

Unpacking the B.C. Business Council's Critique of our *Clean Economy and Jobs Plan*

Overview

Clean Energy Canada recently released *A Clean Economy and Jobs Plan for British Columbia*, along with an accompanying [technical report](#) by Navius Research, showing how B.C. can drive down carbon pollution while remaining competitive and affordable.

The B.C. Business Council (BCBC) reviewed both reports in detail, and shared their views on our findings in [a blog post](#). We welcome the feedback and, in the spirit of constructive discourse, we will respond to the Council's critique here.

The Council raises one question that we agree should be a central consideration of any climate action – namely, how to protect the competitiveness of B.C.'s industries if the province leads on reducing carbon pollution. Fortunately, there are a mix of policy tools to help industries compete and adapt to a cleaner economy. We discuss some of these in our report but we provide more detail in the section on **Protecting Competitiveness** below.

The bulk of the Council's critique relates to the assumptions embedded in our calculations, and we'll unpack those assumptions in more detail in the **Point-by-Point Discussion** below. For each comment, we present the critique in a box followed by our response.

We conclude with a counter to BCBC's call for inaction in **Where the Discussion Leads**. British Columbia can absolutely lead on climate while growing a strong economy and remaining affordable. The key is leading with smart, innovative policy, not waiting for others to pave the way.

Protecting Competitiveness

BCBC:

... any domestically-imposed input taxes (e.g., a higher carbon tax) will diminish the return on capital in most trade-exposed B.C. industries, thereby making investing in British Columbia facilities and operations less attractive for firms in these sectors. Under any realistic assessment, following the CEC playbook would cause B.C. to experience what is known as "carbon leakage" – investment (and jobs) shifting to jurisdictions with lower carbon-related costs and less stringent regulatory requirements.

This critique raises a fair concern: how would the competitiveness of B.C.'s industries be affected if the rest of North America doesn't follow B.C.'s climate leadership?

It does the climate and the province no good if businesses leave B.C. simply to pollute somewhere else with laxer laws, and we lose the jobs and revenue. It's true we did not consider a scenario where North America does not closely follow B.C.'s lead on climate policy. However, the evidence to date suggests that concerns about reduced competitiveness are often unfounded – and when they aren't, they can be mitigated.

Little evidence that competitiveness is at risk

A recent [OECD](#) review of carbon pricing (carbon taxes and cap-and-trade) found little to no impact on competitiveness in countries and jurisdictions with carbon pricing. At the Canadian level, the C.D. Howe Institute also concluded that “competitiveness impacts associated with climate change policy in Canada are likely to be relatively small for most sectors of the economy, with the exception of fossil fuel extraction industries.” (We discuss that last bit about fossil fuels the next section.)

Studies on B.C.’s carbon tax have found the same thing. An [independent review](#) of B.C.’s carbon tax found it “has had negligible effects on aggregate economic performance, though certain emissions-intensive sectors have faced challenges.” Thus, there’s little evidence that carbon pricing impacts competitiveness globally, in Canada or in B.C., except for a small group of what are known as emissions-intensive, trade-exposed sectors.

How to resolve competitiveness concerns for specific sectors

Emissions-intensive, trade exposed sectors — cement, petroleum refining and possibly LNG — likely would experience competitiveness impacts from the policies in our report if other jurisdictions did not adopt similar actions. These sectors represent two per cent of B.C.’s economy, according to the [Ecofiscal Commission](#). It’s fair game to help those industries remain competitive if others don’t act, and British Columbia knows how to do that.

Last year British Columbia announced \$22 million over three years for B.C.’s cement industry to help it transition to cleaner-burning fuels. Australia’s short-lived carbon pricing scheme included transition support for its emissions-intensive, trade-exposed sectors, as do Quebec and California’s cap-and-trade systems. Tax breaks, infrastructure investments and border adjustments are other ways jurisdictions can mitigate this issue.

British Columbia should be cautious about which industries and which tools to use — not all industries that claim impacts actually are adversely affected — but there are many options and precedents to draw on.

This is the approach B.C.’s Climate Leadership Team recommended in its [submission](#) to government.

Point-by-Point Discussion

This section follows the order of B.C.’s critique.

BCBC:

... In reality, the GDP and job growth figures outlined in the CEC report are basically what could be expected to happen in B.C. over the next 35 years under any “normal” scenario: real GDP growth of around two per cent per year, and approximately 25,000 additional jobs each year. These numbers reflect averages over the past two decades. So the CEC report is arguing that B.C. can introduce a suite of aggressive climate policies and regulations without affecting overall economic growth or prosperity.

