December 15, 2016

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: 2030 Target Draft Scoping Plan

Dear CARB and stakeholders,

Thank you for the opportunity to comment on the CARB 2030 Target Scoping Plan.

For context, Citizens' Climate Lobby is a non-partisan national and international organization of more than 45,000 citizen lobbyist volunteers dedicated to building the political will in Congress for a livable planet. In California, CCL has over 9,000 members who are active in 39 chapters across the entire state.

Last December, over 50 members of CCL from around the world participated in the civic engagement sessions at the UN COP21 talks in Paris. We carried with us our advocacy for guiding principles for carbon pricing that underlie all of CCL's policy development and lobbying efforts. We promote carbon pricing that is:

Effective: reduces economy-wide absolute greenhouse gas emissions while supporting domestic economic growth across all sectors.

Efficient: minimizes the cost of implementation while maximizing environmental, economic, and social co-benefits.

Equitable: avoids disproportionate burdens while protecting vulnerable populations from unjust or negative economic or environmental impacts.

These principles reflect those that underpin the international Carbon Pricing Leadership Coalition, of which California is an official member.

CCL's principal focus is on lobbying the US Congress to pass a fully-rebated fee on carbon[1]. However, in recognition of the huge role that California plays worldwide in innovative and effective climate action, over the past year we have also reached out to our state legislators in California, as well as selected environmental and environmental justice organizations in the state. Our purpose has been to educate them about the CCL proposal and how a national carbon fee and dividend could co-exist with the state's current Cap-and-Trade program. In August 2016, the State Assembly and

[1] For this document we use the term "carbon fee" to mean a fully-rebated carbon tax, but use "carbon tax" whenever referring to the more general concept.

Senate passed Assembly Joint Resolution 43, calling on the US Congress to enact a national carbon-fee-and-dividend program.

In the spirit of strengthening California's effective programs to reduce GHG emissions statewide while providing a model for other states and nations, we offer these comments on the Draft Scoping Plan.

Overall, we are happy to see that CARB has committed to analyzing carbon pricing mechanisms in addition to the current Cap-and-Trade program. However, we believe that the Scoping Plan stills lacks critical information necessary for your board, as well as other interested stakeholders, to be able to accurately and comprehensively assess the carbon pricing scenarios contained in the plan, and to evaluate their efficacy in reaching the new 2030 emissions reductions targets.

Specifically, we respectfully request that CARB undertake a much more comprehensive analysis and comparison of a carbon tax—with a variety of rebate options and/or reinvestment options—along with reforms to the existing Cap-and-Trade Program. We all need to understand how effective each of these scenarios can be in achieving California's aggressive 2030 GHG emissions targets.

Below, we include some information we hope you will consider as you revise the Scoping Plan.

1. Positives of a carbon tax in California

We believe there are a number of ways that a carbon tax can be a positive policy alternative for California and in many respects have advantages over a cap-and-trade program. These include:

A. **Predictable price level:** The clear price signal of a steadily rising carbon tax provides businesses greater certainty when planning investments in long-lived infrastructure, and provides a clear signal for investors in clean energy alternatives. Cap-and-Trade, by its nature, has a volatile price for carbon which makes it harder for businesses and investors to plan effectively.

B. **Greater revenue certainty:** If revenue from pricing carbon is used to fund other state-sponsored programs, it can be important to have a predictable and stable revenue stream. The price volatility of Cap-and-Trade can result in significant revenue volatility, as has been seen recently. Revenue from a carbon tax would be more stable and predictable.

C. **Economy-wide emissions coverage**: A carbon tax on fossil fuels, applied as far upstream as possible, can more easily cover fossil fuel use throughout the economy than a cap-and-trade system that focuses on large-scale emitters rather than on the fuels themselves.

D. **Alignment of policy and objectives:** A carbon tax is complementary to other carbon-reduction policies (e.g., renewable portfolio or efficiency standards) in ways that Cap-and-Trade cannot be. Specifically, a carbon tax would align with AB 197, which was passed by the California Legislature in 2016, and requires ARB to prioritize direct emission

reductions over indirect measures such as Cap-and-Trade. In addition, mandated direct emissions reductions have been shown to depress the price of Cap-and-Trade emissions permits, which has undercut the efficacy of Cap-and-Trade in reducing emissions and decreased the reliability of the revenue stream.

