & ELAINE MAAG, TAX POL’Y CTR., HOW TO DESIGN CARBON DIVIDENDS 4 (2018), https://www.taxpolicycenter.org/sites/default/files/publication/156300/how_to_design_carbon_dividends.pdf (analyzing dividend design options); RAMSEUR & LEGGETT, *supra* note 9, at 12–19.

²¹ See Terry Dinan, *Offsetting a Carbon Tax’s Burden on Low-Income Households*, in IMPLEMENTING A US CARBON TAX, *supra* note 9, at 120, 135 (discussing possibility of funding heating assistance).

²² Carolyn Fischer et al., *Carbon Taxes and Energy-Intensive Trade-Exposed Industries*, in IMPLEMENTING A US CARBON TAX, *supra* note 9, at 159, 159–60.

²³ See *id.* at 164, 168–69 (discussing use of exemptions to reduce burden on vulnerable firms and border tax adjustments to equalize burden on imports); Paul Ekins & Stefan Speck, *Impacts on Competitiveness: What Do We Know from Modeling?*, in HANDBOOK OF RESEARCH ON ENVIRONMENTAL TAXATION 377, 379, 390–91 (Janet E. Milne & Mikael Skou Andersen eds., 2012) (noting partial exemptions and lower tax rates for carbon-energy taxes in the European Union).

²⁴ For empirical analyses of the effects of carbon taxes and carbon tax shifts on competitiveness, see CARBON ENERGY TAXATION: LESSONS FROM EUROPE (Mikael Skou Andersen & Paul Ekins eds., 2009); Ekins & Speck, *supra* note 23, at 377.

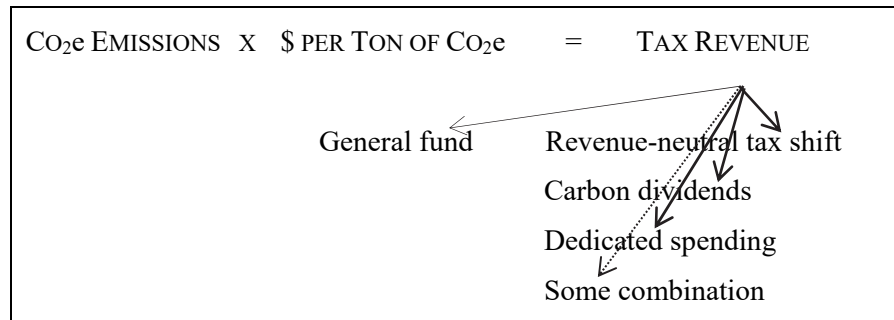
²⁵ Note, however, that lump-sum distributions may have a negative impact on gross domestic product. RAMSEUR & LEGGETT, *supra* note 9, at 14–15 fig.1.

²⁶ S. 1821, 190th Gen. Ct. § 3 (Mass. 2017); see also RAMSEUR & LEGGETT, *supra* note 9, at 18–19 (discussing rebates targeted to emissions-intensive, trade-exposed industries).

vulnerable to a carbon tax, by investing in the development and deployment of new technologies, and by building climate resilient infrastructure.²⁷

Figure 2: Summary of Choices for Use of Revenue

(Choices that are the focus of this Article are highlighted with bold arrows.)



Although this Article focuses on these three options standing alone for sake of simplicity, its analysis applies equally to proposals where only part of the carbon tax revenue is dedicated to one or more of the options. The characteristics of a revenue option are the same regardless of whether the option employs part or all of the revenue.

II. REVENUE-NEUTRAL TAX SHIFT

New tax revenue from carbon taxes may provide the opportunity to reduce other taxes, placing an environmental tax in the context of tax reform more broadly. Some economists have argued since the mid-1960s that using revenue from environmental taxes to reduce inefficient taxes may yield the dual benefits of environmental protection and a more economically efficient

²⁷ See Press Release, U.S. Rep. John B. Larson, Larson Announces the America Wins Act (Aug. 8, 2017), <https://larson.house.gov/media-center/press-releases/larson-announces-america-wins-act> (projecting twenty-two million construction jobs over ten years from investing carbon tax revenue into infrastructure projects).

fiscal system,²⁸ later dubbed a “double dividend.”²⁹ Toward the end of the twentieth century, the concept of shifting tax burdens to pollution and away from other taxes, such as taxes on employment, gained momentum. Terms such as “green tax reform,” “environmental” or “ecological tax reform,” and “tax shift” emerged to describe this approach.³⁰ Regardless of nomenclature, a common thread is that the new carbon tax revenue can allow for tax reform on a revenue-neutral basis. The revenue will not fund new spending programs but rather will finance the reduction of other existing tax burdens, generating a fiscally neutral result.³¹ The new carbon tax revenue will replace the revenue the government will lose when it reduces existing tax burdens. The relative magnitude of carbon tax revenue positions carbon taxes as a potentially significant player in tax-reform discussions.

In the 1990s, some northern European countries engaged in green tax reforms.³² They adopted tax reform as a driving policy principle for carbon taxes but did not legally link the new revenue to specific tax reforms on a precisely revenue-neutral basis.³³ By contrast, the Canadian province of British Columbia explicitly enshrined the principle of revenue neutrality in the political and legal regimes when it adopted its carbon tax in 2008.³⁴

Whether using a conceptual or legally mandated form of revenue neutrality, the underlying premise of environmentally oriented, revenue-

²⁸ See William K. Jaeger, *The Double Dividend Debate*, in HANDBOOK OF RESEARCH ON ENVIRONMENTAL TAXATION, *supra* note 23, at 211, 211–14 (summarizing history of the double dividend theory); David Terkla, *The Efficiency Value of Effluent Tax Revenues*, 11 J. ENVTL. ECON. & MGMT. 107 (1984) (exploring efficiencies of tax shift).

²⁹ David Pearce, *The Role of Carbon Taxes in Adjusting to Global Warming*, 101 ECON. J. 938, 938, 940 (1991) (coining the term “double dividend”).

³⁰ See generally Janet E. Milne & Mikael Skou Andersen, *Introduction to Environmental Taxation Concepts and Research*, in HANDBOOK OF RESEARCH ON ENVIRONMENTAL TAXATION, *supra* note 23, at 15, 24–25.

³¹ See, e.g., ORG. FOR ECON. CO-OPERATION & DEV., ENVIRONMENTAL TAXES AND GREEN TAX REFORM 23–24 (1997).

³² *Id.* at 24–26.

³³ See Stefan Speck & Jirina Jilkova, *Design of Environmental Tax Reforms in Europe*, in CARBON ENERGY TAXATION: LESSONS FROM EUROPE, *supra* note 24, at 24, 28, 33, 43 (detailing tax shifts in Denmark, Finland, and Sweden).

³⁴ See *infra* Section II.A for a discussion of British Columbia’s carbon tax.

neutral tax reform is that the new taxes will shift reliance on one form of taxation to another in a way that might better serve society. The resulting tax reforms can also address policy concerns about a carbon tax. The offsetting tax reforms can offer relief to taxpayers vulnerable to higher costs, such as by reducing income tax rates for low-income taxpayers or reducing corporate taxes.

This Part focuses on carbon taxes explicitly intended to achieve a revenue-neutral tax shift. It uses the term “revenue-neutral tax shift” as shorthand to describe carbon taxes designed to finance tax reform. Revenue neutrality accentuates the notion that this option does not produce new revenue for government spending but rather enables a shift in the tax structure. Reforms that are not revenue neutral increase or decrease the government’s net receipts, affecting the government’s budget in respectively a positive or negative way.

British Columbia’s carbon tax and a 2016 initiative proposal for a revenue-neutral carbon tax in the state of Washington illustrate two different approaches to designing a revenue-neutral tax shift. British Columbia’s carbon tax statute legally mandated revenue neutrality on an ongoing basis.³⁵ The proposal in Washington State designed a tax shift intended to achieve revenue neutrality but without enforcement provisions.³⁶ Both provide an opportunity to explore the meaning of “revenue neutral” and accountability for whether the goal of revenue neutrality has been achieved.

A. British Columbia’s Revenue-Neutral Carbon Tax: Strict Revenue Neutrality

1. The Tax Shift

British Columbia’s carbon tax, enacted in 2008, provides a valuable example of the issues involved in constructing a tax shift that legally mandates revenue neutrality.³⁷ The law defined “revenue neutrality” and the time periods over which it will be measured. It also created accountability and enforcement mechanisms.

³⁵ See *infra* Section II.A.

³⁶ See *infra* Section II.B.

³⁷ See generally Duff, *supra* note 19 (describing British Columbia’s carbon tax).

British Columbia's carbon tax concept explicitly incorporated the principle of revenue neutrality from the start. When British Columbia's Ministry of Finance explained the government's intent to enact the carbon tax, its budget plan firmly stated that the carbon tax would be revenue neutral:

All carbon tax revenue will be recycled through tax reductions—The government intends to introduce legislation that includes a legal requirement to present an annual three year plan to the legislature demonstrating how all of the carbon tax revenue will be returned to taxpayers through tax reductions. The money will not be used to fund government programs.³⁸

The tax started at ten Canadian dollars per ton of CO₂e emissions on July 1, 2008, and increased by five Canadian dollars per ton each fiscal year until it reached thirty Canadian dollars per ton on July 1, 2012.³⁹ The budget plan used the revenue to reduce existing tax burdens. It provided a refundable tax credit for low-income individuals; reduced individual income tax rates, particularly at the lower brackets; and lowered corporate tax rates, with extra relief for small businesses.⁴⁰ The three-year budget plan proposed additional tax cuts in the second and third fiscal years to use the increased revenue that the annual tax increases would generate.⁴¹

When the carbon tax rate reached thirty Canadian dollars per ton of emissions in 2012, the British Columbia government reviewed the tax. It decided to keep the tax in place and to maintain the tax rate at thirty Canadian dollars.⁴² At the time, British Columbia's carbon tax was unique in North America.⁴³ The government noted that raising the tax rate might increase competitiveness concerns but suggested it might revisit the issue if other jurisdictions adopt similar carbon pricing measures.⁴⁴ The government also

³⁸ B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2008/09–2010/11, at 11 (2008) (emphasis in original) [hereinafter BUDGET AND FISCAL PLAN 2008].

³⁹ *Id.* at 12. The Carbon Tax Act, Bill 37–2008, translated these tax rates for emissions into rates per liter or ton of the relevant fossil fuels and other products producing emissions when combusted. Carbon Tax Act, S.B.C. 2008, c 40, pt. 14, sched. 1, tbl.1 (Can.); see Duff, *supra* note 19, at 95.

⁴⁰ BUDGET AND FISCAL PLAN 2008, *supra* note 38, at 15.

⁴¹ *Id.*

⁴² *Id.*

⁴³ B.C. MINISTRY OF FIN., JUNE UPDATE: BUDGET AND FISCAL PLAN 2013/14–2015/16, at 64 (2013).

⁴⁴ *Id.* at 63–64.

stayed the course with revenue neutrality, despite some calls to use the revenue for environmental purposes.⁴⁵ The government indicated that it would achieve revenue neutrality “primarily through broad-based tax reductions for businesses, individuals, and families.”⁴⁶

2. Design Features and Implementation

British Columbia’s revenue-neutral carbon tax illustrates specific issues involved in translating the concept of revenue neutrality into statutory terms and legislative procedures. First, what is “revenue neutrality”? The 2008 Carbon Tax Act explicitly defined the term. The tax is revenue neutral if the carbon tax revenue in the fiscal year is “less than or equal to the estimated dollar amount of the reduction in Provincial revenues in the same fiscal year”⁴⁷ caused by changes in other taxes.⁴⁸ Thus, revenue neutrality is calculated on an annual basis and is satisfied not only when the net fiscal result is zero but also negative. This definition is consistent with the government’s intent to ensure that the carbon tax would not finance government programs, but a negative result might run counter to the broad, lay understanding of “neutrality.”

Second, how is revenue neutrality enforced? The 2008 Carbon Tax Act imposed procedures designed to achieve revenue neutrality each year. For each fiscal year, the Minister of Finance had to prepare an annual revenue-neutral carbon tax plan for three years from the start of that fiscal year, as well as a report on the actual or estimated results for the preceding two fiscal years.⁴⁹ If the tax was revenue positive in a preceding year, the carbon tax plan for the next three years must propose an adjustment to compensate and achieve revenue neutrality.⁵⁰ The Minister of Finance must present these prospective plans and retrospective reports to the legislature.⁵¹ The statute

⁴⁵ *Id.* at 64.

⁴⁶ *Id.*; *see infra* Section II.A.3.

⁴⁷ Carbon Tax Act, S.B.C. 2008, c 40, pt. 2 § 2(2) (Can.) (repealed 2017).

⁴⁸ *Id.*

⁴⁹ *Id.* § 3(1)-(3).

⁵⁰ *Id.* § 3(4).

⁵¹ *Id.* § 4.

also gave the Minister a financial incentive to achieve revenue neutrality. If the Minister failed to introduce legislation reasonably necessary to achieve the fiscal year's revenue neutrality and to implement any adjustment measures, the Minister's salary would be reduced by fifteen percent for the fiscal year.⁵²

This system generated annual carbon tax plans that complied with the statutory definition of revenue neutrality. In fact, the tax has been revenue negative, as allowed by the definition. For example, the first plan for the carbon tax, starting July 1, 2008, projected that carbon tax revenue would be exactly equal to the personal and business income tax cuts in each of the first three years.⁵³ The first year it would generate C\$338 million and the tax reductions would cost C\$338 million.⁵⁴ However, the budget report the next year estimated that the carbon tax revenue in the fiscal year starting July 1, 2008, generated only C\$300 million, due to factors such as reduced motor fuel consumptions, while reductions in revenue from tax relief remained at C\$338 million.⁵⁵ A subsequent report raised the revenue to C\$306 million and lowered the revenue foregone to C\$313 million.⁵⁶ Subsequent three-year budget plans projected net negative results for most years and *ex post* reports on actual revenue impacts found net negative results for all years.⁵⁷ For

⁵² *Id.* § 5.

⁵³ BUDGET AND FISCAL PLAN 2008, *supra* note 38, at 15.

⁵⁴ *Id.*

⁵⁵ B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2009/10–2011/12, at 72 tbl.1 (2009) [hereinafter BUDGET AND FISCAL PLAN 2009].

⁵⁶ B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2010/11–2012/13, at 105 tbl.1 (2010) [hereinafter BUDGET AND FISCAL PLAN 2010].