That’s right. The economic models we used — the same ones governments across Canada use to assess policy impacts — show that aggressive climate policy will have little impact on economic growth in B.C. This shouldn’t come as surprise. It’s what B.C.’s Climate Leadership Team found in its analysis, and it is consistent with B.C.’s experience with the carbon tax and other policies to date.

In addition, our report is based on two economic models. One (CIMS) considers technology adoption and human behavior, the other (GEEM) is a macroeconomic model of Canada and the United States that simulates how the economy evolves under different conditions. Our results are not an

extrapolation of historical trends; rather, they are a detailed simulation of how B.C.’s economy would likely respond to climate policy.

BCBC:

One of the biggest shortcomings in the report is that a full picture of the “business as usual” projections compared to a scenario where the proposed “deep greenhouse gas reduction” policies are instituted is absent. In trying to evaluate the impact of policy changes, the standard modelling approach is to prepare a “base case” using assumptions about population growth, energy prices, other commodity prices, external economic growth, and so on.

The objective of our work is to forecast the emissions, economic growth, jobs and affordability of British Columbia if it meets its climate targets. This objective is in line with the Premier’s goal to grow B.C.’s economy while leading on climate. To satisfy that objective we focused on the deep greenhouse gas scenario — a scenario where B.C. meets its climate targets.

This is a reasonable scenario since acting on climate change is a priority of B.C., the federal government and the international community. Business-as-usual when it comes to greenhouse gas emissions is no longer an acceptable option.

Modelling exercises that have an objective of comparing to business-as-usual often include a base case. Since that wasn’t our objective, we did not focus on that base case. We nevertheless did provide a few comparisons for context and are willing to share more detail if BCBC is interested.

BCBC:

The lack of discussion of the province’s export sector is an especially problematic feature of the CEC report in light of the fundamental importance of the export base to economic growth, jobs and prosperity for a small regional economy like British Columbia.

As listed in the report, we provide anticipated job growth numbers for 2025 and 2050 for a variety of major sectors in the province, including forestry, mining, natural gas, agriculture and agrifood, and manufacturing. The table below summarizes jobs growth projected for these sectors.

Table 1: Direct jobs by industry by year

Industry	2015	2025	2050
Forestry	63.1	78.6	94.8
Mining	13.44	14.56	14.7
Natural Gas	20.1	22.9	22.4
Agriculture and agrifood	70.5	85.9	99.6
Manufacturing	95.2	119.5	146.4

BCBC:

While many of these assumptions relating to energy-related investments by households are questionable, the biggest issue in this area of the modelling is the fact that it is based on two “archetypal” households (low- and high-energy consuming households), which both are presumed to adopt some of the best and most advanced energy-saving technologies available.

Our work shows that, under the model assumptions, the technologies we’ve selected are what most people would purchase in the given time period. That is, the majority of truck owners in 2030 will be buying trucks with a fuel economy close to 8 litres per 100 kilometres (l/100 km), and the majority of car owners in cities will be buying electric vehicles. This may *seem* advanced, but the number-one selling truck in Canada – the Ford F150 – already gets 9.2 l/100 km on the highway. Battery prices for electric vehicles have plummeted by 50 per cent over the last five years, and if Tesla hits its target prices will drop another 30 per cent by 2017.

These assumptions include intangible costs based on empirical evidence from households meant to help simulate actual household behaviour. These intangible costs include costs like technology risk (new technologies are sometimes riskier than more established technologies) and people’s preferences for low capital costs (the “sticker-shock” effect where someone may prefer to buy a cheaper fridge that will be more expensive to run, rather than the more expensive fridge that will save them money in the long-run).

As today, many households will choose different vehicles or heating technology than we assume. Someone may want the future version of the V8 King Ranch F150, or they may want outdoor heaters. These people are presumably willing to pay more money to fuel those choices. But it can go the other way too: someone living in the city, taking an already-electric sky train to work and living in a house that’s electrically heated, would notice very little change in their lifestyle as the province ramps up its climate efforts.

BCBC:

The report also says little about the interconnections between industries that ENGOS love to disparage – mining and energy in particular – and growth in the knowledge, technology and manufacturing sectors in terms of their use of raw material inputs as well as the demand that energy and other resource-based industries create for locally-provided services such as transportation, engineering, environmental consulting and remediation, finance, law, accounting, executive search, etc. In our view, a (much) smaller primary industrial sector would produce significant negative spinoffs for many parts of B.C.’s diverse services sector. But this is not taken into account in the CEC modelling.

The analysis we summarized in our report uses a macroeconomic model specifically designed to account for the interaction between different sectors in the economy. This type of model accounts for and tracks service sector jobs supported by the mining industry and even restaurant workers. It does this for all sectors in the B.C. economy.