E. **Greater portability to other states and countries:** California has an unusually robust administrative capacity compared to most states and countries, as well as laws and processes that ensure a low degree of susceptibility to corruption. A carbon tax can be much quicker and easier to implement and administer for a wider array of less administratively capable jurisdictions, and so has less potential for abuse and a greater chance for ongoing success. This could result in more rapid adoption in such jurisdictions, and correspondingly earlier and greater national and world-wide carbon emission reductions.

F. **Greater equity**: As described in detail below, with appropriate return of the revenue from a carbon tax to households, greater equity can be achieved. In addition, a carbon tax would not feature offsets or emissions trading, but would deliver a price signal directly to existing sources of emissions. This would reduce emissions in all communities far more effectively than Cap-and-Trade, including and especially communities directly impacted by current sources of pollution.

2. Benefits of Dividends or Rebates

To achieve the emissions targets required by SB 32, it is likely that the price on carbon, whether from a tax or through the Cap-and-Trade Program, will have to increase significantly over current levels. A study from Regional Economic Modelling Inc. (REMI) commissioned by CCL shows that a national carbon price that started now and rose to $150/ton would reduce emissions in the United States by 40% from current levels by 2030.[2]

In California, to achieve the same percentage reductions, the price may need to be substantially higher sooner due to California's lower baseline emissions and low use of coal compared to the US as a whole.[3] For the same emissions reductions, the price in a cap-and-trade system would likely have to be similar to the price of a carbon tax.

Fortunately, those same studies show that if a carbon tax is implemented in tandem with a fully-rebated dividend, the economy is not harmed even with a high carbon price. In fact, a fully-rebated carbon fee can be expected to create jobs, grow the economy, and increase real disposable personal income for the average resident over the baseline for both the US and California.

---

[2] The Economic, Climate, Fiscal, Power, and Demographic Impact of a National Fee-and-Dividend Carbon Tax - http://citizensclimatelobby.org/remi-report/

[3] Environmental Tax Reform in Calfiornia: Economic and Climate Impact of a Carbon Tax Swap - http://citizensclimatelobby.org/wp-content/uploads/2014/03/REMI-CA-Carbon-Tax.pdf

Such a fee system is progressive, not regressive, because it returns a financial benefit to low-income households and so reduces income inequality.

If a carbon price will need to be significantly higher than today's level to meet emissions targets, it is essential that CARB consider a system that protects low-income Californians from related cost impacts. It is our view that climate dividends or rebates can contribute a simple and effective mechanism for achieving the goal of equity. We note that the Environmental Justice Advisory Committee, in its Initial Recommendations for Discussion Draft Version of 2030 Target Scoping Plan Update of August 26, 2016, explicitly suggests fee and dividend as a possible alternative to Cap-and-Trade.[4] In addition and equally important, a dividend or rebate will make the carbon reduction program as politically durable as Social Security, since the majority of households will have comparatively small carbon costs and so will be net economic gainers, as we describe in more detail below.

Revenue from a carbon fee can be secured in a special fund with monthly or quarterly dividend payments made directly to households on a per capita basis. CCL's preferred policy is for monthly dividends, since a longer period between dividends may cause many households to struggle with the elevated costs from the fee. However, we recognize that quarterly dividends may be more practical, especially while the carbon price is low. Dividend delivery could be modeled after the Alaska Permanent Fund (which delivers state-collected oil royalties to all Alaskans on a regular, per capita basis), and/or take advantage of existing state programs to reduce costs. CCL's position is that dividends should be made available to all residents regardless of immigration status. While there are basic logistical questions about finding people and delivering an appropriate dividend amount to them that do not have obvious solutions, it is our position that every effort should be made to resolve these questions. We believe ensuring such populations receive a dividend to be in line with other recent policy decisions made by the State of California.