⁵⁷ See BUDGET AND FISCAL PLAN 2009, *supra* note 55, at 72 tbl.1, 73 tbl.2; BUDGET AND FISCAL PLAN 2010, *supra* note 56, at 105, tbls.1, 2 (2010); B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2011/12–2013/14, at 45 tbl.1, 46 tbl.2 (2011) [hereinafter BUDGET AND FISCAL PLAN 2011]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2012/13–2014/15, at 66 tbl.1, 68 tbl.2 (2012) [hereinafter BUDGET AND FISCAL PLAN 2012]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2013/14–2015/16, at 61 tbl.1, 63 tbl.2 (2013) [hereinafter BUDGET AND FISCAL PLAN 2013]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2014/15–2016/17, at 64 tbl.1, 66 tbl.2 (2014) [hereinafter BUDGET AND FISCAL PLAN 2014]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2015/16–2017/18, at 60 tbl.1, 62 tbl.2 (2015) [hereinafter BUDGET AND FISCAL PLAN 2015]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2016/17–2018/19, at 56 tbl.1, 58 tbl.2 (2016) [hereinafter BUDGET AND FISCAL PLAN 2016]; B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2017/18–2019/20, at 66 tbl.1, 68 tbl.2 (2017) [hereinafter BUDGET AND FISCAL PLAN 2017]; B.C. MINISTRY OF FIN., BUDGET 2017 UPDATE 2017/18–2019/20, at 68–69, tbls.2, 3 (2017).

example, when the tax rate was fully phased in at thirty Canadian dollars per ton in 2012, the government's carbon tax plan estimated that the tax would generate C\$1,172 million in tax revenue and offsetting tax relief of C\$1,275 million during the fiscal year starting July 1, 2012.⁵⁸

Thus, the statutory system produced annual revenue neutrality that actually was revenue negative.⁵⁹ This result is perhaps not entirely surprising. The statute mandated revenue neutrality, which a revenue-negative result satisfied. In addition, it may not be easy to predict a precisely net-zero result. Economic circumstances and consumers' changes in behavior can affect both the amount of carbon tax revenue and the revenue loss from tax reductions. Furthermore, during the time when the tax rate was phasing up to thirty Canadian dollars, the Ministry of Finance had to determine the effect of rate increases and pair those increases with new tax reductions. In the face of these challenges, one might design the tax measures conservatively to ensure compliance.

Third, which tax reduction measures qualify when calculating revenue neutrality? In the early years, the carbon tax financed broad-based reductions in individual and corporate income tax rates, but in later years, the government included tax relief targeted toward specific economic interests, such as industry tax credits and property tax relief for farms.⁶⁰ Some commentators perceived this change as an indication that the rationale for the revenue-neutral tax was no longer limited to tax reform designed to improve the efficiency and fairness of the tax system.⁶¹ The Carbon Tax Act of 2008's definition of revenue measures that will reduce revenue to achieve neutrality, however, does not dictate particular types of revenue-reduction policies.⁶²

⁵⁸ BUDGET AND FISCAL PLAN 2012, *supra* note 57, at 68 tbl.2.

⁵⁹ *See, e.g.*, BUDGET AND FISCAL PLAN 2016, *supra* note 57, at 56 tbl.1, 58 tbl.2.

⁶⁰ *See, e.g.*, BUDGET AND FISCAL PLAN 2013, *supra* note 57, at 63 tbl.2.

⁶¹ CHARLES LAMMAM & TAYLOR JACKSON, FRASER INST., EXAMINING THE REVENUE NEUTRALITY OF BRITISH COLUMBIA'S CARBON TAX 16–17 (2017); Brian C. Murray & Nicholas Rivers, *British Columbia's Revenue-Neutral Carbon Tax: A Review of the Latest "Grand Experiment" in Environmental Policy* 7 (Duke Univ. Nicholas Inst. for Envtl. Policy Sol., Working Paper No. 15-04, 2015).

⁶² *See* Carbon Tax Act, S.B.C. 2008, c 40, pt. 2 § 2 (Can.) (repealed 2017) (defining "revenue measures").

Hence, the character of the tax reductions may evolve—a matter more of policy and political accountability than fiscal accountability.

At the same time, the choice of measures that count as offsetting tax relief can raise interesting questions of fiscal accountability. Policy analysts at the Fraser Institute in British Columbia have argued that some tax reductions in the revenue-neutral budget plans in recent years were in effect prior to the carbon tax, such as a tax credit for the film industry and a research and development tax credit.⁶³ Although some of the preexisting provisions were extended or modified after the carbon tax went into effect in ways that caused revenue reductions, the Fraser Institute analysts reasoned that only the incremental fiscal impact resulting from those amendments should contribute to the revenue-neutrality calculation.⁶⁴ They concluded that the tax would have been revenue positive if the preexisting measures were excluded from the revenue-neutrality calculation.⁶⁵ Their analysis raises important design questions: Should preexisting measures be relevant, or only “new measures”?⁶⁶ What is a “new” measure? How is the fiscal impact of a “new” measure quantified if it just modifies a preexisting measure? These are issues that drafters of revenue-neutral carbon taxes could consider.⁶⁷

3. Subsequent Developments

Finally, how durable is the initial revenue-neutrality promise over the course of time? The British Columbia carbon tax serves as an example of how subsequent legislation can alter the fundamental revenue-neutrality principle. When the national context surrounding British Columbia’s carbon tax changed, British Columbia raised the carbon tax rate above thirty Canadian dollars but chose not to apply revenue neutrality to the revenue

⁶³ LAMMAN & JACKSON, *supra* note 61, at 11 tbl.4.

⁶⁴ *Id.* at 11 tbl.4 & app. 2.

⁶⁵ *Id.* at 12–14 fig.2, tbls.4, 5.

⁶⁶ The Carbon Tax Act refers to revenue measures that will “reduce Provincial revenues,” including *inter alia* by increasing or continuing a tax credit. Carbon Tax Act, S.B.C. 2008, c 40, pt. 2 § 2 (Can.) (repealed 2017). This definition would seem to allow for revenue-losing adjustments to existing measures but does not explicitly address the incremental quantification question.

⁶⁷ *See infra* Section IV.A.2.a (discussing the approach to estimating the fiscal impact of changes in tax law used in the U.S. Congress).

attributable to the rate increase. It also revoked the legal revenue-neutrality requirements for the revenue generated by the thirty-dollar tax rate.

Although British Columbia's carbon tax was unique when the government conducted its 2012 review, the national picture shifted with the election of Prime Minister Justin Trudeau. Under Prime Minister Trudeau's leadership, the Canadian government in late 2016 joined with provincial ministers to announce a climate change plan that included nationwide carbon pricing.⁶⁸ The plan requires provinces to implement a carbon price.⁶⁹ The carbon price can take the form of a carbon tax rising from a minimum of ten Canadian dollars in 2018 to fifty Canadian dollars by 2022 or a cap-and-trade program that will achieve comparable emissions reductions.⁷⁰ The national government will impose a federal carbon-pricing system if a province does not comply.⁷¹ In light of these developments, British Columbia reevaluated its carbon tax and announced a new approach in 2017. It committed to increasing the thirty-dollar carbon tax rate by five Canadian dollars per year, starting on April 1, 2018, until the rate reaches fifty Canadian dollars in 2021.⁷²

The British Columbia government remained behind the concept of revenue neutrality for revenue produced by the original carbon tax up to the thirty-dollar tax rate, but it chose a different path for the new revenue beyond the thirty-dollar tax rate, generating a hybrid result. The government decided to use the revenue from the rate increase to provide funding for additional tax relief to low- and moderate-income people and other programs, including support for industry transitions to lower emissions levels and green

⁶⁸ DEP'T OF THE ENV'T & CLIMATE CHANGE, PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE 6–7 (2016).

⁶⁹ *Id.* at 50 annex 1.

⁷⁰ *Id.*

⁷¹ *Id.*; see also *Guidance on the Pan-Canadian Carbon Pollution Pricing Benchmark*, GOV'T OF CAN., <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/guidance-carbon-pollution-pricing-benchmark.html> (last visited Jan. 11, 2020).

⁷² B.C. MINISTRY OF FIN., BUDGET AND FISCAL PLAN 2018/19–2020/21, at 75 (2018) [hereinafter BUDGET AND FISCAL PLAN 2018].

initiatives.⁷³ As the 2017 budget update stated: “This will allow the government to spend carbon tax revenues on measures that reduce emissions.”⁷⁴ The province today remains committed to using the incremental revenue for tax relief, industry incentives, and green projects.⁷⁵

Importantly for purposes of this Article, the new approach repealed the statutory revenue-neutrality requirement for carbon tax revenue generated by the thirty-dollar tax rate and the statutory requirements that budgets include a prospective carbon tax plan and a retrospective carbon tax report.⁷⁶ Consequently, the 2019 budget plan describes carbon tax revenue and various climate programs,⁷⁷ but it no longer matches carbon tax revenue to offsetting tax relief and related spending programs on either a prospective or retrospective basis. Thus, measures that ensured fiscal accountability for revenue neutrality for revenue up to the thirty-dollar tax rate no longer exist. The procedural protections around the lockbox are gone.

In sum, British Columbia’s carbon tax offers a very useful illustration of the issues involved in designing a revenue-neutral carbon tax shift that aspires to achieve strict revenue neutrality. Under the original tax, British Columbia chose to measure revenue neutrality on an annual basis and to allow revenue-negative but not revenue-positive results. It applied strong accountability measures that offered *ex ante* and *ex post* transparency and required adjustments, if necessary, to compensate for positive result, building a strong lockbox. Its experience highlights for other legislators the possibility of considering how to define and measure qualifying tax reductions,

⁷³ B.C. MINISTRY OF FIN., BUDGET 2017 UPDATE 2017/18–2019/20, at 67–68 (2017). The 2018 budget plan elaborated on the new approach. *See* BUDGET AND FISCAL PLAN 2018, *supra* note 72, at 75–76.

⁷⁴ B.C. MINISTRY OF FIN., *supra* note 73, at 65.

⁷⁵ *British Columbia’s Carbon Tax*, GOV’T OF B.C., <https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/carbon-tax> (last visited Jan. 11, 2020). For example, the budget plan for 2019/2020 increased the climate action tax credit for individuals and funded two programs designed to encourage industry to reduce greenhouse gas emissions. BUDGET AND FISCAL PLAN 2019, *supra* note 14, at 16–18.

⁷⁶ B.C. MINISTRY OF FIN., *supra* note 73, at 65, 68. Effective November 2, 2017, the Carbon Tax Act was amended accordingly. *See* Carbon Tax Act, S.B.C. 2008, c 40 (noting repeal of §§ 2–7 in Table of Legislative Changes).

⁷⁷ BUDGET AND FISCAL PLAN 2019, *supra* note 14, at 16–18, 110 (2019). The government’s 2018 plan to address climate change, Clean B.C., preserves the sentiment that new revenue due to the rate increase will fund additional programs, notably the program to encourage industry to achieve low emissions standards. B.C., CLEANBC: OUR NATURE. OUR POWER. OUR FUTURE. 40 (2018).

particularly if the tax shift contemplates adjustments over time. It also illustrates how legislative policies can change over time. The original strict form of revenue neutrality has now been relaxed, and the principle of revenue neutrality no longer applies to all carbon tax revenue. Regardless of how one views the political or policy wisdom of this development, the British Columbia carbon tax serves as a reminder that legislation can change the code to the lockbox.

B. Revenue-Neutral Carbon Pollution Tax Initiative in Washington State: Loose Revenue Neutrality

A proposed carbon tax shift in Washington State offers a different design model. If it had been enacted, it would have set a tax shift in motion and provided for analyses of its fiscal impact. However, it did not mandate legal accountability for revenue neutrality. Hence, this approach might be called loose revenue neutrality.

1. The Proposed Tax Shift

In Washington State, voters considered a revenue-neutral “carbon pollution tax” when they went to the polls in November 2016.⁷⁸ The measure, Initiative Measure No. 732 (I-732), appeared on the ballot as a result of the initiative process allowed by the Washington Constitution.⁷⁹ Proponents had gathered sufficient signatures to present the proposal to the legislature, and in the absence of legislative action, the measure went to voters on the ballot.⁸⁰ Although the measure fell short of the simple majority required for passage, with forty-one percent voting in support,⁸¹ it offers an instructive example of a different approach to a revenue-neutral tax shift.

⁷⁸ See *Initiative 732 Archive*, CARBON WASH., <https://carbonwa.org/initiative-732-2/> (last visited Feb. 1, 2020).

⁷⁹ WASH. CONST. art. II, § 1(a).

⁸⁰ See Janet E. Milne, *Carbon Tax Choices: The Tale of Four States*, in *THE GREEN MARKET TRANSITION: CARBON TAXES, ENERGY SUBSIDIES AND SMART INSTRUMENT MIXES* 3, 12 (Stefan E. Weishaar et al. eds., 2017).

⁸¹ *Id.*; see also Michael Reed et al., *The Economics and Politics of Carbon Taxes and Regulations: Evidence from Voting on Washington State’s Initiative 732*, 11 *SUSTAINABILITY* 3667, 3667 (2019) (exploring possible reasons for I-732’s failure to pass).

The campaign for I-732 referred to the proposal as a “revenue neutral tax swap,”⁸² using new carbon tax revenue to reduce existing tax burdens. I-732 called for a tax on the carbon content of fossil fuels sold or used in the state and carbon content attributable to electricity produced or used in the state. The tax started at fifteen dollars per ton of carbon dioxide, rising to twenty-five dollars per ton a year later, and then increasing 3.5% annually thereafter (plus inflation) until reaching \$100 (in 2016 inflation-adjusted dollars).⁸³ The proposal would have reduced the tax rates of various manufacturing taxes⁸⁴ and the general sales tax.⁸⁵ It also increased the sales tax exemption for low-income people.⁸⁶ I-732’s findings and declaration of policy succinctly capture in statutory language the multiple economic, equity, and environmental rationales for the proposal:

The people find that reduction of Washington’s high sales tax will increase commerce in this state; reduction of the business and occupation tax on manufacturers will encourage business formation and expansion by reducing the burden of this tax; the implementation and enhancement of the working families’ sales tax exemption will provide the benefits expressed at the inception of that program; and the imposition of a carbon pollution tax to fund these actions will establish Washington state’s national leadership in addressing both climate change and acidification of the oceans.⁸⁷

This statement reflects the tax shift concept but does not explicitly promise revenue neutrality.

2. Design Features

I-732’s approach to a revenue-neutral tax shift is different from British Columbia’s revenue-neutral carbon tax in two key respects. First, I-732 did not legally mandate revenue neutrality. Second, it operated within a different institutional context that may influence design choices.

⁸² *Tax Swap Overview*, CARBON WASH., <http://yeson732.org/tax-swap-overview/> (last visited Feb. 1, 2020); see David Roberts, *The Left vs. A Carbon Tax*, VOX (Nov. 8, 2016, 11:00 AM), <https://www.vox.com/2016/10/18/13012394/i-732-carbon-tax-washington>.

⁸³ Initiative Measure No. 732 § 4(1), (2) (Wash. 2015).

⁸⁴ *Id.* §§ 9–13.

⁸⁵ *Id.* § 14.

⁸⁶ *Id.* § 15.