As discussed previously, our work highlights the mining and energy sectors, which in turn drive growth in other sectors in the model, including services and renewable energy. Table 1 above summarizes job growth for the mining and energy sectors, along with some of the other sectors we considered.

BCBC:

An even more problematic assumption in the CEC report is that other North American jurisdictions will follow BC's aggressive actions to reduce carbon emissions, with little delay.

Carbon policies are catching on

North America is catching up to B.C.'s leadership and there's good reason to believe this will continue in the future.

In Canada, Alberta recently released its plan to phase out coal over 15 years and put in a \$30 per tonne carbon price. Ontario has joined Quebec and California with cap-and-trade, and in October Quebec announced its electric vehicle strategy. Saskatchewan and Manitoba have both announced new policy actions as well. Meanwhile, Prime Minister Justin Trudeau has committed to negotiate a national carbon pricing standard with the provinces before the end of the first quarter in 2016.

The United States has three major regulations in effect or being developed to drive down carbon pollution. The Clean Power Plan to reduce emissions in the electricity sector, fuel economy standards to reduce transportation emissions, and a new set of rules to reduce emissions in the petroleum and natural gas industries. Collectively these policies cover 60 per cent of U.S. emissions and these standards will likely become more stringent over time. This is in addition to a range of state-level policies. While these are not carbon taxes, they imply carbon prices.

All signs point towards to increasing carbon policy, not stagnation.

British Columbia can accelerate this trend

British Columbia can also help accelerate this trend. For example, it's a member of the Pacific Coast Collaborative – an agreement between British Columbia, Oregon, Washington and California to adopt and maintain specific carbon policies. Concerning Canada, U.S. President Barack Obama also recently said that, “our close friendship on a whole range of issues including energy and climate change should provide the basis for even closer coordination between our countries going forward,” and has promised to engage with Canada's federal government to “deepen that cooperation.” That commitment marks a clear opening for the Government of British Columbia to work with Ottawa and B.C.'s biggest trading partner on carbon policy.

Carbon policy involves more than carbon pricing

We need to look beyond carbon pricing when comparing to other jurisdictions. Other policies like renewable energy standards, building standards and vehicle efficiency standards also implicitly price carbon. Since carbon taxes have faced a lot of political opposition, many countries – including the U.S. and China – have opted for regulations rather than an overt price on carbon. However, such regulations have a cost, which is often higher than similar carbon pricing proposals.

Other North American jurisdictions are implementing climate policies, many of which are stringent, though not all involve pricing carbon explicitly. It's therefore reasonable to consider a future where the carbon policy stringency of North America is similar to B.C. even if the actual policies are not the same.

BCBC:

The CEC report does not adequately consider the implications of its recommended policies for B.C.'s trade-dependent economy, nor does it recognize that most of our existing export industries are quite energy-intensive and cannot pass on higher input costs to their customers. In addition, the report pays little attention to the wider global context facing B.C.'s export industries.

We used a macroeconomic model specifically to consider this concern. The extent of the competitiveness impact is determined in our methodology through two key dynamics:

1. **The trade of goods and services between regions.** An increase in the costs of producing a good or service in one region relative to another can affect the trade of that good or service in the model. This only applies to goods and services that can be traded, which is determined using Statistics Canada input/output data.
2. **The flow of capital.** We assume capital used for new investments is fully mobile between all regions in the world. If the costs of producing a good or service increase in one region relative to another, "investors" have the ability to move capital for new investments to the region with lower costs, in order to get a higher return on their investment. Again, this only applies to goods and services that are tradable.

Where this discussion leads

BCBC:

...while a higher BC carbon tax may make sense over the long-term, the province would be wise to refrain from taking steps that further increase energy and other business operating costs here until there is persuasive evidence that most other Canadian and U.S. jurisdictions have embraced and are actually implementing stronger carbon pricing policies.

We firmly disagree with the Council's conclusion (above). British Columbia hasn't waited for other jurisdictions to drive down carbon pollution, and we don't need to wait before continuing to take action. The province successfully met its 2012 carbon pollution target while growing its economy more quickly than the Canadian average. It led the world in this pursuit, and the world celebrated it for doing so.

Premier Clark has set an ambitious and achievable goal to drive down carbon pollution and grow B.C.'s economy. British Columbia's Climate Leadership Team just provided the government with an innovative path to get there.

BCBC would be better serve this province by recommending how B.C. can reduce its carbon emissions while maintaining the competitiveness of the Council's members. We look forward to that conversation.