Household Financial Impact of a Revenue-Neutral Carbon Fee by Income and Race

One tremendous benefit of a revenue-neutral carbon fee in which all funds are returned to households in regular, dependable payments is that those most disadvantaged in our communities receive a significant financial benefit. Specifically, low income,[5] minority, and elderly households all come out ahead, as demonstrated in the tables below.[6] (These results stem from a study[7] by Kevin Ummel,

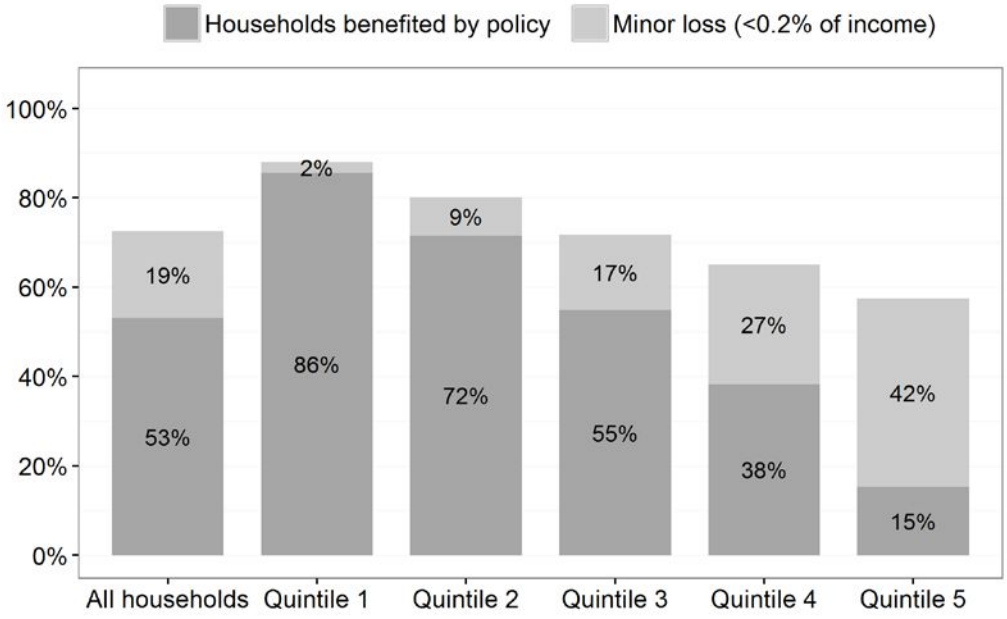
[4] Environmental Justice Advisory Committee Initial Recommendations for Discussion Draft Version of 2030 Target Scoping Plan Update August 26, 2016, page 4, Equity comment #4.

[5] Low income here is defined as those with incomes at or below twice the poverty line.

[6] The results shown here are national, and not specific to the state of California. Though statewide figures (as well as congressional district level figures) are available, national figures are most representative of the effects of a California statewide program as they are a zero sum game (fees are roughly equal to the dividend). Under a national revenue-neutral fee, California comes out *far better* than these figures indicate because of our relatively low-carbon economy. The California-specific data is available upon request.

[7] See *Impact of CCL's proposed carbon fee and dividend policy: A high-resolution analysis of the financial effect on U.S. households* at https://citizensclimatelobby.org/wp-content/uploads/2016/05/Ummel-Impact-of-CCL-CFD-Policy-v1_4.pdf.

completed while a Research Scholar at the International Institute for Applied Systems Analysis, and are generally consistent with the substantial literature on this topic.) The primary driver of this outcome is that about 60 percent of increased consumer costs stemming from the carbon fee accrue not from direct energy purchases (power and fuel), but from all other goods and services purchased. Those with more money buy more such goods. They therefore have a larger "carbon footprint," and would tend to pay more in carbon fees than those with less money. Simply by charging for pollution and rebating the revenue, generally, those most able to absorb a net fee pay it while those least able receive a benefit.