⁸⁷ *Id.* § 2.

Unlike British Columbia's original carbon tax, I-732's statutory provisions did not legally require revenue neutrality. I-732's statement of intent indicated that the designated tax relief is "all funded by a phased-in carbon pollution tax,"⁸⁸ but the statutory scheme did not mandate mathematical revenue neutrality at the start, annually or cumulatively.

The lack of a legal revenue-neutrality mandate is a logical product of I-732's design and the institutional context. I-732 established all the details for the revenue-neutral tax swap from the start, while British Columbia's approach assumed annual legislative adjustments. Procedurally, Washington's voting ballots presented a short description of the proposal, but in fact voters were deciding whether to adopt a fully drafted tax statute, not a general principle. The statutory language for the carbon tax and tax reductions in I-732 would have become law without further action. As a result, the proposal had to address all the legal details of the tax shift at its inception, such as the identification of specific tax relief measures. Leaving issues unresolved would have required additional legislative action or another initiative campaign, both of which would have generated uncertainty. By contrast, British Columbia's 2008 Carbon Tax Act established principles that set revenue-neutral tax reform in motion but did not mandate specific tax relief measures in any particular year. Instead, the law required the provincial government to annually adjust the tax relief to ensure that carbon tax revenue in any year would not exceed the tax relief.

Annual adjustments may be more realistic in British Columbia's parliamentary system, which gives the governing party the power to determine policy, than in the United States. Under a parliamentary system, the party or coalition in power has control. As long as that party or coalition is in power, it can deliver subsequent adjustments. Under the legislative system in the United States, the constitutional process is not designed to produce one controlling party or coalition. Party power often splits among the legislative chambers and the executive branch. Consequently, legislative adjustments to a carbon tax would require negotiations among parties and may fail for lack of will. Thus, British Columbia's requirement for adjustments to achieve annual revenue neutrality may not be realistic in the United States. I-732's approach of designing the tax and setting it in motion is better suited to the United States, but as a result, it may be more difficult

⁸⁸ *Id.* § 1.

to promise strict, annual revenue neutrality. Although the Washington example involves a statute presented to voters through the initiative process, the same challenges to frequent adjustments exist for a statute that arises out of a U.S. legislative body.

The lack of a statutory mandate for revenue neutrality does not mean that I-732 was insensitive to the need to assess fiscal impacts on an ongoing basis. I-732 required the Washington Department of Revenue to provide reports to the governor and legislature on: (1) the annual tax revenue collected, (2) the annual revenue forgone as a result of the tax reductions, (3) the annual net gain or loss considering revenue collected and revenue lost, and (4) the annual costs of administration.⁸⁹ Thus, it mandated *ex post* transparency. However, unlike British Columbia, the Washington governor or legislature was not required to take any action upon receiving the reports. The governing bodies would have information about the fiscal impact of the tax and its associated tax reform and could amend the legislation if they so chose—or not. Thus, I-732 strove for revenue neutrality in a loose sense, not in a strict, legal sense. Whether I-732 in fact would have been revenue neutral was a subject of debate prior to the November 2016 vote, given the challenges of estimating revenue streams.⁹⁰

British Columbia's carbon tax and I-732 both illustrate how policymakers or advocates of a revenue-neutral tax shift should think carefully about precisely what they mean when they call for a revenue-neutral

⁸⁹ *Id.* § 8. The reports are provided annually for the first ten years and biennially thereafter, but biennial reports must contain annual data. The net revenue gain or loss and the costs of administration are provided in dollar amounts and as percentages of the general fund. *Id.*

⁹⁰ Revenue from the carbon pollution tax would have averaged about \$2 billion a year over the first four years. *See* WASH. DEP'T OF REVENUE, FISCAL NOTE INITIATIVE 732, at 1, <https://perma.cc/79E3-EHCV> (last visited Jan. 19, 2020). Prior to the November 2016 vote, the Washington Department of Revenue estimated that the combination of the carbon pollution tax and the tax reductions would yield net losses of over \$281 million in state revenue in the 2017–2019 biennium and over \$633 million in the 2019–2021 biennium. *Id.* at 1. The projections did not extend beyond 2021. *Id.* Carbon Washington, the organization that spearheaded the I-732 campaign, challenged some of the Department's assumptions and asserted that the net revenue in the first four years would be either revenue neutral or slightly revenue positive. CARBON WASH., COMMENTS ON THE OFFICE OF FINANCIAL MANAGEMENT'S FISCAL NOTE ON I-732, at 1 (2016). The potential for a negative net revenue stream became an issue in the campaign, in part because the state faced pressure from its Supreme Court to increase spending on education. TODD MYERS, WASH. POL'Y CTR., CITIZENS' GUIDE TO INITIATIVE 732: TO INCREASE CARBON-BASED ENERGY TAXES AND REDUCE THE STATE SALES TAX AND BUSINESS TAXES TO REDUCE CARBON EMISSIONS 7 (2016).

tax shift and about their ability to deliver revenue neutrality, however defined. In short, is revenue-neutral tax reform a legal mandate capable of long-term implementation, or is it a conceptual restructuring? British Columbia has successfully experimented with the former. I-732 took a very credible approach to the latter.

C. Design Implications

Stepping back to the big picture, this foray into revenue-neutral carbon tax shifts has primarily probed the question of how confidently one can assert that carbon taxes combined with tax relief will generate a revenue-neutral fiscal result—whether the carbon tax revenue flowing into the metaphorical lockbox will match the revenue flowing out through tax reductions. A threshold issue is whether to define the goal of revenue neutrality as precisely net zero or as something with a greater margin of error. In the real world of policy, politics, and fiscal fluctuations, some room for error seems wise.⁹¹

A second consideration is the timeframe over which one evaluates and recalibrates the lockbox's flow of revenue. British Columbia took the annual approach to evaluation and recalibration. Washington State's I-732, by contrast, set a formula at the start and did not build adjustments into the original design.

A final related consideration is who enforces revenue neutrality. The public bears ultimate responsibility through its power to vote for legislators and leaders, albeit an attenuated form of control over the lockbox. British Columbia's penalty on a finance minister who does not propose a revenue-neutral tax created a sizeable stick, and the annual review requirements provided transparency. Washington's I-732 spotlights fiscal impacts at the time of enactment and provides information on an ongoing basis but does not require corrections in course. The distinctiveness of a revenue-neutral carbon tax shift is that it explicitly embodies a goal that binds the revenue flow and revenue loss into one unified principle. Without an enforcement mechanism, a loose revenue-neutrality principle seems more authentic than a strict one.

These considerations do not tilt against the concept of a revenue-neutral carbon tax shift. They strive instead to test what we mean by a revenue-

⁹¹ See *infra* Part IV (discussing the budget implications of measures that are not precisely revenue neutral).

neutral tax shift and the extent to which it can be achieved in the short and long terms. Textbox 1 provides a brief summary of key issues.

Textbox 1

Is Revenue Neutrality Secure: Key Issues

- What is the meaning of “revenue neutrality”?
 - Is it defined or conceptual?
 - Does it create a legal obligation?
 - Over what time periods is it measured?
 - Are adjustments for shortfalls or excesses required or possible?
- Is revenue neutrality enforced at the time of enactment?
 - Directly through requirements for *ex ante* plans and penalties for the lack of plans?
 - Indirectly through the public visibility of *ex ante* revenue estimates?
- Is revenue neutrality enforced post-enactment?
 - Directly through requirements for *ex post* reports and adjustments?
 - Indirectly through *ex post* accountings?

III. DEDICATED SPENDING PROGRAMS—CARBON DIVIDENDS AND PROGRAMMATIC SPENDING

Legislators might instead spend the revenue rather than structuring a revenue-neutral tax shift. One set of carbon tax proposals suggests that carbon tax revenue should be fully recycled back to taxpayers in the form of dividends or rebates. Another set would commit the revenue to specific spending programs, often programs that will help address climate change. Each approach sends the revenue into a dedicated fund that serves as the lockbox for the revenue. Given this common feature, this Part explores the lockbox features of these two approaches side by side. This combined treatment, however, should not disguise the fact that they serve very different goals. The dividend approach avoids new programmatic spending. Hence, it is similar to a revenue-neutral tax shift. It is budget neutral, but it accomplishes its neutrality goal through a lump-sum distribution mechanism rather than tax relief. The programmatic spending approach, by contrast, is specifically designed to enhance government’s ability to fund substantive programs. Yet they both use dedicated funds to accomplish their purpose.

This Part starts with an explanation of each of these two approaches, drawing on proposals at the federal and state levels.⁹² It then analyzes common legal design features that affect their lockboxes, in particular the role of dedicated funds and appropriations mechanisms that control the flow of revenue into and out of the lockboxes.⁹³

A. Recycling Revenue Through Dividends or Rebates

One revenue option is to give the new carbon tax revenue back to society through lump-sum distributions. The idea of recycling carbon pricing revenue as equal lump-sum payments developed at the turn of the twenty-first century with Peter Barnes's idea of creating a "sky trust." The sky trust would sell carbon emissions rights and then return the revenue in the form of "dividends" to citizens as owners of the sky.⁹⁴ When political attention turned to the possibility of using a federal cap-and-trade system to control greenhouse gas emissions, the concept was reframed as "cap-and-dividend."⁹⁵ Barnes argued that government revenue from auctioning emissions permits should be recycled back to citizens in lump-sum distributions. Doing so would compensate the public, as owners, for the sky's use.⁹⁶ It also would protect consumers from the cost of reducing greenhouse gas emissions.⁹⁷

Some carbon tax proponents have adapted this concept to carbon taxes. Revenue from a carbon tax or fee would be distributed as lump-sum

⁹² See *infra* Sections III.A–B.

⁹³ See *infra* Sections III.C–D.

⁹⁴ PETER BARNES, WHO OWNS THE SKY?: OUR COMMON ASSETS AND THE FUTURE OF CAPITALISM 61–66 (2001). Alaska's Permanent Fund inspires Barnes's sky trust concept. *Id.* at 53. The fund holds revenue Alaska receives from oil, a state-owned resource, and distributes a portion of the earnings on the fund's holdings to Alaskans as dividends. *Id.* at 51–53.

⁹⁵ See, e.g., Peter Barnes, *Cap and Dividend, Not Trade: Making Polluters Pay*, SCI. AM. (Dec. 1, 2008), <https://www.scientificamerican.com/article/cap-and-divident-not-trade/?redirect=1>.

⁹⁶ PETER BARNES, CLIMATE SOLUTIONS: A CITIZEN'S GUIDE 56 (2008).

⁹⁷ *Id.* at 50–51.

dividends or rebates.⁹⁸ The carbon tax would send the environmental signal, and lump-sum distributions can help address a carbon tax's regressivity for lower-income taxpayers. However, if the dividends are equal lump-sum distributions to all residents or households regardless of income, the revenue recycling may not be progressive in nature.⁹⁹ Some dividend proposals calibrate the amount of the dividend to the recipients' income or other factors to address equity concerns.¹⁰⁰

Although some economists favor the economic efficiency of revenue-neutral tax reform over lump-sum payments that recycle revenue,¹⁰¹ the fee-and-dividend approach is gaining visibility in policy circles. Legislators at the federal and state levels have introduced carbon tax or fee bills that follow this path, as discussed below. In 2017, the Climate Leadership Council, a coalition of U.S. conservatives, proposed in general terms a carbon tax with revenue devoted to monthly dividends to individuals.¹⁰² A think tank in the United Kingdom subsequently released a similar proposal for the United Kingdom in a post-Brexit scenario.¹⁰³ The same dividend or rebate concept could apply to recycling the revenue from the auction of emissions

⁹⁸ Some analysts draw a conceptual distinction between carbon dividends and rebates, reasoning that the former represents a payment for the use of communal property and the latter is a tax rebate to offset the burden of carbon taxes paid. MARRON & MAAG, *supra* note 20, at 1–2, 6.

⁹⁹ One line of reasoning posits that the distributions are progressive when viewed in light of the recipients' expenditures on carbon-intensive goods. Although low-income individuals pay a higher percentage of their income on these goods, wealthy individuals spend more on them. As a result, low-income individuals would receive a greater benefit from the lump-sum distributions. David Klenert et al., *Making Carbon Pricing Work for Citizens*, 8 NATURE CLIMATE CHANGE 669, 671–72 (2018).

¹⁰⁰ See S. 2284, 116th Cong. § 4(a) (2019) (phasing out carbon dividends above designated income level); H.R. 4051, 116th Cong. § 4(a) (2019) (phasing out carbon dividends above designated income level); H. 2810, 191st Gen. Ct. § 3 (Mass. 2019) (targeting rebates to low income quintiles). These bills do not devote the carbon tax revenue exclusively to dividends or rebates.

¹⁰¹ See, e.g., Adele Morris & Aparna Mathur, *The Distributional Burden of a Carbon Tax: Evidence and Implications for Policy*, in IMPLEMENTING A US CARBON TAX, *supra* note 21, at 109.

¹⁰² BAKER ET AL., *supra* note 6. The proposal also calls for phasing out regulations on carbon dioxide emissions, including repeal of the Clean Power Plan that the Obama Administration put in place. *Id.*

¹⁰³ MATT ROONEY ET AL., POL'Y EXCHANGE, THE FUTURE OF CARBON PRICING: IMPLEMENTING AN INDEPENDENT CARBON TAX WITH DIVIDENDS IN THE UK (2018). For other discussions of the revenue recycling through lump-sum distributions, see Klenert et al., *supra* note 99, and MARRON & MAAG, *supra* note 20.

allowances, as some federal bills proposed.¹⁰⁴ This Article focuses only on proposals that generate revenue through carbon taxes or fees, but cap-and-dividend proposals may face similar issues.

Carbon tax or fee proposals that distribute the revenue back to the citizenry in the form of lump-sum dividends or rebates are sometimes referred to as fee-and-dividend proposals. Like revenue-neutral tax reform, this approach ensures that the new revenue will not fund new programmatic spending programs but will go back into taxpayers' pockets. It achieves this result, however, by using a very different technique. As illustrated by the examples below, this approach uses a dedicated fund, a de facto lockbox, to insulate the revenue. It can also limit the role of legislative appropriators in order to ensure that the revenue flowing into the fund flows back out as distributions.¹⁰⁵ This feature highlights the issue of who exercises control over the lockbox and when.

Bills that have been introduced in the U.S. Congress illustrate how to align a carbon tax or fee with lump-sum distributions and to ensure that those distributions will occur. This Article draws on several examples. In 2018, two similar bipartisan bills introduced in the House of Representatives and the Senate proposed legislation that would use revenue from a "carbon fee" to provide lump-sum distributions to the citizenry.¹⁰⁶ The lead sponsor

¹⁰⁴ See Healthy Climate and Family Security Act of 2018, S. 2352, 115th Cong. § 3 (2018) (proposing quarterly payments of dividends from auction proceeds held by the Healthy Climate Trust Fund). The bill permanently appropriates the auction revenue to the Healthy Climate Trust Fund and provides that the Secretary of Treasury "shall" make quarterly Healthy Climate Dividend Payments to individuals with Social Security numbers who are lawfully present in the United States. *Id.*; see also Healthy Climate and Family Security Act of 2018, H.R. 4889, 115th Cong. § 3 (2018) (companion bill).

