

2018 Australasian Tax Teachers’ Association’s 30th Annual Conference

“Sharing the Burden - Tax Reform's Shifting Winners and Losers”

Canada’s Environmental Tax Reform – Who Gains? Who Loses?

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Abstract

Canada is undergoing an as-of-yet unnamed, yet evident, environmental tax reform. This paper examines the carbon tax in British Columbia and Alberta, and addresses the cap-and-trade programs in Ontario and Quebec in addition to other incentives and fee structures currently in place for environmental protection.

Keeping in line with the theme of the conference, the ‘winners’ and ‘losers’ from Canada’s environmental tax reform initiatives are presented and discussed. The paper addresses both sides of the argument surrounding the implementation of the carbon tax, seen on one hand as necessary due to the growth in greenhouse gas (GHG) emissions, yet viewed on the other hand as unfair due its regressive nature and its competitive impacts on industry. Similarly, cap-and-trade programs are both criticized for being inefficient pricing mechanisms, yet praised as being the superior method to decrease pollution levels.

Based on the foundations of Arthur Cecil Pigou’s environmental tax theories, the paper examines the tax base and design of the various taxes and programs, in addition to the political influences, and social and economic effects. The paper looks at the issues from the viewpoint of the three pillars of sustainability, discussing 1) the economic impacts from environmental tax reform on industry – particularly energy production and agriculture, 2) the environmental effects from the various policies and programs, and 3) social concerns, praises, and outcomes.

Lastly, the paper addresses ways in which the issues from reforms such as this (and others) may be effectively taught to students through experiential exercises, allowing for a deeper understanding and appreciation of policy shifts. Students are thus taught to objectively identify ‘winners’ and ‘losers’ in tax reform while learning to think critically about the formulation of tax policies.

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1. Introduction

Canada, like many other countries around the world, has recognized its impact on the global environmental footprint, and governments at all levels have initiated programs aimed at reducing carbon emissions, amongst a number of other environmental concerns. Due to the current attention and prominence on the carbon tax (recently introduced federally) in Canada to reduce the country’s GHG emissions, this paper will focus on the carbon pricing plans in the newly announced federal initiative and the most recent program in place in Alberta. The decade long program in British Columbia will also be addressed, and the paper will present information on the cap-and-trade (emissions trading systems – ETS) programs in Quebec and Ontario, in addition to providing a list of other initiatives throughout the country in order to present a comprehensive picture of Canada’s ‘environmental tax reform’.

Whether or not a carbon tax should even be included as an instrument of tax reform is a topic for social and political debate, but in line with the OECD (2016, 2017a, 2017b) and other scholars who support the concept (see, eg, The Brookings Institution, 2017), this paper treats the movement towards environmental tax policy as one of tax reform. Of significant note here is that the political will of any given jurisdiction is key to the design and implementation of environmental tax policy, which can quickly change when there is a shift in parties. While this is an important consideration in any discussion concerning tax reform and/or the environment, the impacts of this reality are not examined here, though the author’s viewpoint is that long-term complexity must be introduced as a component of policy decision-making.

2. Carbon pricing in Canada

2.1 The 2018 federal carbon tax

In 2016, the federal government released a benchmark for carbon pricing across the country to be implemented in its various forms by 2018 by each province and territory. This ‘pan-pacific’ initiative was driven by the newly elected liberal government, in an attempt to drive innovation and clean economic growth at the lowest cost to both industry and consumers (Government of Canada, 2017b). A ‘carbon pricing backstop system’ was also established to enforce a carbon

pricing mechanism where none exists by the 2018 deadline, or where the targets of the jurisdiction are below the threshold.

The backstop carbon tax is set at a minimum of CAD10/tonne in 2018, rising to CAD 50/tonne by 2022 (Government of Canada, 2017a). Backstop provinces not meeting federal targets can implement carbon taxes, cap-and-trade, or a combination of both. Table 1 identifies carbon pricing programs in Canada to date:

Table 1. Carbon pricing in Canada to date

Carbon pricing across provinces		
Province	Start Date	Carbon pricing system
Alberta	2017	Carbon tax
Alberta	2007	Cap-and-trade
British Columbia	2008	Carbon tax
Manitoba	2012	Carbon tax
Ontario	2017	Cap-and-trade
Quebec	2007 to 2012	Carbon tax
Quebec	2012	Cap-and-trade

Source: Statistics Canada, "Carbon Pricing in the Canadian System of Macroeconomic Accounts" from *Latest Developments in the Canadian Economic Accounts* (13-605-X).