	All households	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Mean net benefit (% of avg. income)	$7 (0.01%)	$280 (1.78%)	$133 (0.37%)	$27 (0.05%)	$-83 (-0.10%)	$-322 (-0.18%)
Median gain (% of HH income)	$192 (0.50%)	$279 (1.95%)	$202 (0.60%)	$161 (0.29%)	$128 (0.15%)	$93 (0.07%)
Median loss (% of HH income)	$-195 (-0.25%)	$-96 (-0.79%)	$-116 (-0.38%)	$-143 (-0.29%)	$-183 (-0.24%)	$-319 (-0.20%)
Median HH income % of FPL	326%	95%	204%	326%	489%	858%

Percent of Households Benefited, by Income quintile - US: Note that the three lowest-income quintiles show a benefit for the mean (average) household. The average net benefit for the lowest-income quintile is 1.78% of income, whereas households in the top quintile experience, on average, net losses that are a much smaller percentage of their total income, at just 0.18%.

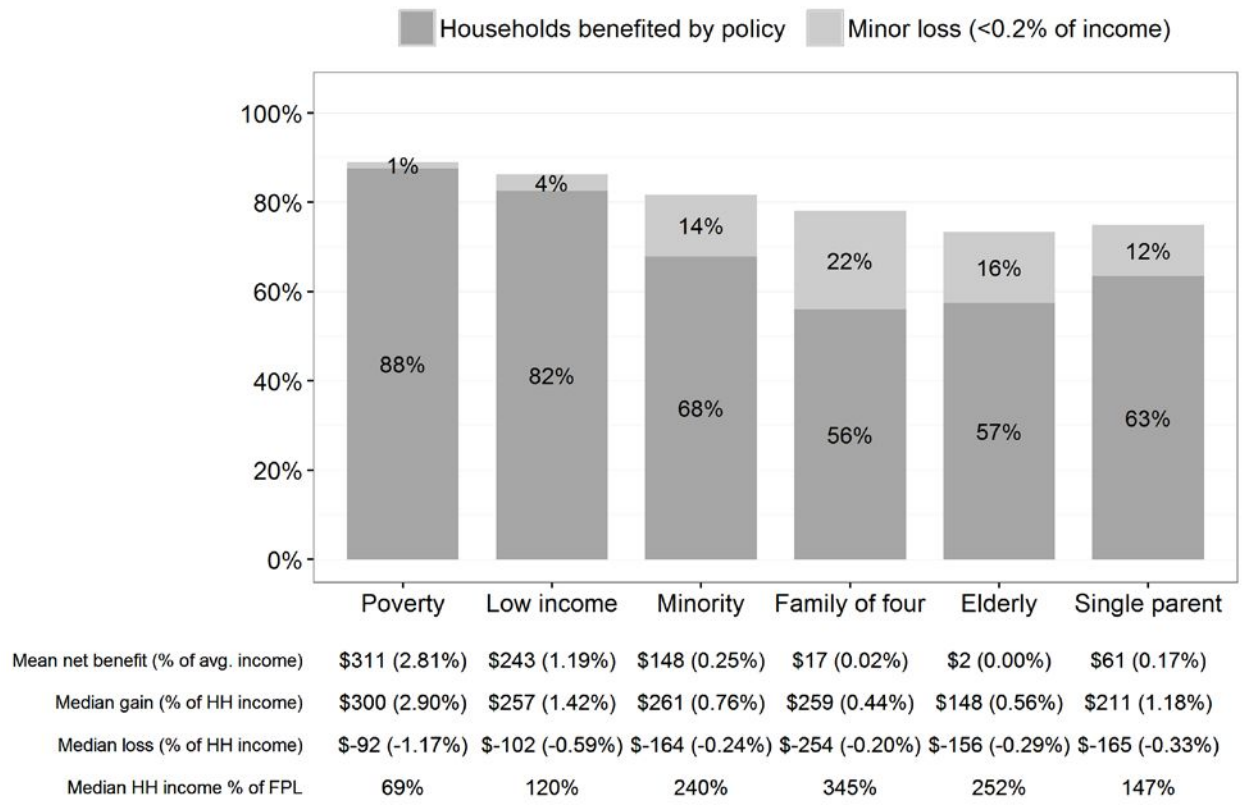
Specifically, a full 86% of families within the lowest income quintile receive a net gain (dividend less carbon fees) totaling 1.78%[8] of their income. In contrast, 85% of families in the highest quintile pay a net cost of similar magnitude, but it averages only 0.18% of their income.