¹⁰⁵ Note that lump-sum distributions can also occur through the tax code, but this Article concentrates on direct distributions. A 2019 carbon tax bill introduced by U.S. Senator Sheldon Whitehouse (D-RI) provides a refundable income tax credit for taxpayers equal to the lesser of 6.2% of earned income or \$900 and a direct payment of \$900 to Social Security recipients. American Opportunity Carbon Fee Act of 2019, S. 1128, 116th Cong. §§ 201, 202 (2019). Unlike the fee-and-dividend approach, the lump-sum benefits are delivered in large part through the tax code, and the distributions are not matched to the revenue from the carbon fee. *Id.* The bill also contains a permanent appropriation to cover the Social Security payments and \$10 billion a year for state grants for assistance for low-income and rural households, worker transitions, adjustments to climate change and a low-income economy. *Id.* § 203; see also S. 2368, 115th Cong. (2018); H.R. 4926, 115th Cong. (2018).

¹⁰⁶ Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong. (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong. (2018). Note that these bills differ in their approach to the enactment of a carbon fee on current regulations under the Clean Air Act. The House

of the House bill, Ted Deutch, a Democrat from Florida, said the bill would “return 100% of the net revenue as a rebate to American families.”¹⁰⁷ The lead sponsor of the Senate bill, Chris Coons, a Democrat from Delaware, stated that “[r]evenues received will be returned directly to the American people in the form of a monthly dividend, protecting energy consumers and low- and middle-income households.”¹⁰⁸ For each bill, the carbon fee, inserted into the tax code, starts at fifteen dollars per ton of greenhouse gas emissions generated by the use of fossil fuels. It increases ten dollars per year, or fifteen dollars if emissions reductions do not meet targets, or zero dollars if emissions fall to ten percent or less of 2015 levels.¹⁰⁹ The monthly lump-sum distributions, or “carbon-dividend payments,” equal a pro rata share of the revenue, after administrative expenses, for each adult and a half pro rata share for each child under age nineteen.¹¹⁰ Eligible recipients must be U.S. citizens or lawful residents.¹¹¹

At the state level, Massachusetts Senator Michael Barrett introduced a bill in the Massachusetts legislature that offered lump-sum distributions, or “rebates,” to a broader class of recipients—state residents and employers in the state.¹¹² Revenue from a “carbon dioxide emissions charge,” which increases annually from ten dollars per ton of greenhouse gas emissions up

bill would suspend certain regulations while the Senate bill would provide the Environmental Protection Agency (EPA) discretionary authority to review regulations if emissions targets are met or exceeded. Compare H.R. 7173, § 8, with S. 3791, § 8. Congressman Deutch the sponsor of H.R. 7173, introduced a similar bill in 2019. Energy Innovation and Carbon Dividend Act of 2019, H.R. 763, 116th Cong. (2019).

¹⁰⁷ Press Release, U.S. Rep. Ted Deutch, Landmark Bipartisan Carbon Fee Legislation Introduced (Nov. 27, 2018), <https://teddeutch.house.gov/news/documentsingle.aspx?DocumentID=399440>.

¹⁰⁸ Press Release, Senator Chris Coons, Sens. Coons, Flake Introduce Landmark Bipartisan Legislation to Put Money in the Pockets of Working Families by Pricing Carbon Pollution (Dec. 19, 2018), <https://www.coons.senate.gov/news/press-releases/sens-coons-flake-introduce-landmark-bipartisan-legislation-to-put-money-in-the-pockets-of-working-families-by-pricing-carbon-pollution>.

¹⁰⁹ H.R. 7173, § 3; S. 3791, § 3. The bills also impose a smaller fee on fluorinated greenhouse gases and a border adjustment fee that funds administration of the border adjustment and refunds for exporters of carbon-intensive products and fuels subject to the tax in the United States. H.R. 7172, § 3; S. 3791, § 3.

¹¹⁰ H.R. 7173, § 4; S. 3791, § 4. In addition, the Secretary of the Treasury is charged with transferring an amount to the Trust Fund that would allow an advance dividend one month prior to the first payments of the tax, recouped from the Trust Fund over the first three years. S. 3791, § 4.

¹¹¹ H.R. 7173, § 4(a); S. 3791, § 4(a).

¹¹² S. 1821, 190th Gen. Ct. (Mass. 2017). Senator Barrett introduced a similar bill in 2015. S. 1747, 189th Gen. Ct. (Mass. 2015).

to forty dollars per ton,¹¹³ is apportioned between state residents and employers in proportion to the charges each sector paid. That revenue is then distributed as rebates to residents based on their per capita share (with an adjustment for residents in vehicle-dependent rural areas)¹¹⁴ and to employers based on their share of the number of full-time, in-state employees (with the possibility of adjustments for sectors that the charges might negatively affect).¹¹⁵

B. Dedicated Environmental Programmatic Spending

A third option is to dedicate the revenue to environmental programs. The new carbon tax revenue can allow the government to increase its spending on climate-related initiatives that reduce greenhouse gas emissions (mitigation), help society prepare for the consequences of climate change (adaptation), assist workers affected by the transition to a cleaner economy, and help low-income households facing the burdens of a carbon tax. While all three revenue options in effect “spend” all the new revenue for specific purposes, neither revenue-neutral tax reform nor the dividend approach finance new or larger programmatic spending. Dedicated programmatic spending under this third option will expand the government’s role in supporting efforts to address climate change.

The programmatic spending approach may address some of the same policy concerns as a revenue-neutral tax shift or dividend approach, such as alleviating a carbon tax’s impact on low-income households. But it stands apart in two distinct ways. It harnesses the government’s power to spend money on specific programmatic initiatives, and those initiatives can focus on efforts to reduce greenhouse gases and adapt to climate change. Bills in Congress illustrate this approach. Although these bills do not direct all of the revenue to programmatic spending and not all of the spending may link to climate change, they illustrate how carbon tax revenue can be dedicated to specific programmatic purposes.

¹¹³ S. 1821, § 3 (calling for a report on whether the tax rate should be adjusted after it reaches forty dollars).

¹¹⁴ *Id.*

¹¹⁵ *Id.*

Representative John Larson, a Democrat from Connecticut, introduced a bill in 2017 that directs revenue from a carbon tax to spending programs.¹¹⁶ The tax of forty-nine dollars per ton of carbon dioxide, adjusted for inflation over time, would generate an estimated \$1.8 trillion over ten years.¹¹⁷ During the first ten years (2019–2028), the vast majority of the revenue would finance infrastructure programs, which may or may not bear a direct relation to climate change.¹¹⁸ Any remainder finances a tax rebate for working families delivered through an income tax credit.¹¹⁹ According to the sponsor, the bill is “fully paid for by taxing harmful pollution.”¹²⁰

The bill targets much of the programmatic spending to existing programs either by directing the revenue into their trust funds, such as the Highway Trust Fund,¹²¹ or by placing it in the hands of an agency for purposes which statutes already define, such as specific water programs under the jurisdiction of the Environmental Protection Agency or Department of Agriculture.¹²² In limited instances, it directs revenue to an agency for the creation of a new program, such as the expansion of broadband and transition assistance for workers.¹²³

Representative Carlos Curbelo, a Republican from Florida, introduced a bill in 2018 that would create a carbon tax and invest three-quarters of the

¹¹⁶ America Wins Act, H.R. 4209, 115th Cong. § 2(b) (2017).

¹¹⁷ Press Release, U.S. Rep. John Larson, Larson Introduces the America Wins Act (Nov. 1, 2017), <https://larson.house.gov/media-center/press-releases/larson-introduces-america-wins-act>.

¹¹⁸ Over \$80 billion is allocated each year to: transportation infrastructure (\$63 billion); river, harbor, flood control, shore protection, and aquatic ecosystem restoration programs (\$6 billion); water quality and infrastructure programs (\$4.4 billion); water and waste disposal facilities (\$1.5 billion); broadband for underserved communities (\$3 billion); and assistance for workers in carbon-dependent industries (\$5 billion). America Wins Act, H.R. 4209, 115th Cong. § 2(b) (2017). In addition, on a permanent basis 12.5% of the revenue will provide energy refunds for lower-income individuals. *Id.* §§ 2(c), 3. The refund would compensate households for the loss in purchasing power attributable to the tax, but to ensure revenue neutrality, the refunds would be reduced pro rata in any year when the dedicated stream of revenue is not sufficient to fully finance the refunds. *Id.* § 3(d).

¹¹⁹ *Id.* §§ 2(c), (4).

¹²⁰ Press Release, *supra* note 117.

¹²¹ H.R. 4209, § 2(b).

¹²² *Id.*

¹²³ *Id.*

tax revenue in programmatic spending.¹²⁴ In the absence of specification, the remainder of the revenue presumably flows into the general fund. The tax rate on greenhouse gas emissions starts at twenty-four dollars per ton of CO₂e emissions, increasing by two percent per year plus an inflation adjustment and an additional two dollar increase if emissions exceed targets.¹²⁵

The Curbelo bill allocates the money by percentages to specific programs, most of which currently exist.¹²⁶ It designates seventy percent of the dedicated revenue (which constitutes three-quarters of the total revenue) to the federal Highway Trust Fund.¹²⁷ Because it also repeals the federal excise tax on gasoline, which currently provides revenue for the federal Highway Trust Fund,¹²⁸ it substitutes the tax on greenhouse gases for the existing federal gas tax. It designates the remaining thirty percent in specific percentages to a number of other uses, including weatherization programs, projects that address coastal flooding mitigation and adaptation, carbon capture and sequestration, reforestation, low-income assistance, and assistance for workers in the energy sector who might be adversely if the bill becomes law.¹²⁹

C. Design Feature: The Role of Dedicated Funds

Dedicated funds play an essential role in executing both the carbon-dividend approach and the programmatic spending approach. The bills described above direct the revenue into a dedicated fund that will hold the revenue for the designated purposes, isolating the revenue from the Treasury's general fund. Under both congressional bills calling for carbon dividends, the revenue from the carbon fee flows into a Carbon Dividend Trust Fund within the Department of Treasury. After administrative

¹²⁴ Market Choice Act, H.R. 6463, 115th Cong. § 201 (2018).

¹²⁵ *Id.* § 101(a).

¹²⁶ *See id.* § 202. The bill does not designate a use for the remaining one-quarter of the revenue from the tax. It presumably would flow into the general fund.

¹²⁷ *Id.* § 202(a)(1).

¹²⁸ *Id.* § 211.

¹²⁹ *Id.* § 202.

expenses, the Secretary of Treasury pays the dividends from the fund.¹³⁰ Under the Massachusetts bill, the revenue from the emissions charge goes into a Carbon Dioxide Emissions Charges Rebate Fund managed by the Commissioner of Energy Resources, who is charged with distributing rebates.¹³¹ The federal bills that use carbon taxes to finance spending programs create new trust funds to hold the carbon tax revenue until it is distributed to the spending programs. Congressman Larson's bill would create the Build America Trust Fund.¹³² Congressman Curbelo's bill would establish the Rebuilding Infrastructure and Solutions for the Environment (RISE) Trust Fund in Treasury.¹³³

Placing the revenue in a dedicated fund has two particular benefits: protection of the revenue and transparent accountability. First, and most importantly, it insulates the revenue in the fund from other uses. This approach is not novel. The federal government uses trust funds to hold revenue that has been dedicated to a particular statutory purpose,¹³⁴ such as the Highway Trust Fund¹³⁵ and the Oil Spill Liability Trust Fund.¹³⁶ This guarded status reflects a legislative commitment to a cause. Some have suggested that this status may be more politically difficult to undo,¹³⁷ but the protection is not invulnerable. Congress can amend the governing legislation. Second, dedicated funds can provide transparency for the use of carbon tax revenue. Government ledgers will track the flow of revenue into trust funds

¹³⁰ Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong. § 4 (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong. § 4 (2018).

¹³¹ S. 1747, 189th Gen. Ct. § 3 (Mass. 2015).

¹³² America Wins Act, H.R. 4209, 115th Cong. § 2 (2017).

¹³³ H.R. 6463, § 201.

¹³⁴ See generally ALLEN SCHICK, THE FEDERAL BUDGET: POLITICS, POLICY, PROCESS 43 (2007); OFFICE OF MGMT. & BUDGET, OFFICE OF THE PRESIDENT, A BUDGET FOR A BETTER AMERICA: ANALYTICAL PERSPECTIVES: FISCAL YEAR 2020 BUDGET OF THE U.S. GOVERNMENT, at 327-340 (2019); CONG. RESEARCH SERV., R41328, FEDERAL TRUST FUNDS AND THE BUDGET (2014) [hereinafter FEDERAL TRUST FUNDS]; ERIC M. PATASHNIK, PUTTING TRUST IN THE US BUDGET: FEDERAL TRUST FUNDS AND THE POLITICS OF COMMITMENT (2000).

¹³⁵ I.R.C. § 9503.

¹³⁶ *Id.* § 9509.

¹³⁷ FEDERAL TRUST FUNDS, *supra* note 134, at 2; see PATASHNIK, *supra* note 134 (discussing extensively the political dynamics surrounding a variety of trust funds).

and dispersals out of the trust funds. The lockbox will hold the government accountable. In addition, for the carbon-fee-and-dividend approach, segregation of the revenue from the general fund may facilitate the calculation of the lump-sum distributions. The fund's account of receipts will determine the size of the dividends or rebates.

D. Design Feature: The Role of the Appropriations Process

In implementing the promise that the revenue will be returned as lump-sum distributions or used for programmatic spending, proposals must address whether the flow of revenue into and out of the fund is subject to the legislative appropriations process. Managing the fund through the annual appropriations process could affect the flow of revenue into a fund and then out again, whether as lump-sum distributions or for programmatic spending.

By way of background, and using the U.S. Congress as an example, the U.S. Constitution gives Congress the power of the purse. Article I states, "No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law."¹³⁸ Absent any special statutory provisions relating to appropriations procedures, the House and Senate Committees on Appropriations annually recommend spending bills which then go to the full House and Senate for consideration and, if approved by both chambers, to the President for signature or veto.¹³⁹

Under a conventional approach, the appropriations process would control the flow of carbon tax revenue into and out of the dedicated fund. If a bill creates a trust fund and does not mandate that revenue flow automatically into the fund, the legislative appropriations process would decide whether to deposit revenue into the fund. Similarly, if a bill only establishes the principle of paying carbon dividends or sets spending priorities but does not mandate spending, the appropriations process would determine whether to distribute money in keeping with the fund's purposes or allow it to accumulate in the fund. Thus, reliance on the annual appropriations process would inject significant elements of uncertainty into

¹³⁸ U.S. CONST. art. I, § 9, cl. 7.