These various carbon pricing systems differ in design and complexity. A carbon tax is considered to be the easier tax to administer and orchestrate due to the set price on GHG emissions, though a carbon tax does not, in and of itself, set an acceptable emission level outside of that which firms are willing to pay. Cap-and-trade on the other hand, is based on a system with set emission levels, but the pricing is more complex due to the open-market design of tradable permits. Table 2 provides a high-level illustration of the difference between the two systems.

Table 2. Contrasting the price and emission levels of carbon tax vs. cap-and-trade

Pricing mechanism	GHG emissions levels	GHG pricing per unit
Carbon tax	Not set	Set
Cap-and-trade	Set	Not set

In order to establish a framework from which the various carbon pricing mechanisms are to be designed, a pricing scheme has been established for the various categories of fossil fuel emissions (shown in Table 3).¹

Table 3. Tax base on liquid, gaseous, and solid fuels for carbon pricing in Canada

Liquid fuel	Unit	2018 (\$10/tonne)	2019 (\$20/tonne)	2020 (\$30/tonne)	2021 (\$40/tonne)	2022 (\$50/tonne)
Gasoline	¢/L	2.33	4.65	6.98	9.30	11.63
Diesel / Light Fuel Oil	¢/L	2.74	5.48	8.21	10.95	13.69
Heavy Fuel Oil	¢/L	3.19	6.37	9.56	12.75	15.93
Aviation Gasoline	¢/L	2.49	4.98	7.47	9.95	12.44
Aviation Turbo Fuel / Jet Fuel / Kerosene	¢/L	2.58	5.16	7.75	10.33	12.91
Methanol	¢/L	1.10	2.20	3.29	4.39	5.49
Naphtha	¢/L	2.25	4.51	6.76	9.02	11.27
Petroleum Coke	¢/L	3.84	7.67	11.51	15.35	19.19

Gaseous fuel	Unit	2018 (\$10/tonne)	2019 (\$20/tonne)	2020 (\$30/tonne)	2021 (\$40/tonne)	2022 (\$50/tonne)
Marketable Natural Gas	¢/m ³	1.96	3.91	5.87	7.83	9.79
Non-marketable Natural Gas	¢/m ³	2.59	5.17	7.76	10.34	12.93
Propane	¢/L	1.55	3.10	4.64	6.19	7.74
Butane	¢/L	1.78	3.56	5.34	7.12	8.90
Ethane	¢/L	1.02	2.04	3.06	4.08	5.09
Gas Liquids	¢/L	1.67	3.33	4.99	6.66	8.32
Still Gas	¢/m ³	2.70	5.40	8.10	10.80	13.50
Pentanes Plus	¢/L	1.78	3.56	5.34	7.12	8.90
Coke Oven Gas	¢/m ³	0.70	1.40	2.10	2.80	3.50

Solid fuel	Unit	2018 (\$10/tonne)	2019 (\$20/tonne)	2020 (\$30/tonne)	2021 (\$40/tonne)	2022 (\$50/tonne)
Low Heat Value Coal (i.e., Sub-bituminous Coal; Lignite)	\$/tonne	17.72	35.45	53.17	70.90	88.62
High Heat Value Coal (i.e., Bituminous Coal; Anthracite)	\$/tonne	22.52	45.03	67.55	90.07	112.58
Coke (coal)	\$/tonne	31.80	63.59	95.39	127.19	158.99
Waste fuel / Tires	\$/tonne	19.97	39.95	59.92	79.89	99.87

Source: (Government of Canada, 2017b)

¹Prices are established using a CO₂e (carbon dioxide equivalent) as per the accepted *Global Warming Potential (GWP)* (for 100 years) where CO₂ = 1. It should be noted that the GWP of CO₂ is an estimate which can and does change as new evidence presents itself (see, eg. Myhre, 2013). GWP measures the amount of energy absorbed by one tonne of emissions from the various fuels. (For further information on GWP, see, eg., United States Environmental Protection Agency, 2017)

The following sections will now discuss carbon pricing in Alberta and British Columbia, as these are the two primary examples of a carbon tax currently administered in Canada.