[8] This is based on a $15/ton carbon fee, whereas a steadily increasing fee in California with all revenue returned, could provide a much more significant gain for the poor.

Similarly, 88% of families below the poverty line (2.81% of income), 82% of low income families (1.19%), 65% of African American families (0.205%), and 75% of Latino families (0.41%) receive a net benefit from a revenue-neutral carbon fee. This effect stems not from a program designed to redistribute income, but simply by charging the full cost of the product, including the externalities, specifically the cost of carbon pollution.

There are three reasons to believe these results understate the benefits to the population as a whole, and especially low-income households. 1. These results assume 100% pass-through of cost from fossil fuel producers to consumers. However, data indicate the actual number is closer to 87% because some costs are likely to be absorbed upstream in the economic chain.[9] This would mean the same amount of revenue is collected and distributed, but household costs would not rise by as much, so they would see a larger net benefit and more households would experience a net benefit. 2. This study includes none of the benefits that would accrue to Californians from decreased climate risk and improved air quality. 3. The study relied on people's actual spending patterns from 2008-2012. Thus, it does not reflect any of the likely changes in behavior that households or providers of goods and service would make to reduce their emissions.

[9] National Commission on Energy Policy (2007) Allocating Allowances in a Greenhouse Gas Trading System. NCEP.
http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/Allocating%20Allowances%20in%20a%20Greenhouse%20Gas%20Trading%20System.pdf



Impact by Household Type - US: This graph reports data for demographic groups of particular interest to many legislators. “Elderly” households are defined as having a household head age 65 or older, no more than two adults, and no children present. “Poverty” and “Low income” refer to households with income below 100% and 200% of FPL, respectively.

Additionally, and quite importantly, a regular climate dividend will build and maintain support for California’s emission reductions programs, as all recipients will perceive a regular tangible benefit from their dividends. With a tax swap, a utility bill credit, or an investment of funds in government programs there is potential to lessen the direct personal connection to the state’s emissions reduction programs and thus reduce public awareness and support. In fact, anecdotal surveys conducted by our members have shown that even educated professionals in the energy industry and public service are unaware that they currently receive a climate credit from the present Cap-and-Trade system on their utility bills.

At the federal level, a fully-rebated carbon fee can be effectively revenue-neutral if income from the dividend is considered taxable. (Taxing the dividend as income offsets revenue lost from any reduction in taxable corporate income from those corporations subject to the carbon fee.)[10] If a state were to rebate all revenue from a carbon fee, care may need to be taken to avoid a revenue-negative

[10] Carbon Fee and Divdend and 25% Pay As You Go http://citizensclimatelobby.org/laser-talks/25-percent-pay-go/

result, since a taxable dividend would result in some revenues diverted to the federal government, and rates of income taxation differ between state and federal tax tables.

While the maximal number of households benefitting from a climate dividend would likely be realized if all funds were returned to all households in the form of a dividend, that is not essential for the success of such a program. For instance, dividends could be sent to a subset of the population based on means testing (e.g., all households below 300% of the federal poverty line). Similarly, some revenue could continue to flow to the Greenhouse Gas Reduction Fund (GGRF), where it can support disadvantaged communities while funding emissions reduction programs as it does today. While CCL does not advocate for such means testing in our federal advocacy, we recognize it may make sense on a state level.