¹³⁹ See generally JAMES V. SATURNO ET AL., CONG. RESEARCH SERV., R42388, THE CONGRESSIONAL APPROPRIATIONS PROCESS: AN INTRODUCTION (2016) (discussing how these procedures operate in the context of the President's budget recommendations and congressional budget resolutions).

the implementation of plans to use carbon tax revenue. Defenders of the funds would need to compete against other programs for funding each year to allocate revenue into the funds. They also might encounter resistance to spending money out of the trust fund. In short, the dividend approach and the dedicated programmatic spending approach would not be self-executing but would require annual legislative action, which can generate uncertainty.

The carbon-tax and carbon-fee bills described above have addressed the appropriations issue in various ways. To avoid the uncertainty and burden of the appropriations process, bills may choose to expressly bypass the annual appropriations process in whole or part. The federal carbon-dividend bills introduced by Senator Coons and Congressman Deutch, discussed above, provide that revenue from the fees is “hereby appropriated” to a Carbon Dividend Trust Fund.¹⁴⁰ In addition, they require that the Secretary of Treasury “shall” make monthly carbon-dividend payments to citizens and lawful residents of the United States.¹⁴¹ The Massachusetts rebate bill states that the Commissioner of Energy Resources “shall deposit” all proceeds from the charges in the Greenhouse Gas Emissions Charges Rebate Fund, that the Commissioner “shall return all proceeds from greenhouse gas emissions charges to residents and employers in the commonwealth in the form of rebates,” and that the proceeds are available for these purposes “without appropriation.”¹⁴² As a result, the legislative bodies in these examples would not need to take annual appropriations measures. In budgetary language, these arrangements are sometimes known as permanent appropriations.¹⁴³

Turning to proposals for programmatic spending, Congressman Larson’s bill creating the Build America Trust Fund also takes a permanent appropriations approach—but only for the first ten years.¹⁴⁴ It provides that

¹⁴⁰ Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong. § 4 (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong. § 4 (2018).

¹⁴¹ H.R. 7173, § 4; S. 3791, § 4.

¹⁴² S. 1821, 190th Gen. Ct. § 3 (Mass. 2017).

¹⁴³ OFFICE OF MGMT. & BUDGET, *supra* note 134, at 112–13; see Kate Stith, *Congress’ Power of the Purse*, 97 YALE L.J. 1343, 1378–81 (1988) (discussing the constitutionality of permanent appropriations); U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-19-36, GOVERNMENT-WIDE INVENTORY OF ACCOUNTS WITH PENDING AUTHORITY AND PERMANENT APPROPRIATIONS, FISCAL YEARS 1995 TO 2015, at 4–8 (2018) (explaining permanent appropriations and analyzing extent of federal use).

¹⁴⁴ America Wins Act, H.R. 4209, 115th Cong. § 2 (2017).

“the increase in revenues received in the Treasury as the result of the tax” is “hereby appropriated to the Trust Fund.”¹⁴⁵ Thus, the revenue flows annually into the fund without any further legislative action. The bill then directs that amounts in the fund “shall be available without further appropriation” for designated purposes.¹⁴⁶

Congressman Curbelo’s bill instead would preserve the appropriators’ role over the decision whether to disperse revenue from the fund for programmatic uses. It provides that three-quarters of the tax revenue is “hereby appropriated and transferred” to the RISE Trust Fund for specified uses.¹⁴⁷ These programmatic designations, however, do not mandate dispersal. The bill provides a roadmap for the allocation of the revenue to specific purposes, but it states that the funds will be available “as provided by appropriation Acts.”¹⁴⁸ Thus, Congress ultimately would decide through the appropriations process whether the money in the trust fund actually flows into the designated programs.¹⁴⁹ Unlike the Larson bill, Congress would retain ongoing control over the keys that can actually unlock the revenue in the lockbox.

A proposal in Washington State similarly preserved a role for appropriators while also establishing a new body to oversee the spending program. Initiative Measure 1631 (I-1631) was presented to voters in 2018 but failed to pass with only forty-three percent voting in approval.¹⁵⁰ Its

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ Market Choice Act, H.R. 6463, 115th Cong. § 201 (2018).

¹⁴⁸ *Id.* § 202(a).

¹⁴⁹ Because the bill designates much of the funding to existing federal programs, such as the Highway Trust Fund, appropriations from the fund would mesh with those programs’ funding review process. *See, e.g.*, ROBERT S. KIRK & WILLIAM J. MALLETT, CONG. RESEARCH SERV., R45350, FUNDING AND FINANCING HIGHWAYS AND PUBLIC TRANSPORTATION 4 (2019); ROBERT S. KIRK & WILLIAM J. MALLETT, CONG. RESEARCH SERV., IF11125, REAUTHORIZING HIGHWAY AND TRANSIT FUNDING PROGRAMS 2 (2019).

¹⁵⁰ *Washington Initiative 1631, Carbon Emissions Fee Measure (2018)*, BALLOTPEdia, [https://ballotpedia.org/Washington_Initiative_1631_Carbon_Emissions_Fee_Measure_\(2018\)](https://ballotpedia.org/Washington_Initiative_1631_Carbon_Emissions_Fee_Measure_(2018)) (last visited Jan. 12, 2020).

“pollution fee” would have sent an estimated \$2.3 billion over five years¹⁵¹ into a new Clean Up Pollution Fund for climate and environmental programs.¹⁵² I-1631 placed the responsibility for awarding funds in the hands of a Public Oversight Board (Board), a new body in the office of the governor,¹⁵³ which would make final funding decisions for awarding revenue to specific programs and projects.¹⁵⁴ Despite the Board’s strong role in shaping the programmatic use of the revenue, the state legislature would ultimately control the actual flow of revenue out of the fund.¹⁵⁵

These examples illustrate how legislators who dedicate revenue from a carbon tax may choose to avoid annual appropriations to a full or partial extent.¹⁵⁶ As noted above, the annual discretionary appropriations process can generate uncertainty for program funding—whether for carbon dividends or programmatic spending. Even permanently appropriating revenue into a fund does not necessarily mean that appropriators in future years will choose to appropriate revenue back out of a fund. Uncertainty about distributions or the failure to distribute would undermine the concept underlying dedication of revenue to specific purposes.

The risk of money accumulating in a dedicated fund for lack of appropriation is not hypothetical. For example, the Federal Land and Water

¹⁵¹ WASH. STATE OFFICE OF FISCAL MGMT., FISCAL IMPACT STATEMENT: I-1631 REDUCING POLLUTION, at 1, https://ofm.wa.gov/sites/default/files/public/budget/ballot/2018/I-1631_Fiscal_Impact_Statement.pdf (last visited Jan. 19, 2020).

¹⁵² H.R. 1631, 66th Leg. § 3 (Wash. 2018).

¹⁵³ *Id.* § 10(1).

¹⁵⁴ *Id.* § 10(3)(c).

¹⁵⁵ *Id.* § 3(1). In addition, the Board must make budget recommendations to the governor as part of the biennial state budget process, and the legislature has ultimate control over the budget that the governor submits through the appropriations process. *Id.* § 10(3)(a); WASH. REV. CODE §§ 43.88.030, -.080 (Wash. 2016). While revenue from the pollution fee “must” be deposited in the fund, the revenue “may only be spent after appropriation into” the fund. H.R. 1631, § 3(1).

¹⁵⁶ Other permutations of course are possible. California struck a balance between permanent and discretionary appropriations for carbon-pricing revenue. California’s revenue from the auction of greenhouse gas emissions allowances in its cap-and-trade program flow into the Greenhouse Gas Reduction Fund, which has received \$9.5 billion, of which \$9.3 billion had been appropriated through 2018. CAL. CLIMATE INV., 2019 ANNUAL REPORT: CAP-AND-TRADE AUCTION PROCEEDS, at vi fig.ES-2 (2019). Sixty percent of the revenue flows out through continuous appropriations to purposes and forty percent through annual appropriations. CAL. CLIMATE INV., 2018 ANNUAL REPORT: CAP-AND-TRADE AUCTION PROCEEDS, at 6 (2018).

Conservation Fund¹⁵⁷ accumulated an unappropriated balance of \$21.6 billion from its creation in 1965 through fiscal year 2018.¹⁵⁸ The fund is a special fund that finances the acquisition of federal land, state land acquisition programs, and other conservation-related purposes.¹⁵⁹ The governing statute requires that the fund receive \$900 million each year,¹⁶⁰ the vast majority of which comes from oil and gas leases on the outer continental shelf.¹⁶¹ Hence, \$900 million flows into the fund each year without appropriation. However, the fund cannot disperse this money for the designated purposes unless Congress appropriates the funds.¹⁶² Under this discretionary appropriation approach, annual appropriations have varied significantly and less than half of the fund's total receipts have been spent.¹⁶³ Thus, the fact that revenue is committed to a set of purposes does not necessarily mean that it will be spent for those purposes.¹⁶⁴

E. Design Implications

First, dedicated funds play a significant role in executing the dedication of carbon tax revenue to specific spending programs, whether those programs

¹⁵⁷ See 54 U.S.C. § 200301(1) (2018).

¹⁵⁸ CONG. RESEARCH SERV., RL33531, LAND AND WATER CONSERVATION FUND: OVERVIEW, FUNDING HISTORY, AND ISSUES 2, 3 fig.1 (2018) [hereinafter LAND AND WATER CONSERVATION FUND].

¹⁵⁹ See *id.* at 4–8. For federal budget purposes, special funds are dedicated accounts within the general fund, but they are substantively the same as trust funds, which lie outside the general fund. OFFICE OF MGMT. & BUDGET, *supra* note 134, at 109, 227.

¹⁶⁰ 54 U.S.C. § 200302(c)(1). The \$900 billion annual allocation expired in 2018 but was made permanent in 2019. John D. Dingell, Jr. Conservation, Management, and Recreation Act, Pub. L. No. 116-9, § 3001(a), 133 Stat. 580, 754 (2019).

¹⁶¹ LAND AND WATER CONSERVATION FUND, *supra* note 158, at 2.

¹⁶² 54 U.S.C. § 200303 (“Amounts deposited in the Fund shall be available for expenditure for the purposes of this chapter only when appropriated for those purposes.”).

¹⁶³ LAND AND WATER CONSERVATION FUND, *supra* note 158, at 2, 12 tbl.2.

¹⁶⁴ The Land and Water Conservation Fund also illustrates how a legislature can instead require mandatory spending. Since 2006, the fund has received an additional stream of revenue from leases in a portion of the Gulf of Mexico. Gulf of Mexico Energy Security Act, Pub. L. No. 109-432, § 105, 120 Stat. 3000, 3004 (2006) (codified at 43 U.S.C. § 1331(a)(2)(B), (e) (2018)). It can spend this money—\$75 million through 2018—for state outdoor recreational programs without further appropriation. 43 U.S.C. § 1331(e)(1) (2018).

involve revenue recycling through dividends or programmatic spending. Insulating revenue in a dedicated fund protects it from government's other demands for money as long as the governing legislation remains in force. The funds are the lockboxes.

One should be prepared to justify using a dedicated fund or lockbox. The general concept of dedicating, or earmarking, revenue to specific spending programs is not without controversy. It can provoke questions, such as the relative policy merits of securing funding for important programs and hampering government's ability to reassess its priorities, the risk of perpetuating programs beyond their useful life or encouraging inefficient spending, and whether earmarking will improve popular support of a measure.¹⁶⁵ Although these questions lie outside the boundaries of this Article, they remain important.

Second, and relatedly, legislators will decide how much control over the use of the revenue they want to leave in the hands of future legislators, acting as appropriators. Permanent appropriations of revenue into the funds and out of the funds will maximize assurance that the revenue will be spent as initially promised. The legislators enacting the proposal will have delivered on their promise. However, mandating uses through permanent appropriations out of the funds will limit the legislative ability to evaluate programs and reevaluate priorities over the course of time. Corrective action would require a change in the governing law and, in effect, a renegotiation of the terms of the carbon tax.

Third, these considerations may apply in different ways to carbon dividends and dedicated programmatic spending. The concept of recycling carbon tax revenue as dividends relies on segregation of the funds to secure full recycling. Distributing the dividends back to the citizenry does not require discretionary judgments about how much revenue should go to whom as the years go by. The formula in the governing statute should control.

¹⁶⁵ See Claudia Dias Soares, *Earmarking Revenues from Environmentally Related Taxes*, in HANDBOOK OF RESEARCH ON ENVIRONMENTAL TAXATION, *supra* note 23, at 102 (discussing the debate over earmarking); Timothy Riordan, *Editorial Introduction to the Hypothecation Debate*, in ECOTAXATION 37, 37 (Timothy Riordan ed., 1997) (discussing the debate over earmarking); Andrea Baranzini & Stefano Carattini, *Effectiveness, Earmarking and Labeling: Testing the Acceptability of Carbon Taxes with Survey Data*, 19 ENVTL. ECON. POLICY STUDY 197, 197 (2017) (linking earmarking and public support).

Hence, both a trust fund and permanent appropriation fit quite neatly with the carbon-dividend concept—once the legislative body chooses the dividend option.

A trust fund with permanent appropriations for programmatic spending presents a more complicated picture. The potential magnitude of revenue from a substantial carbon tax can accentuate policy concerns about earmarking. One of the federal carbon tax bills would dedicate over \$80 billion a year primarily for infrastructure spending,¹⁶⁶ or almost \$1 trillion over ten years.¹⁶⁷ Policymakers will need to consider whether they can forecast appropriate uses. A trust fund with permanent appropriations will lock in legislative spending decisions, subject to a legislative amendment.

On the one hand, legislators may want to allow future legislators discretion to control the outflow of the revenue, or possibly even the inflow. They may want to identify specific types of uses in the governing legislation but leave details to the appropriations process. Alternatively, if they prefer complete future flexibility, they could choose not to create a dedicated fund and proceed on the general principle, not legally executed, that the revenue would support climate spending.

On the other hand, the magnitude of the climate problem may tilt in favor of building a strong lockbox to guard this substantial source of funding and its uses. A strong lockbox with clearly articulated purposes, permanent appropriations into the fund, and permanent or possibly discretionary appropriations out of the fund will execute the concept of dedicating the tax on greenhouse gases to programs that can help address climate problems. Allocating the revenue to existing programs may reduce concerns about inflexibility, as could limiting the timespan for permanent appropriations. In any event, the policy and political choices about discretionary and permanent appropriations will determine the legal details of legislation governing carbon tax revenue.

Fourth, legislators can define the role of specific agencies in managing dedicated funds. The federal carbon-dividend bills place responsibility for distributing revenue in the hands of Treasury; the Massachusetts bill chose

¹⁶⁶ America Wins Act, H.R. 4209, 115th Cong. § 2(b) (2017).