2.2 Alberta’s carbon levy²

Alberta was the second province to implement a direct carbon pricing mechanism in Canada as part of the province’s *Climate Leadership Plan* (Government of Alberta, 2016-17). The Alberta model began in 2017, and is based on a model comprised of a carbon levy and an output- (or product-) based pricing system (which is also the model stipulated in the federal backstop system). The carbon levy began at CAD 20/tonne on CO₂ emissions in 2017, and will be increased incrementally until the target of CAD 50/tonne is reached by 2022.

The output-based pricing system is a shift from the previous percentage based *Specified Gas Emitters Regulation (SGER)*, and is intended to result in stronger signals for large industrial emitters to meet standards, while remaining competitive. The new system will exempt industry from paying the levy on the first 100,000 tonnes of emissions in order to prevent carbon leakage and other competitive impacts (Government of Alberta, 2017c).

2.2.1 Gains and losses from Alberta’s carbon pricing

At this preliminary stage of the carbon pricing system in Alberta, it is difficult to state with certainty who the winners and losers are or will be. While there is widespread opposition to the introduction of the ‘carbon tax’ – as there is to any new tax, a full account of the outcomes is not yet available.

According to Calgary economist, Trevor Tombe, costs to consumers will be minimal following the 2018 increase on the carbon levy to CAD 30/tonne in Alberta. Gas prices at the pump will rise slightly by a few cents per liter, and heating costs (most of Alberta homes are heated with

²Although Alberta uses the term ‘levy’ rather than ‘tax’, the charge is most often referred to informally by citizens as a tax.

natural gas) will rise by approximately \$5 per month. The larger increase will occur on indirect purchases, at an estimate of \$70 to \$105 for the year, per household, though rebates will be distributed in 2018 as in 2017, to lower and middle income Albertans to counteract the increases from carbon pricing (Government of Alberta, 2016c). Thus, whether Alberta’s carbon tax system will definitively be able to avoid the regressive effects (placing a larger burden on the lowest income earners) is yet to be determined (see, eg, The National Bureau of Economic Research).

From a broader perspective, Alberta’s premier views the carbon levy as a means to generate diversification in industry, protect the environment, and strengthen the province’s bid for pipelines to move the province’s oil and gas to new markets (as reported by Ross, 2017). The need for an environmental framework to support a pipeline to the west coast was also been emphasized by the province’s minister of finance (Government of Alberta, 2016b). The minister stated in his budget address:

“[A]ll Albertans will benefit from investments in the green infrastructure and energy efficiency initiatives that the carbon levy will support, creating thousands of jobs, diversifying our energy economy, and driving new technologies that will add to our exports.

It’s a win for our environment. It’s a win for our energy industry. And above all, it’s a win for Albertans who will benefit from a stronger, more sustainable economy with good paying jobs.”(Government of Alberta, 2016a)

At this point in time, however, a full analysis of the environmental and social outcomes has not been conducted, and is not expected to begin until 2019. However, the economic predictions have been presented with more certainty.

The levy is expected to generate roughly CAD 4 billion in revenue for the province over the next three year (approximately 5% of the annual revenue), as shown in Table 4, and while not a revenue-neutral system as that in place in British Columbia (with the exception of a reduction of the small business corporate tax rate from 3% to 2%), the funds are to be returned to Albertans or invested in green initiatives (Government of Alberta, 2016c), and thus they are earmarked to a

large degree.³ The levy also comes with the initiative to drive innovation in the oilsands industry (CBC News, 2015; Government of Alberta, 2017a).

Table 4. Government revenue in Alberta (source: Government of Alberta, 2017b)

Tax Revenue (millions of dollars)						
	2015-16	2016-17		2017-18	2018-19	2019-20
	Actual	Budget	Forecast	Estimate	Target	Target
Personal income tax	11,357	11,405	11,459	11,177	11,609	12,159
Corporate income tax	4,195	4,325	3,344	3,918	4,464	5,072
Education property tax	2,255	2,414	2,414	2,446	2,585	2,654
Carbon levy	-	274	230	1,038	1,396	1,416
Other taxes	2,913	3,349	3,099	3,183	3,269	3,361
Total	20,720	21,767	20,546	21,762	23,323	24,662

Further details of the carbon levy funds are outlined in Table 5.