3. Options that integrate aspects of both a carbon tax and cap-and-trade

There are also options that CARB should consider that integrate aspects of both Cap-and-Trade and a carbon tax that could allow for greater transparency, more predictability, and greater support for both environmental justice and industry concerns. Some of those options are briefly described below:

A. **Cap-and-Trade could be modified to more closely resemble a carbon tax, and thus achieve some of the benefits.** Offsets could be eliminated or reduced. Banking of carbon allowances could be disallowed, or the banking timeframe shortened. Free allowances could be eliminated or reduced. The minimum auction floor price could be increased at a faster pace. Trading could be eliminated or limited to ensure that emissions were reduced in all parts of California. Allowances could be moved further upstream to fuel producers and distributors. Such changes would allow for greater transparency and equity, could reduce emissions leakage out of the state, and provide a more predictable price signal, while keeping much of the Cap-and-Trade infrastructure in place.[11]

B. **A carbon tax can also be designed to have mechanisms to accelerate the rate of increase if emissions reductions targets are not being met.** Such a “ratcheting mechanism” could be implemented by having CARB review actual emissions compared to the target and upwardly adjusting the price increase in future years if needed. Alternately, a formula could be used to avoid the political tensions that would arise if such an increase was needed. Such a system would be simpler to implement than Cap-and-Trade and allow for greater emissions certainty while still having more price predictability than Cap-and-Trade currently allows. The Environmental Defense Fund is in the early stages of researching such mechanisms, calling them "Environmental Integrity Mechanisms." They may be a good resource for further such safeguards.[12]

---

[11] Such a cap could closely resemble the type of cap outlined in Rep. Chris Van Hollen’s Healthy Climate and Family Security Act of 2015: https://vanhollen.house.gov/sites/vanhollen.house.gov/files/VANHOL_011_xml.pdf

[12] Ensuring Environmental Outcomes from a Carbon Tax - http://blogs.edf.org/markets/2016/11/03/ensuring-environmental-outcomes-from-a-carbon-tax/

C. **California could implement both a carbon tax and Cap-and-Trade simultaneously.** Though it would not be the most elegant policy solution, California could add a steadily-rising carbon tax on fossil fuels as far upstream as practical, while keeping the existing Cap-and-Trade mechanisms in place. The carbon tax would send a clear, economy-wide market signal at both the wholesale and retail levels with price predictability that would motivate shifts away from carbon intensive fuels. If the tax were high enough to lead to sufficient emissions reductions, the price for emissions permits would remain low, but if the tax proved to be inadequate to reduce emissions, the permit price would rise, leading to increased emissions reductions. This would allow for more price stability while also providing a "back-up plan" for Clean Power Plan compliance. Revenue from such a tax could be rebated to households, added to the GGRF fund, or allocated in some other way.

4. Specific Responses to the Scoping Plan Comparative Assessment

The comparative assessment approach to the two policies in the Draft Scoping Plan (pp 98-100) is welcome. We hope that the next revision of the Plan will carefully consider modifications and additions discussed below.

A. **Ensuring the state achieves the 2030 target**: The analysis concludes that the Cap-and-Trade policy will achieve the target while a carbon tax offers no guarantee. This may not be the case. In a Cap-and-Trade system with banking, overcompliance in earlier years can lead to undercompliance in later years, resulting in emission targets not being met. As noted above, a well-designed carbon tax can give a high level of confidence in emissions reductions and could be revised based on emissions experience over time to bring greater certainty of reaching emissions targets.

B. **Potential to protect against leakage**: The analysis indicates Cap-and-Trade has the tool of free allowances to protect against leakage and that a carbon tax has "fewer options." Sub-national carbon pricing programs inherently encounter leakage issues due to the difficulty of such jurisdictions in establishing border tariff adjustments. We encourage CARB to investigate options for creating or approximating such adjustments, as free allowances may prove inadequate at higher carbon pricing levels. Aside from border adjustments, both Cap-and-Trade and a carbon tax have essentially similar options of providing an exemption for certain industries, or some other break or subsidy to counter the effects of carbon pricing. (British Columbia's tax employed these options.) In both systems, this would put additional burdens for emissions reductions on other sectors. Any such adjustments or exemptions should be carefully designed to avoid diminishing the economic incentive to cut emissions or increasing the burden placed on vulnerable populations within the state, while also avoiding windfall profits that have been seen in other programs.