¹⁶⁷ Press Release, *supra* note 117 (stating that the bill provides “a dedicated revenue stream of \$1 trillion over 10 years” to invest in infrastructure).

the Department of Energy Resources. For dedicated programmatic spending, distributing revenue to already functioning agencies and programs builds on existing administrative systems, but I-1631 proposed creating a new executive body to help govern revenue decisions.

In sum, the dividend approach can quite successfully implement the principle of returning revenue to the people if the legislation establishes a dedicated fund and if the flow of revenue into and out of the fund bypasses the annual appropriations process. The lockbox is secure, as is full revenue recycling. If people's reliance on dividends politically perpetuates the system, the lockbox may remain sturdy over time.¹⁶⁸ The robustness of the dedicated spending approach will depend on the implementing statutory details. The fund holding the revenue will serve as the lockbox. Permanent appropriation for specific uses can ensure that revenue flows out of the lockbox to serve those purposes. But this strong lockbox may heighten concerns about whether future legislatures should hold some power over the keys, short of amending the governing legislation. Textbox 2 highlights some key design issues.

¹⁶⁸ See Klenert et al., *supra* note 99, at 673, 675 (suggesting that lump-sum distributions of carbon tax revenue to broad constituencies may create policy stability and resilience). The dividends distributed to citizens from the Alaska Permanent Fund, which served as a model for the carbon dividend concept, see *supra* note 94, have created a constituency that has defended the fund and its dividend program. See Michael W. Howard & Karl Widerquist, *Why Link Basic Income to Resource Taxation?*, in ALASKA'S PERMANENT FUND DIVIDEND: EXAMINING ITS SUSTAINABILITY AS A MODEL 221, 224–25 (Karl Widerquist & Michael W. Howard eds., 2012) (concluding from the Alaskan experience that the dividends' popularity and universal constituency protect the program).

Textbox 2

**Are Carbon Dividends and Dedicated Programmatic Funding Secure:
Key Issues**

- Does legislation establish a dedicated fund for the revenue?
 - Is the concept of a dedicated fund recognized in any given jurisdiction?
- How does revenue flow into the fund?
 - Permanent appropriation?
 - Discretionary appropriation?
 - Any limits on duration?
- How does revenue flow out of the fund?
 - Permanent appropriation?
 - Discretionary appropriation?
 - Some combination?
- Does the governing legislation provide specific directions about spending purposes?
 - Are they sufficient to guide permanent appropriation?
 - Do they sufficiently guide discretionary appropriation?
- To what extent do executive branch agencies participate in or inform spending out of a fund?
 - Does the fund serve as a conduit or does distribution require substantive judgments?
 - How are executive branch agencies integrated into the process?

As Parts II and III illustrate, each of these revenue options uses carbon tax revenue for a specific purpose, albeit a very different purpose under each option. Each option raises its own legal design issues, with carbon dividends and dedicated spending sharing attention to dedicated funds and appropriation powers. Choices about the details will affect the way the lockbox functions and how it is described. Part IV now turns to the influence of budget rules, using federal rules for budget discipline as an example. Generally applicable budget rules add an environmentally neutral overlay on choices affecting the use of carbon tax revenue.

IV. THE ROLE OF BUDGET DISCIPLINE RULES

Carbon taxes are born and live within the world of governmental budget procedures. That surrounding environment can shape the design, perceptions, and operation of carbon taxes that use the revenue options described above.

This Part considers in particular the implications of three aspects of the federal budget process: Congress's methodology for estimating the fiscal effect of tax measures at time of enactment; the pay-as-you-go (PAYGO) rules designed to create fiscal discipline for new federal legislation that will affect the federal budget; and the Budget Control Act,¹⁶⁹ which also encourages fiscal discipline.

Although seemingly arcane, these budget processes are important. Estimates of the revenue effect will allow policymakers and others to determine whether carbon tax proposals with specific revenue uses are likely to achieve their conceptual goals and whether to adjust proposals. For budget purposes, one dollar of tax revenue may not equal one dollar. The PAYGO rules in the House of Representatives and the Senate may influence strategies for enactment. The statutory PAYGO rule governing Congress and the Budget Control Act potentially can affect the ability to fully implement revenue spending. These considerations may shape design choices. Other jurisdictions no doubt will have different rules, but this discussion serves as one example of how budget procedures can interject data and influences as legislators build carbon tax lockboxes.

This Article does not attempt to comprehensively investigate the impact of congressional budget rules on the design and enactment of carbon taxes. That task would warrant a lengthy article unto itself. The goal here is to identify some issues that can arise at the complex intersection where generic budget rules, which are facially neutral to nonfiscal policy agendas, meet carbon taxes, which are driven by the policy goal of reducing greenhouse gas emissions.¹⁷⁰ A discussion of selected issues can highlight the importance of considering the influence of budget rules and perhaps spur interest in exploring this terrain more extensively. It comes with the caveat that the analysis below focuses on the public face of the budget rules as codified in law or official pronouncements.¹⁷¹ In actual operation, those rules carry a patina of institutional practice, politics, and the choices of individual players

¹⁶⁹ See generally GRANT A. DRIESSEN & MARC LABONTE, CONG. RESEARCH SERV., R42506, THE BUDGET CONTROL ACT OF 2011 AS AMENDED: BUDGETARY EFFECTS (2015); BILL HENIFF, JR. ET AL., CONG. RESEARCH SERV., R41965, THE BUDGET CONTROL ACT OF 2011, at 17 (2011).

¹⁷⁰ For a valuable analysis of how budget rules can affect policy decisions, sometimes in unanticipated ways, see Philip G. Joyce, *Congressional Budget Reform: The Unanticipated Implications for Federal Policy Making*, 56 PUB. ADMIN. REV. 317 (1996).

¹⁷¹ Even so, this Article cannot address all aspects of the legal regime governing budget procedures.

that can influence the rules' application as legislation moves through the halls of Congress. That patina is important but lies beyond the scope of this Article.

A. The Implications of Federal Calculations of Fiscal Impact

The three revenue options discussed above all share the notion that all or some of the new carbon tax revenue will be used for the designated purposes—tax relief, dividends, or programmatic spending. Dedicated revenue will not contribute to other government programs or needs. Viewed together, the carbon tax and the revenue use in effect seem to create a self-contained, self-financing fiscal unit. Revenue that comes in from the tax will go back out for the identified purposes. But do specific carbon tax proposals drafted in statutory language achieve this net-zero goal? Estimates of fiscal impact prior to or at the time of enactment will inform the answer. The results of those estimates will depend in part on the methodology that revenue estimators use. As explained below, one cannot assume that one dollar of carbon tax payment in cash to the federal treasury will equal one dollar for federal *budgetary purposes*. The calculation is more complex. This complexity can matter for the various revenue choices.

1. The Federal Revenue-Estimation Methodology

As a general matter, the Joint Committee on Taxation (JCT) in Congress, a nonpartisan body, is responsible for estimating the revenue impact of tax legislation, estimates on which the Congressional Budget Office can rely.¹⁷² A legislator who introduces a tax bill can ask the JCT to provide revenue estimates.¹⁷³ Budget discipline rules also require revenue estimates.¹⁷⁴ Revenue estimates project the annual and cumulative revenue impact over a ten-year budget window relative to a baseline of revenue under present law.¹⁷⁵

¹⁷² 2 U.S.C. § 601(f) (2018).

¹⁷³ STAFF OF JOINT COMM. ON TAXATION, 116TH CONG., THE JOINT COMMITTEE ON TAXATION REVENUE ESTIMATING PROCESS 5 (Comm. Print 2019).

¹⁷⁴ *E.g.*, ROBERT KEITH, CONG. RESEARCH SERV., R41157, THE STATUTORY PAY-AS-YOU-GO ACT OF 2010: SUMMARY AND LEGISLATIVE HISTORY 13 (2010).

¹⁷⁵ STAFF OF JOINT COMM. ON TAXATION, *supra* note 173, at 6.

The methodology used to score the fiscal impact of tax changes can significantly affect the result. JCT does not simply look, for example, at how much revenue the carbon tax, standing alone, will generate. The calculations are more intricate. Under current procedures, JCT calculates the revenue impact of the changes relative to present law, taking into account behavioral responses to the tax from a microeconomic perspective.¹⁷⁶ Its estimate of revenue from a proposed carbon tax would consider how much revenue the tax would generate from levels of emissions and how much the carbon tax would reduce greenhouse gas emissions and, therefore, tax revenue from the carbon tax. It would also evaluate the impacts of the tax on other activities that generate federal tax revenue and, therefore, the impact of those tax revenue streams, but it would not take macroeconomic effects into account under current procedures.¹⁷⁷ Drawing on an example of scoring that JCT has provided for excise taxes, an increase in the federal excise tax on cigarettes will reduce consumption levels, which will reduce the tax base.¹⁷⁸ In addition, smokers who pay the increased tax may reduce other forms of consumption in order to afford to continue to purchase cigarettes, which in turn can affect other streams of tax revenue.¹⁷⁹

Thus, JCT considers impacts on other taxes when it scores the changes in revenue.¹⁸⁰ JCT estimates that changes in excise tax rates in 2019 would result in a 21.9% offset in income and payroll taxes.¹⁸¹ One dollar in excise tax revenue, such as carbon tax revenue, would count for budget purposes as 78.1 cents after taking into account reduced income and payroll tax revenue. The discounted amount captures the net budgetary effect of the tax on federal tax receipts, not the gross receipts from the tax.

¹⁷⁶ *Id.* at 6, 13.

¹⁷⁷ *Id.* at 13–16. The House of Representatives’ rules adopted in 2019 do not call for the specific dynamic and macroeconomic requirements that were in effect from 2015–2018. *Id.* at 23; JAMES V. SATURNO & MEGAN S. LYNCH, CONG. RESEARCH SERV., R45552, CHANGES TO HOUSE RULES AFFECTING CONGRESSIONAL BUDGET PROCESS INCLUDED IN H. RES. 6 (116TH CONGRESS), at 1 (2019).

¹⁷⁸ See STAFF OF JOINT COMM. ON TAXATION, 110TH CONG., MODELING THE FEDERAL REVENUE EFFECTS OF PROPOSED CHANGES IN CIGARETTE EXCISE TAXES 6 (Comm. Print 2007).

¹⁷⁹ *Id.* at 7.

¹⁸⁰ See STAFF OF JOINT COMM. ON TAXATION, *supra* note 173, at 19.

¹⁸¹ JOINT COMM. ON TAXATION, 116TH CONG., NEW INCOME AND PAYROLL TAX OFFSETS TO CHANGES IN EXCISE TAX REVENUES FOR 2019–2029, at 1 tbl.1 (Comm. Print 2019).

2. The Impact of Methodology on Carbon-Revenue Options

JCT's revenue-estimation methodology has different and potentially significant implications for carbon taxes that finance the three revenue options. Results may vary with the details of the options.

a. Revenue-Neutral Tax Shift

For a carbon tax shift proposal that aspires to be revenue neutral, JCT would determine the amount of revenue a carbon tax will produce and the amount of revenue that the tax relief will forgo. A key issue for estimating a revenue-neutral tax shift, however, is whether the income and payroll tax offset described above would apply. JCT has indicated that the offset may not apply to "broad-ranging tax reform proposals that replace income taxes with consumption taxes."¹⁸² Thus, JCT would need to decide whether any particular proposal for a revenue-neutral carbon tax shift would sidestep the offset assumption. This decision would have a significant impact on the revenue-neutrality calculation. For example, if a carbon tax would generate \$1 trillion over ten years in gross carbon tax payments for the Treasury, JCT's current approach to scoring may reduce that number to account for the carbon tax's impacts on other tax receipts—such as the 21.9% assumption used in 2019 for excise tax changes. If the offset applies, JCT would find that the carbon tax would generate \$781 billion, not \$1 trillion. To be revenue neutral, any associated tax relief should cost, for budget purposes, \$781 billion. If the offset does not apply, the revenue would be \$1 trillion, which in theory would allow tax relief scored for budget purposes at \$1 trillion.

This fiscal analysis is important for several reasons. At a fundamental level, the results will allow legislators to determine whether they in fact have designed a tax shift that is sufficiently revenue neutral and, if not, whether they should revise the proposal. At a detailed level, they may want to consider whether to design the tax shift so that the offset will or will not apply. At a rhetorical level, legislators might keep in the back of their minds the possibility that one dollar of tax paid may not necessarily mean one dollar of tax relief. Under JCT's current scoring methodology, cash flow dollars may be different from budgetary dollars. Although this distinction may not even

¹⁸² STAFF OF JOINT COMM. ON TAXATION, 112TH CONG., THE INCOME AND PAYROLL TAX OFFSET TO CHANGES IN EXCISE TAX REVENUES 3 (Comm. Print 2011).

surface publicly, policymakers should be aware of it as they conceptualize and characterize tax shifts.

In addition, revenue estimates of the projected fiscal impact set the timeframe for evaluating revenue neutrality. JCT's *ex ante* revenue estimates provide revenue estimates for a ten-year budget window and provide annual numbers within that window.¹⁸³ As a practical matter, achieving precise year-by-year revenue neutrality may be challenging for a carbon tax, as discussed above in the context of the Washington carbon tax shift, I-732.¹⁸⁴ With revenue estimates in mind, legislators can consider whether they present revenue neutrality as an annual goal or as a cumulative target for a longer budget period—and how to design their proposals to meet the chosen goal.

Budget methodology is also relevant to *ex post* accountability for the actual fiscal impacts of a carbon tax. The federal government annually reports on actual revenue receipts by type of tax.¹⁸⁵ However, it does not typically report *ex post* the revenue foregone as a result of specific tax changes that reduce tax burdens. Thus, current practices would not allow legislators or others to determine *ex post* whether a carbon tax combined with tax relief measures actually achieved revenue neutrality or something close. In addition, data about revenue received would reflect the actual payments that flowed into Treasury, not adjusted by the scoring factors used for the prospective revenue estimates described above. Hence, a comparison of the

¹⁸³ Congressional concurrent budget resolutions cover at least five years. 2 U.S.C. § 632(a) (2018), and often ten years. H. COMM. ON THE BUDGET, 114TH CONG., A COMPENDIUM OF LAWS AND RULES OF THE CONGRESSIONAL BUDGET PROCESS 56 n.30 (Comm. Print 2015). The White House's proposed budget for a fiscal year projects budgets for the next nine years, creating a ten-year budget picture. *See, e.g.*, OFFICE OF MGMT. & BUDGET, *supra* note 134, at 101. JCT revenue estimates currently project revenue impacts for ten years. STAFF OF JOINT COMM. ON TAXATION, *supra* note 173, at 6. Statutory "pay-as-you-go" rules (PAYGO) call for budgetary assessments of certain types of legislation, including revenue measures, on a first-year, five-year, and ten-year basis. KEITH, *supra* note 174, at 13–14.