Table 5. Carbon levy - Revenue and Spending (source: Government of Alberta, 2016c)

Climate Leadership Plan (millions of dollars)						
	2016-17	2017-18	2018-19	2019-20	2020-21	5-year
	Estimate	Target	Target	Projected	Projected	Totals
Revenue:						
SGER / Compliance Payments	101	146	917	899	758	2,821
Carbon Levy	274	1,247	1,709	1,751	1,798	6,777
Gross Revenue	375	1,393	2,626	2,650	2,554	9,598
Less: Adjustment for Small Business Tax Cut	(45)	(185)	(200)	(210)	(225)	(865)
Net Revenue	330	1,208	2,426	2,440	2,329	8,733
Spending:						
Climate Leadership Investment:						
Green Infrastructure (capital)	5	208	555	680	710	2,158
Energy Efficiency Alberta ¹	45	90	165	170	175	645
Other Investment ²	175	440	1,066	940	784	3,405
Climate Leadership Adjustment:						
Consumer Rebates	95	435	590	600	610	2,330
Other Adjustment ³	10	35	50	50	50	195
Total Spending	330	1,208	2,426	2,440	2,329	8,733

¹ Revenue recycling into grants and loans to small businesses, families, building owners, industries, community organizations and municipalities to support energy efficiency and micro-generation.

² Revenue recycling into bioenergy, renewable energy, innovation and technology, Climate Leadership Plan implementation.

³ Revenue recycling into coal community transition, adjustment for communities including Indigenous communities.

³Whether or not tax revenue should be earmarked is topic of great debate in the arena of environmental taxation – but beyond the scope of this paper. For further information on this topic, see, eg, Brett & Keen, 2000.

While the carbon levy will be felt by consumers at the gas pump and on their heating bills, a number of exemptions have been granted in the program for items such as ‘natural gas produced and consumed on site’ (until 2023), ‘marked gasoline and diesel’ used in farming, ‘biofuels’, ‘inter-jurisdictional flights’, ‘indigenous use’, exported fuel, and others (Government of Alberta, 2016c). Despite these exemptions, there is still concern amongst, for example, the agricultural community who, though exempt on their farm fuels, will be faced with higher costs in their operations – many of which are already performing on tight profit margins (Bakx, 2017). Businesses must also prepare for new regulations and reporting requirements whenever a new tax is introduced.

The literature discussing the winners and losers in environmental tax reform provides a number of successes, such as the service sector (eg, accountants and lawyers will see an increase in business due to the new legislation), fuel-efficient transport, environmental research firms, government - from a revenue generating perspective, renewal power firms, and of course, the environment. On the less successful side of environmental tax reform are transportation industries, electricity companies, construction and construction material manufacturers, the resource sector, employees in the affected industries, amongst others. (See, eg, Featherstone, 2012; Meng, Siriwardana, & McNeill, 2011.)

Suffice it is to say at the point in time, that the outcomes of the Alberta carbon levy are uncertain and deserving of intensive research to determine the true winners and losers. The following section presents a brief discussion on Canada’s first carbon tax regime, British Columbia.

2.3 British Columbia’s carbon tax

Eighteen years following the first carbon tax in the world (in Finland in 1990), British Columbia (B.C.) became the first province in Canada to introduce a revenue-neutral carbon tax (in the year 2008). The system in B.C. closely follows the double-dividend theory of environmental taxation (see, eg, De Mooij, 2008) whereby the tax acts to reduce other distortionary taxes while also reducing harmful effects on the environment.

Through the recycling of tax revenues, the province returned more than CAD 500 million annually in excess of carbon tax revenues to its residents during the last two fiscal budgets. From a percentage standpoint, the government revenue received from the carbon tax in relation to total revenue is slightly lower than the forecasts for Alberta, and lower than the original 2016 budget proposals, (see, eg, Government of British Columbia, 2017 for forecasts and discussion). However, with the new federal initiative, B.C. will be required to increase its current CAD 30/tonne, and thus the final impacts are yet to be seen.

With a decade of experience behind them, B.C. is in a stronger position to evaluate the long-term effects of its carbon pricing policy. While the tax was initially met with strong opposition by B.C.’s residents who were concerned about, for example, the regressive nature of the tax, more recent studies indicate that acceptance of the tax has increased for a variety of reasons, including the government’s dependence on the tax revenue, the province’s access to a large supply of hydro-power, and the impact that the 2008 global recession had on the political vote, which – while it had little to do with the carbon tax – effectively maintained the supporting party (Harrison, 2013).