C. **Support the development of other GHG emissions reduction programs:** The analysis concludes that Cap-and-Trade is advantageous and a carbon tax has "limited opportunities for linkage." It is our sense that the goal should not be "linkages" per se but supporting other

jurisdictions in implementing effective GHG reduction programs. As noted above, the simplicity of a carbon tax makes it much more easily implemented around the country and around the world than Cap-and-Trade. Linkages with other carbon taxes are as simple as harmonizing the price per ton to eliminate the need for border adjustments, to the extent they are necessary at all. A well implemented carbon tax in California can be a model for the country and the world, allowing for wider, more rapid adoption and larger GHG emission reductions.

D. **Support the Clean Power Program and other federal programs**: Cap-and-Trade is assessed as compatible with the CPP and a carbon tax policy is not. But a carbon tax policy is compatible and specifically allowed in the Clean Power Plan:

> "The EPA also notes that the state measures plan type could accommodate imposition by a state of a fee for CO2 emissions from affected EGUs, an approach suggested by a number of Commenters."[13]

While the EPA would require a backup plan that would ensure the emissions limits are met, a carbon tax can be a key element in compliance with the Clean Power Plan.

E. **British Columbia's carbon tax:** In addition, the discussion of the British Columbia revenue-neutral carbon tax experience would benefit from a broader review of available literature to present a fuller picture of the important history, context, rationale, performance, public support, and success. See the Carbon Tax Center's "British Columbia's Carbon Tax by the Numbers" for a full analysis.[14]

British Columbia, as the pioneer in Canada with its steadily rising carbon tax, provided an early impetus for the emergence of a national carbon price. The parallels are important for California to consider carefully.

In an article in early 2016, the New York Times said:

> "[British Columbia's] experience shows that cutting carbon emissions enough to make a difference in preventing global warming remains a difficult challenge. But the most important takeaway for American skeptics is that the policy basically worked as advertised."[15]

With the tax in place, BC's economy grew more quickly that neighboring provinces. Over the

---

[13] See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule - Page 176 - https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf
See also:
http://www.c2es.org/federal/executive/epa/q-a-regulation-greenhouse-gases-existing-power#comply
https://www.brookings.edu/opinions/to-comply-with-the-clean-power-plan-states-should-tax-carbon/
http://www.c2es.org/newsroom/articles/carbon-trading-under-clean-power-plan

[14] https://www.carbontax.org/blog/2015/12/17/british-columbias-carbon-tax-by-the-numbers/

[15] http://www.nytimes.com/2016/03/02/business/does-a-carbon-tax-work-ask-british-columbia.html

years, voters and businesses warmed to the tax, and for good reasons – it is an efficient market-based approach for reducing emissions.

Canada has now made an historic announcement on December 9, 2016 that they would implement a nation-wide price on carbon.

"The Canadian government on Friday reached a deal with eight of the 10 provinces to introduce a landmark national carbon price, which Prime Minister Justin Trudeau says will help Canada meet its international climate change obligations. . . . The provinces can either implement a carbon tax or a cap-and-trade market." [16]

This presents a tremendous opportunity for California to partner with Canadian provinces as we update/extend our own price on carbon. The schedule for Canada's price on carbon is to start with a cost of $10/ton (CAD) in 2018, rising by $10/yr (CAD) until 2022 when it reaches $50/ton (CAD). California could align its carbon price with the Canadian schedule with its own carbon tax or by setting the auction floor price to align with Canada's schedule.

Conclusion

In conclusion, we believe that a carbon tax or fee can provide an effective, efficient, and equitable option for helping California meet our emissions reductions targets. We hope you will consider this option in more depth as you revise the Scoping Plan, and include a much more comprehensive analysis and side-by-side assessment of the carbon pricing options described above.

Thank you again for this opportunity to comment on your work. Citizens' Climate Lobby is happy to provide any resources or information we can to support California in developing its climate plans. Please don't hesitate to contact us.

Thank you for doing this critical work for the health and well-being of all Californians and the world.

Sincerely,

Tasha Reddy, PhD
CCL California State Coordinator
tasha.reddy@citizensclimate.org

[16] http://www.reuters.com/article/us-canada-environment-idUSKBN13Y2N0