¹⁸⁴ *See supra* Section II.B.

¹⁸⁵ *See, e.g.*, STAFF OF JOINT COMM. ON TAXATION, JCX-3-18, OVERVIEW OF THE FEDERAL TAX SYSTEM AS IN EFFECT FOR 2018, at 25, tbl.A-1 (Comm. Print 2018); *SOI Tax Stats—IRS Data Book*, INTERNAL REVENUE SERVICE, <https://www.irs.gov/statistics/soi-tax-stats-irs-data-book> (last visited Jan. 18, 2020); OFFICE OF MGMT. & BUDGET, *supra* note 134, at 154 tbl.14-4.

actual revenue stream with the projected revenue stream could be misleading.¹⁸⁶

Carbon tax legislation could require *ex post* reporting, as Washington's I-1631 did.¹⁸⁷ Companion federal bills in the House and Senate introduced by Congressman Earl Blumenauer, a Democrat from Oregon, and Senator Sheldon Whitehouse, a Democrat from Rhode Island, proposed a carbon tax and tax relief¹⁸⁸ and called for *ex post* accountability. The bills would require the Treasury Department to create a website to regularly disclose the amount of the revenue from the carbon fee and the amount of benefits from the reductions in the corporate tax rate, tax credit, and payments the bills provided.¹⁸⁹ They did not explicitly address the scoring nuances but suggested an important step toward *ex post* accountability.

Finally, budget scoring methodology will affect the measurement of adjustments to a tax shift after initial enactment. JCT will estimate the fiscal impact of proposed changes in the tax code against the baseline of revenue under existing law, which would then include the tax shift. For example, if data indicate that after three years the carbon tax revenue exceeded expectations by \$100 billion each year, legislators seeking to achieve revenue neutrality over the long term might want to enact additional tax reductions going forward. Applying the existing-law baseline, JCT would evaluate only the fiscal impact of the proposed reductions and would not consider the revenue that the existing carbon tax will generate, even if that revenue would compensate for the proposed reductions.¹⁹⁰ An adjustment that might de facto make a carbon tax revenue neutral over the long term may appear de jure revenue negative when the adjustment is proposed. This result does not necessarily stand in the way of an adjustment, but it could complicate the

¹⁸⁶ Applying the offset for reductions in payroll and income taxes to actual revenue could put the *ex post* figures about tax revenue on closer footing with the *ex ante* revenue estimate, but nonetheless the offset provides only an estimate.

¹⁸⁷ See *supra* Section III.D.

¹⁸⁸ American Opportunity Carbon Fee Act of 2017, H.R. 3420, 115th Cong. (2017); American Opportunity Carbon Fee Act of 2017, S. 1639, 115th Cong. (2017).

¹⁸⁹ H.R. 3420, § 301; S. 1639, § 301.

¹⁹⁰ Conversely, if the original tax relief has caused more revenue loss than the carbon tax generated in revenue, reducing the tax relief would generate a savings that legislators could use for other purposes.

public message. Recalibrating the flow of revenue to achieve a revenue-neutral policy goal will require an explanation that revenue neutrality should be judged over time.

b. Carbon Dividends

For a carbon-dividend proposal, JCT's scoring would determine the revenue the carbon tax will produce, which customarily would apply an offset to the carbon tax revenue. However, under the federal bills described above,¹⁹¹ taxpayers would include the dividends in their gross income.¹⁹² According to JCT, when carbon tax revenue is distributed back to individuals as taxable income, such as through a dividend, the increase in taxable income may cancel the need for the income and payroll tax offset.¹⁹³ If the dividends instead are exempt from income tax, the amount of revenue attributable to a carbon tax for budget purposes presumably would fall by the amount of the offset.

This income tax twist matters for federal budget purposes. If the income and payroll tax offset applies, the trust fund holding the carbon tax revenue for distribution as dividends could be revenue negative from a budget perspective. The discounted carbon tax revenue would be less than the cash payments of dividends (calculated on a dollar-for-dollar cash basis). As a result, for federal budget purposes, some percentage of the real cost of dividends would fall on the general population of taxpayers, not the polluters who pay the carbon tax. A similar result occurs with increases in excise taxes that finance the Federal Highway Trust Fund.¹⁹⁴ Taxing the carbon dividends maintains budget equality between the flow of revenue into the fund and the flow of dividends out.

¹⁹¹ See *supra* Section III.A.

¹⁹² Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong. § 4 (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong. § 4 (2018); see MARRON & MAAG, *supra* note 20, at 8, 12 (discussing the income tax treatment of dividends or rebates from legal and policy perspectives).

¹⁹³ JOINT COMM. ON TAXATION, *supra* note 182, at 3; CONG. BUDGET OFFICE, THE ROLE OF THE 25 PERCENT REVENUE OFFSET IN ESTIMATING BUDGETARY EFFECTS OF LEGISLATION 7–8 (2009).

¹⁹⁴ CONG. BUDGET OFFICE, ANATOMY OF A COST ESTIMATE FOR LEGISLATION FUNDING TRANSPORTATION PROGRAMS 30 (2014).

From the taxpayers' perspective, the difference also will matter. Recipients of dividends will receive the cash value, but if dividends are taxable income, the posttax value of the dividends may be lower than the cash value. This result could come as a surprise to the unwary. Legislators may also consider the political ramifications.

Legislators designing carbon tax proposals that distribute the revenue as dividends or rebates can design a secure lockbox that returns the carbon tax revenue to the citizenry. The lock on the use of the revenue is firm. But depending on the tax treatment of the dividends, either the lockbox will not be revenue neutral for budget purposes (if the dividends are not taxed) or the citizenry may receive less value than they might think (if the dividends are taxed). Legislators will need to choose their path and perhaps nuance their descriptions.

c. Dedicated Programmatic Spending

On a cash-flow basis, a trust fund that holds carbon tax revenue for programmatic spending purposes will appear to be annually self-sustaining if the fund is authorized to spend all the revenue it takes in. However, as described above, scoring of carbon tax revenue that takes into account behavioral responses will apply an income and payroll tax offset when estimating how much revenue a tax will generate.¹⁹⁵ The JCT will not consider the tax impact of these spending programs, so the offset presumably will apply. Consequently, a trust fund may appear to be self-financing, but in the budget world, a fund may be deemed to be revenue-negative for budget purposes when enacted.¹⁹⁶ Similar to the scenario above where carbon tax dividends are not taxed, the carbon tax revenue for budget purposes will be lower than the programmatic cash flow out of the trust. Again, legislators could bear this result in mind.

Stepping back from the details, this venture into budgetary procedures illustrates how revenue estimating can help legislators determine the real fiscal consequences of their proposals and whether those fiscal consequences

¹⁹⁵ For example, the White House's proposed budget for fiscal year 2020 calls for reinstating the excise tax that finances the Oil Spill Liability Trust Fund. OFFICE OF MGMT. & BUDGET, *supra* note 134, at 150. Its estimates of the projected revenue from the reinstated tax apply income offsets. *Id.* at 152 tbl.14-3 n.1.

¹⁹⁶ This assumes the simple example of permanent appropriations into and out of the trust.

match their goals. Revenue estimates in effect stress-test the proposals. But in doing so, the methodology may produce results that are not always intuitive and can potentially complicate simple political messages.

The scenarios discussed above present the possibility that, for budget purposes, the carbon tax proposals might not pay for themselves. For budget purposes, a tax shift might be revenue-negative and a carbon tax might not fully pay for dividends or spending programs. The discussion below considers the budget consequences of enacting a carbon tax proposal that does not fully pay for itself for budget purposes.

B. The Implications of the House and Senate PAYGO Rules

Both the House of Representatives and the Senate currently have pay-as-you-go (PAYGO) rules that govern the conduct of their chambers. The PAYGO rules are designed to encourage fiscal discipline by focusing attention on measures that will lose revenue. They create procedural hurdles that may quietly discourage revenue-negative measures, but they do not guarantee that a carbon tax proposal will pay for itself. They inform, but they do not guarantee, enforcement.

The House and Senate PAYGO rules heighten fiscal scrutiny at the time of a vote, backed up by the ability of a representative or senator to raise a point of order¹⁹⁷ against a proposed measure. They apply to nonemergency “revenue” legislation (which includes tax legislation) and “direct spending” (which covers entitlements and permanent appropriations but not discretionary appropriations).¹⁹⁸ The House rule considers whether any bill,

¹⁹⁷ A point of order is defined as “[a] claim made by a senator [or representative] from the floor that a rule of the Senate [or House] is being violated.” *Glossary Term: Point of Order*, U.S. SENATE, https://www.senate.gov/reference/glossary_term/point_of_order.htm (last visited Jan. 12, 2020).

¹⁹⁸ See H.R. R. XXI, cl. 10; H.R. Con. Res. 71, 115th Cong. § 4106 (2018). See generally HENIFF ET AL., *supra* note 169 (explaining Senate PAYGO rule and its application). Although adopted in a budget resolution for a specific year, the Senate rule does not contain an expiration date. Note that the House PAYGO rule in recent years applied only to direct spending measures, not to revenue measures. As a result, it constrained increased spending but did not limit tax measures that lost revenue. It has been dubbed CUTGO. The House reinstated a PAYGO approach that covered both direct spending and revenue measures when the Democrats assumed control of the House in January 2019. SATURNO & LYNCH, *supra* note 177, at 2–3. Some who favored the Green New Deal opposed this change. See Lindsey McPherson, *House Adopts Rules Package with Few Democratic Defections over PAYGO Provision*, ROLL CALL

amendment, joint resolution, or conference report, standing alone, would increase the deficit or reduce the surplus over five- and ten-year budget windows.¹⁹⁹ The Senate rule also considers each piece of legislation standing alone, but it applies a slightly more lenient approach. Unlike the House rule, the deficit calculation can take into account the net fiscal impact of all revenue or direct-spending legislation enacted earlier in that calendar year—in effect, keeping a running fiscal tally.²⁰⁰ Enforcement of the House and Senate rules occurs only if a representative or senator raises a point of order against the measure in their chamber.²⁰¹ Even then, a point of order is not fatal. It will trigger additional procedural actions by the House²⁰² or Senate²⁰³ that can raise the bar for enactment. Thus, the strength of the House and Senate rules depends on the willingness to raise points of order and the will to overcome them.

For all of the carbon tax options described above, a carbon tax would be a revenue measure as defined by PAYGO rules. On the revenue-use side of the carbon tax equation, tax-relief measures that are part of a revenue-neutral tax shift would also be subject to the PAYGO rules as revenue measures. Revenue dedicated to paying dividends from a trust fund would be subject to PAYGO rules if the trust fund operates through permanent appropriations, as

(Jan. 3, 2019, 7:41 PM), <https://www.rollcall.com/news/politics/house-adopts-rules-package-democratic-defections-paygo-provision> (Rep. Alexandria Ocasio-Cortez votes against rule change).

¹⁹⁹ H.R. R. XXI, cl. 10(a)(1), (b).

²⁰⁰ H.R. Con. Res. 71, § 4106(a)(6). In addition, it only imposes consequences on measures that would increase or cause an on-budget deficit (as opposed to reduce a surplus). *Id.* § 4106(a)(1).

²⁰¹ H.R. R. XXI, cl. 10(a)(1); H.R. Con. Res. 71, § 4106(a)(1). *See generally* VALERIE HEITSHUSEN, CONG. RESEARCH SERV., 98-307, POINTS OF ORDER, RULINGS, AND APPEALS IN THE HOUSE OF REPRESENTATIVES (2018).

²⁰² RICHARD KOGAN, CTR. ON BUDGET AND POL’Y PRIORITIES, THE NEW PAY-AS-YOU-GO RULE IN THE HOUSE OF REPRESENTATIVES 3 (2007); *see* HEITSHUSEN, *supra* note 201, at 1. A point of order raised by a representative must “specify precise language” on which the point of order is premised. The chair then puts the point of order up for consideration. Each member raising the point of order and an opponent to the point of order each have ten minutes to debate. 2 U.S.C. § 658e(b) (2018).

²⁰³ When a senator raises a point of order, the presiding officer may sustain the point of order. Before the presiding officer rules, any senator can waive the point of order. A motion to waive requires an affirmative vote of three-fifths of the duly sworn senators to waive the point of order. After the presiding officer has ruled, any senator can appeal the ruling. H.R. Con. Res. 71, § 4106(b)(1); 2 U.S.C. § 644(e).

would spending from a dedicated programmatic spending fund operating through permanent appropriations.²⁰⁴

The House and Senate PAYGO rules may affect carbon tax proposals in several ways. First, they heighten the *ex ante* transparency of the fiscal impact of carbon tax proposals. They test whether the proposals in fact execute suggestions that they will pay for themselves. They also will focus attention on the magnitude of carbon tax revenue.

Second, the threat of a point of order may subtly encourage revenue-neutral and revenue-positive measures. But this observation comes with an important caveat. If the carbon tax and the associated revenue use are part of a larger tax or budget bill, the PAYGO rules will consider only the net fiscal impact of the entire bill. Tax legislation often has moved as part of an omnibus bill containing many features. Revenue estimates will itemize the fiscal impact of each component, but only the cumulative net result is relevant for PAYGO purposes. Consequently, strategically nesting a carbon tax proposal within a larger bill can provide the carbon tax proposal with a margin of PAYGO error; other measures may compensate for any shortfall. Conversely, including a carbon tax with other revenue-negative measures could enhance PAYGO exposure—or tempt legislators to decouple the carbon tax from its revenue so that they can use the revenue to pay for other purposes.

Third, PAYGO rules could encourage designation of a carbon tax as an “emergency” measure exempt from the House PAYGO rule. Under its current PAYGO rule, the House can approve an “emergency” designation for a legislative measure by majority vote.²⁰⁵ The House rules do not define an emergency. Therefore, if carbon tax proponents are concerned about the potential dampening effect of PAYGO rules on a carbon tax proposal or omnibus bill within which it sits, they might choose to include an emergency designation in legislative language to avoid PAYGO consequences in the House. An emergency exemption in the Senate may be challenging. A measure that qualifies as an “emergency requirement” needs to address a

²⁰⁴ See *infra* tbl.1.

²⁰⁵ H.R. R. XXI, cl. 10(c).

situation that is sudden and unforeseen, among other factors.²⁰⁶ On the one hand, one could submit that climate change is foreseeable and gradual albeit with potentially devastating consequences. On the other hand, a carbon tax designed to generate revenue to address climate change's sudden consequences arguably could qualify as an emergency requirement if the consequences are not anticipated, such as the unpredictable pattern of severe weather events. Ironically, legislators who are skeptical of climate change might be in a stronger position to argue for an emergency designation. Under the Senate rules, a senator can raise a point of order against a designation as an "emergency requirement,"²⁰⁷ which will require sixty votes to waive.²⁰⁸ Although designation as an emergency could provide procedural protection against a PAYGO point of order, it would also soften the quiet pressures against legislation that does not pay for itself.