Studies indicate that the carbon tax in B.C. has had the effect of reducing GHG emissions while maintaining economic stability (Elgie & McClay, 2013), and Beck et al. (2015) found that, based on the province specific conditions in B.C., the tax was in fact progressive rather than regressive (though the authors recognized that the same might not hold true in other provinces with different spending and income patterns).

The following section will now briefly address some of the other environmental tax programs in place in Canada. Though there is little evidence or research available to definitively state the winners and losers of these programs at this time, the section has been included to inform the reader of other initiatives taking place in Canada’s environmental tax reform.

3. Other environmental initiatives in Canada

3.1 Cap-and-trade in Canada

Both Ontario and Quebec have elected to address GHG emissions through a cap-and-trade model, based on a market system. Quebec began its program in 2013, and similar to Alberta, Ontario initiated its carbon pricing in 2017. There is concern, however, that these market systems are operating on low marginal prices which weakens the stringency of the provincial policy (see, eg, Beugin, Dion, Elgie, Olewiler, & Ragan, 2017). These low prices are also cause for concern as they many not meet the federally mandated price of CAN \$50/tonne by 2022 as the current price equivalent is not expected to reach CAN \$20/tonne by 2020 in either province (see, eg, Harris, 2016).

3.2 A sample of other environmental initiatives in Canada

Table 6 lists a number of initiatives in place in Canada to protect the environment. While each is deserving of a thorough analysis to determine the effectiveness of the program, this would require a level of primary data collection beyond the scope of this paper, and thus the reader is provided with a list for information’s sake.

Table 6. A few of many examples of other environmental initiatives in Canada

Environmental initiative	Location	Information
Feed-in-tariff system	Banff, Alberta	Initiated due a solar PV production incentive
Extended producer responsibility (EPR)	Canada-wide	Manufacturers encouraged to incorporate end-of-life strategies for their products
Federal gas tax fund	Canada-wide	Excise-tax on gasoline transferred to the provinces and territories each year for various uses including clean environment projects
Scientific research & experimental development incentives	Canada-wide	Offered through the Canadian Income Tax Act to include among others, clean energy initiatives
Capital cost allowance expenditures	Canada-wide	As above

4. Teaching the impacts of tax reform to students

A project will be developed in 2018 which will allow students to engage in experiential exercises relating to various types of tax reform.⁴ The OECD (2016) lists the primary categories of tax reform (see Table 7) which will be used in this project as the platform to develop the various experiential activities.

Table 7. Categories subject to tax reform

1.	Personal income taxes
2.	Social security contributions
3.	Corporate income taxes
4.	Other corporate taxes
5.	VAT/GST
6.	Excise duties
7.	Environmentally related taxes
8.	Property taxes

In class sizes ranging from 30 to 45 students, this list lends itself well to an experiential classroom exercise which can be prepared by students and presented to the class. While the exercise is limited to the classroom, thus not necessarily embracing an external experiential learning experience, the need for enhanced classroom activities is recognized as necessary for the improved success of students following their university education (Eischen & Singh, 2005); and the need for experiential learning in management and business schools is well recognized (see, eg, Block, 2014; Clark & White, 2010). Recognizing that accounting students are not always prepared for the professional world to the degree that employers require (Elijido-Ten & Kloot, 2015), and based on the foundational experiential learning theories of Kolb (1984), the following exercise is proposed to address the need for deeper learning at the post-secondary level in management and business schools.

The structure of the exercise is as follows:

⁴The Alberta CPA Education Foundation has generously provided requested funds for enhanced learning in the tax courses, of which a portion will be assigned to this project upon their approval.