In short, the PAYGO rules build JCT estimates into the legislative process for tax and direct spending (permanent appropriation) measures.²⁰⁹ They enhance *ex ante* transparency of fiscal impacts, allowing legislators and stakeholders to more fully understand proposals and to consider adjustments. The rules, however, would not demand that the revenue going into the lockbox equal that coming out or forgone. In fact, some budget estimates may make the lockbox appear as though it will operate at a deficit. In addition, a carbon tax proposal could be sheltered by others or move as part of an emergency measure.

²⁰⁶ The Senate's definition of an emergency includes requirements that the situation being addressed is "sudden, quickly coming into being, and not building up over time" and "unforeseen, unpredictable, and unanticipated." H.R. Con. Res. 71, § 4112(f)(1). An emergency is not unforeseen if it "is part of an aggregate level of anticipated emergencies, particularly when normally estimated in advance." *Id.* § 4112(f)(2).

²⁰⁷ *Id.* § 4112(e)(1).

²⁰⁸ *Id.* § 4112(e)(2)(A); HENIFF ET AL., *supra* note 169, at 4. *See generally* S. COMM. ON THE BUDGET, 114TH CONG., EMERGENCY DESIGNATIONS: VARIATIONS AND USES 4 (2016).

²⁰⁹ Note that the PAYGO rules for a carbon tax that finances discretionary spending would only apply to the tax component of the proposal. This result could generate strategic PAYGO considerations not explored here.

C. The Implications of Budget Sequestration Rules

The PAYGO rules described above potentially create procedural hurdles for tax and direct spending measures that do not pay for themselves. The federal budget process contains two budget discipline mechanisms that could affect the flow of revenue out of dedicated funds and interrupt operation of the lockbox—a statutory PAYGO rule²¹⁰ and the Budget Control Act.²¹¹ They enforce budget discipline through sequestration, which can cut back on spending.²¹² Hence, these statutes are relevant to carbon taxes that fund dividends and programmatic spending.

The statutory Pay-As-You-Go Act of 2010 focuses on the net fiscal effect of new legislation enacted in any given year and uses spending cuts to achieve budget neutrality.²¹³ Like the House and Senate PAYGO rules, it applies to nonemergency “revenue” legislation (which includes tax legislation) and “direct spending” (which covers entitlements and permanent appropriations but not discretionary appropriations).²¹⁴ After the end of each congressional session, the Office of Management and Budget (OMB) must determine the net fiscal impact of all new revenue and direct spending legislation.²¹⁵ If the legislation will yield a debit over a five- or ten-year

²¹⁰ 2 U.S.C. § 934(b) (2018).

²¹¹ *Id.* § 901(a)(1); see Budget Control Act of 2011, Pub. L. No. 112-25, 125 Stat. 240 (building on earlier budget law, most notably the Balanced Budget and Emergency Deficit Control Act of 1985, Pub. L. No. 99-177, 99 Stat. 1037). Their budget framework has been amended since 2011, including in 2019. See H.R. 3877, 116th Cong. § 101 (2019) (revising budget caps). For simplicity, this Article refers to this budget regime as the Budget Control Act. See generally CONG. RESEARCH SERV., R44874, THE BUDGET CONTROL ACT: FREQUENTLY ASKED QUESTIONS (2018); DRIESSEN & LABONTE, *supra* note 169; HENIFF ET AL., *supra* note 169.

²¹² 2 U.S.C. §§ 901(a)(1), 934(b); see U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-19-36, GOVERNMENT-WIDE INVENTORY OF ACCOUNTS WITH SPENDING AUTHORITY AND PERMANENT APPROPRIATIONS, FISCAL YEARS 1995 TO 2015, at 10–11 (2018) (discussing application of sequestration to permanent and discretionary appropriations).

²¹³ See generally KEITH, *supra* note 174.

²¹⁴ 2 U.S.C. §§ 931, 933(g). Direct spending is defined as “budget authority provided by law other than appropriations Acts,” “entitlement authority,” and spending under a nutrition assistance program. *Id.* § 900(c)(8).

²¹⁵ 2 U.S.C. § 933(d)(1); see, e.g., 2018 Statutory Pay-As-You-Go Act Annual Report, 84 Fed. Reg. 7,134 (Mar. 1, 2019) (providing PAYGO report for second session of 115th Congress).

budget period,²¹⁶ the President will issue a sequestration order that will reduce direct spending (not discretionary appropriations) to offset the debit.²¹⁷

The Budget Control Act adds a parallel form of statutory fiscal discipline for discretionary spending, which is not covered by the PAYGO rules. It controls discretionary spending by imposing caps on defense and nondefense discretionary spending.²¹⁸ If OMB determines that discretionary spending for a fiscal year exceeds the caps, nonexempt spending is subject to sequestration.²¹⁹ A sequester will reduce covered programs' spending by a uniform percentage that will bring spending down to the level of the cap.²²⁰

Thus, spending of carbon tax revenue that is authorized by permanent appropriation would be covered by the statutory PAYGO rule. Spending of carbon tax revenue authorized by discretionary appropriations would be covered by the Budget Control Act. This coverage carries potential consequences for the operation of the dedicated funds for carbon dividends and programmatic funding. If nonexempt legislation produces a PAYGO debit or exceeds budget caps, a sequestration order can limit, respectively, expenditures of permanent appropriations or discretionary appropriations.

Sequestration can apply to trust funds.²²¹ For example, funds in the Highway Trust Fund have been sequestered.²²² Consequently, a carbon tax paired with a dedicated fund that appears to robustly protect the flow of revenue out of the fund remains vulnerable to sequestration. These budget rules potentially can partially close the lockbox's outgoing door—even

²¹⁶ 2 U.S.C. § 933(d)(4)–(5). Debit is “the net total amount, when positive, by which the costs recorded on the PAYGO scorecards for a fiscal year exceed savings recorded on those scorecards for that fiscal year.” *Id.* § 932(5).

²¹⁷ *Id.* § 934(b).

²¹⁸ *Id.* § 901(b)–(c) (2018 & Supp. 2019).

²¹⁹ *Id.* § 901(a)(1).

²²⁰ *Id.* § 901(a)(2); OFFICE OF MGMT. & BUDGET, *supra* note 134, at 112–13.

²²¹ Sequestration applies to budgetary resources permanently, except for budgetary resources in trust funds, revolving funds, and special funds. Resources in trust funds, revolving funds, and special funds can be sequestered in the first fiscal year, but funds can be available in subsequent years. 2 U.S.C. § 906(k)(1), (6).

²²² *Sequestration of Highway Trust Funds for Fiscal Year (FY) 2018*, U.S. DEP'T TRANSP. (Oct. 2, 2017), <https://www.fhwa.dot.gov/legisregs/directives/notices/n4510817.cfm>.

though carbon tax revenue continues to flow into the fund and even though the carbon tax fund may not have contributed to the need for sequestration. The fund would hold revenue that it could not spend.

Table 1 summarizes how the budget rules apply to the three alternatives for the use of carbon tax revenue.

Table 1. Summary of Budget Rules' Application to Carbon Tax Proposals

Federal Budget Rule	Revenue-Neutral Tax Shift	Tax and Dividend or Rebate	Tax with Dedicated Spending	Enforcement Consequence	Implications for Carbon Tax Revenue
Covered by House PAYGO Rule	Yes (nonemergency)	Yes for tax, Yes for dividends if mandatory appropriation	Yes for tax, Yes for spending if mandatory appropriation	Point of order	Possible pressure to avoid revenue negative results; possible incentive to nest carbon tax within larger bill
Covered by Senate PAYGO Rule?	Yes (nonemergency)	Same as above	Same as above	Point of order	Same as above
Covered by Statutory PAYGO Rule?	Yes (nonemergency)	Same as above	Same as above	Sequestration of direct spending based on net impact of year's legislation; no consequence for tax.	Possible pressure to avoid revenue-negative results; risk of sequestration for mandatory appropriations
Covered by Budget Control Act?	No	Yes for dividends if discretionary appropriation	Yes for spending if discretionary appropriation	Sequestration of discretionary appropriations in dedicated funds	Possible incentive to use permanent appropriations (still subject to PAYGO risks)

It is important to note, however, that even if statutory PAYGO debits occur or discretionary spending exceeds caps, Congress can alleviate application of sequestration. PAYGO sequestration has not actually been

applied.²²³ OMB's PAYGO scorecards have reported net savings in five- and ten-year projections, and Congress by statute has adjusted the balances to avoid sequestration, as happened in 2019.²²⁴ Under the Budget Control Act, Congress, with the consent of the President, can declare an emergency to adjust caps on discretionary spending,²²⁵ or by statute it can amend the caps, as also happened in 2019.²²⁶ Nevertheless, barring these actions, dedicated spending can be at risk of sequestration.

The risk of sequestration only applies to spending programs. If a revenue-neutral carbon tax shift is actually revenue-negative and contributes to a statutory PAYGO debit, the carbon tax and the paired tax relief would remain in place unchanged. Spending programs, not the tax provisions, would pay the price.²²⁷

As this exploration illustrates, budget procedures can shine a light on a proposed carbon tax lockbox. *Ex ante* revenue estimates will determine its fiscal characteristics, with the potential for a distinction between analysis for budget purposes and actual cash flows. Any such distinctions do not invalidate the lockbox. They instead add a more nuanced understanding of fiscal impacts. If the revenue from carbon taxes will not fully pay for the companion tax cut or spending measures, budget discipline rules may come into play, but they will not correct for any shortfall. They instead will sharpen attention to fiscal impacts. Shortfalls may contribute to the enforcement of budget discipline rules. PAYGO rules in the House and Senate can lead to points of order when Congress considers enactment—a strategic hurdle but not a bar against enactment. Once a dedicated fund is put in place, sequestration under the PAYGO rules and the Budget Control Act could put

²²³ OFFICE OF MGMT. & BUDGET, *supra* note 134, at 141.

²²⁴ 2 U.S.C. § 901(c). Legislation in 2019 reset the balance at zero. H.R. 3877, 116th Cong. § 102 (2019).

²²⁵ 2 U.S.C. § 901(b)(2)(A)(i); S. COMM. ON THE BUDGET, EMERGENCY DESIGNATIONS: VARIATIONS AND USES 2 (2016). An emergency applies to a situation that “requires new budget authority and outlays (or new budget authority and the outlays flowing therefrom) for the prevention or mitigation of, or response to, loss of life or property, or a threat to national security” and “is unanticipated.” 2 U.S.C. § 900(c)(20). The PAYGO statute also contains an emergency exception. *Id.* § 902(e).

²²⁶ *E.g.*, Bipartisan Budget Control Act of 2019, H.R. 3877, 116th Cong. § 101 (2019). Legislation can also reset the annual statutory PAYGO scorecard at zero. *Id.* § 102.

²²⁷ Nonetheless, the risk of spending sequestration could subtly discourage revenue-losing tax legislation.

at risk the fund's ability to spend revenue as planned. Thus, budget procedures *ex ante* can provide transparency and may help test the lockbox. Budget enforcement *ex post* may change its operation.

As indicated at the start of this Part, this discussion of federal budget rules and their possible implications for carbon taxes is an initial foray into the complex intersection of budget rules and carbon taxes. A more extensive exploration could probe other facets, some of which lie in the field of political economy. For example: whether proposals for carbon tax bills that dedicate the tax revenue reflect substantive policy preferences, political calculations, the influence of budget rules, or some combination; whether budget rules drive decisions to permanently appropriate carbon tax revenue, given that new tax revenues can offset permanent (but not discretionary) appropriations for PAYGO purposes; and whether scoring methodology and the ten-year window for scoring fiscal impacts contribute to carbon tax design decisions.²²⁸ Nevertheless, this Article points toward the need to look more closely at this intricate and often unexamined intersection. Although different jurisdictions may apply very different budget rules, this federal example highlights the need to at least consider the interaction between carbon tax proposals and budget rules.

²²⁸ See Joyce, *supra* note 170, at 321–24 (discussing how budget rules can affect design decisions (outside of the carbon tax context)).

Textbox 3

Securing Carbon Tax Revenues: Key Budget Issues

- How transparent are estimates of fiscal impact for legislators and others?
 - Do budget processes allow or encourage revenue estimates?
 - Do budget methodologies affect the calculation of whether revenue matches expenditures?
- In any jurisdiction, do budget discipline rules create procedural or substantive requirements that encourage revenue neutrality or revenue dedication?
 - On the basis of a proposal standing alone?
 - On the basis of legislation within which a proposal is nested?
- Do budget discipline rules create the risk that dedicated spending cannot be spent?
 - For permanent appropriations?
 - For discretionary appropriations?
- Do budget rules influence design decisions, such as:
 - Whether to use permanent or discretionary appropriations?
 - Whether to build a margin of error into the design of tax measures?
- Does the budget process shape the way in which legislators present the tax proposal?
 - Should they attach caveats to simple explanations?

V. CONCLUSION

This exploration of the dedication of carbon tax revenues yields two prevailing points. First, design details matter. The basic concepts of dedicating revenue to a revenue-neutral tax shift, carbon dividends, and programmatic spending seem simple and straightforward. The statutory details, however, will determine whether those concepts meet expectations. A statute can deliver a tax shift, but a conceptual tax shift may be more realistic than a precisely revenue-neutral tax shift. A statute can set up systems to distribute carbon dividends and to finance spending programs. Policymakers can create a lockbox, but they also will need to define who controls its operation. Giving future appropriators power over the revenue can create uncertainty and might mean that the revenue will not be spent immediately, even if it lies safely in a trust fund.

Second, budget details matter. Tax revenue will flow in and then out again as hard cash or silently as tax relief's forgone revenues. But tax revenue may have a different value for budget purposes, depending on budget methodologies. When assessing whether concepts meet expectations, one must decide whether to speak in terms of cash dollars or budget dollars, or both. The choice can affect how one measures the lockbox's operation. In addition, tax proposals and their associated revenue use operate within the broader context of budget discipline rules. These budget rules may shape design choices and strategies. The net fiscal result of a carbon tax proposal can influence whether the budget rules pose procedural hurdles. In some cases, budget rules might pose the risk of freezing the use of funds, frustrating full conceptual execution.

These considerations do not invalidate the idea that legislators can dedicate carbon tax revenue for these purposes—tax reform, dividends, or programmatic spending. They instead provide a lens for evaluating how simple notions of revenue dedication translate into a more complex reality. Policymakers can build lockboxes and design their operating manuals, but one needs to understand whether the statutory lockboxes will meet conceptual expectations—whether they will be durable when shaken. Their durability will depend on their design and the environment within which they operate. Although these details may not change policymakers' brief sentences about how carbon tax revenue will be used, they can yield a clearer understanding of what lies beneath those descriptions.