1. The class will be divided into groups, each with four to six students.
2. Each group will be assigned one of the categories from the OECD list.
3. The groups will then be presented with a set of questions with which they will embark on an exercise in research, exploring the academic literature, professional and trade journals, the Income Tax Act, the Canada Revenue Agency, and reliable commentary.
4. The list of questions (still preliminary at this stage of development) will include:
 - 1) Define tax reform, tax base, and tax design.
 - 2) Provide a description of your topic, (eg, history, current status).
 - 3) Select an example from your category whereby tax reform has occurred or is occurring. (Any jurisdiction may be chosen.)
 - 4) What was the main purpose of the tax reform?
 - 5) Who initiated the tax reform?
 - 6) What is the new (and if applicable, former) tax base in your example?
 - 7) What is the design of the tax?
 - 8) Who is impacted by this tax reform?
 - 9) Are there economic, social, and/or environmental impacts from the reform?
 - 10) Describe any financial and/or behavioral effects, or any other impacts that resulted (or may result) from this reform, and prepare any forms that would be required due to this reform (based on hypothetical numbers created by the group in consult with your instructor).
 - 11) Summarize this tax reform in your group’s own words, discussing the pros and cons from your perspectives and observations.
5. The project will be carried out throughout the semester in three sections: Part 1) submission of articles and reference list; Part 2) written answers to the questions in research format; and Part 3) an oral presentation of the findings to the class, followed by a short question period.
6. Following the submission and grading of Part 2, each group will be asked to generate a situation pertaining to the topic which can be related to the lives of the group members or those close to them. The group will then identify the effects, and address ways in which to deal with the impact(s) (positive and negative). This ‘student-centered experiential education’, in contrast to the typical ‘teacher-centered experience’ (see, eg, Estes, 2004),

is intended to enhance the learning and the internalization of the particular tax reform, and will be a key component of discussion in the presentations.

7. The weighting of the project will range between 20 and 25% of the overall course grade.
8. A student evaluation will be administered to provide feedback on the exercise.

This exercise has been selected based on experience with two exercises currently used in the classroom. The first, and at the introductory tax level, consists of groups of students selecting tax topics to which they can either relate, or they show great interest, or both. Similar to this proposed tax reform exercise, the students then conduct research and present their findings. (The professionalism of the discussions has risen substantially – to the point of many superb presentations – since the project was broken down into three parts, as proposed here, since the students are now ‘forced’ to think about their topic from the very beginning of the semester, until the time they present, which is usually in the last week of classes.)

The second project, assigned to the advanced tax classes, requires groups of students to ‘virtually create’ new corporations of their choice, of which they are shareholders. The project begins with Part 1 with the preparation of a business plan and a complete set of financial statements with ratio analysis, in addition to a discussion of the tax implications that would arise from any two selected corporate decisions. Part 2 then requires the students to research an advanced tax topic as it applies to their company, in addition to the students preparing a communication piece on the topic for the public at large. Finally, in Part 3, the students present their company and its tax implications to the class.

Experience over the years has provided a strong indication that students enjoy researching topics which resonate with them personally, as there is more ownership of the subject matter. The projects also allow for the development of ‘interpersonal skills, real-time decision-making, recognition of contexts, and integration across functional areas’ (Eischen & Singh, 2005, pp. 1-2) which are recognized as often lacking in business school education.

Much like these current projects, the aim is that the tax reform exercise will be met in much the same way, and that students – through exploratory and experiential learning – will gain significant knowledge about the fundamentals of an important tax issue at a deeper level than by

way of rote learning. To test this prediction, further study is anticipated, based on the models and literature of experiential learning, for the preparation of a paper for publication, summarizing the findings.

5. Conclusion

The complexities of this topic are immense and thus this paper has, in the viewpoint of the author, skimmed the surface of a subject deserving of intensive primary research to uncover the true winners and losers of environmental tax reform. From the winning side of the coin, the reduction of emissions is a positive move towards environmental protection, and the revenues generated by the taxes - if utilized effectively, can bolster other societal aspects. In the case of revenue-neutral systems, taxpayers will recognize lower taxes in other areas in return for paying to protect the environment. However, environmental taxes do not come without their share of uncertainties. The mechanics alone of, for example, carbon pricing can leave citizens perplexed as to the true personal impacts and environmental gains. Businesses are often left wondering how their bottom lines will be affected, and consumers unable to substitute fossil fuel intensive products will pay a price. Motivations for environmental tax policy are often questioned as to their political pull, and the stability of any given policy is at the mercy of ‘the next election’.

Thus, while in principle the introduction of environmental tax reform is favorable (in the author’s view) if it leads to a cleaner and healthier world for its citizens, attention to the details of any given policy are critical if the intended outcomes are to be achieved. Transparency and stakeholder input are necessary for a wider acceptance of the programs, and the inherent gains and losses must be made apparent and subsequently analyzed in order to design the most favorable policy, mitigating negative outcomes whenever possible.

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