

Intelligence MEMOS



From: Maria Carvalho

To: Catherine McKenna, Minister of the Environment and Climate Change and Bill Morneau, Minister of Finance

Date: January 15, 2019

Re: **CARBON TAXES NEED NOT HURT THE MIDDLE CLASS TO BE EFFECTIVE**

The 'gilets jaunes' protests in France provide a powerful lesson of why energy and carbon taxes need to be designed to address their impact on average families, let alone the most socially vulnerable.

First, it is important to understand that a carbon tax is not the same thing as an energy tax – though it is easy to mistake it for one.

It is true that, in 2015, 73 percent of final consumption of all energy in Canada emitted greenhouse gases. So carbon taxes will feature as a component of the final price that consumers pay for energy – especially as the carbon price is set to increase for subsequent years.

Nevertheless, a carbon tax is different from an energy tax in two fundamental ways. Understanding these differences is crucial in understanding why a carbon tax is both relatively effective in reducing greenhouse gas emissions and can be designed to not hurt families whose budgets are already stretched.

Energy taxes place a fixed cost on all energy – including clean energy. Despite the name, the UK's Climate Change Levy went from being a carbon tax to an energy tax when it removed the tax exemption for renewable electricity generation in 2015. Therefore, the tax burden on consumers is based on the total volume of energy they consume, regardless of its carbon content.

Carbon taxes, on the other hand, impose a fixed unit cost on the carbon content of the fuel consumed. This fixed cost changes the relative prices of fuels based on their carbon intensity. As coal has twice the carbon content of natural gas, a single carbon tax can create a significant price incentive to switch between these two fossil fuels. As the carbon tax rate increases, it can create a further incentive to switch from natural gas to renewables.

Indeed, the introduction of the carbon price floor in the UK power sector in 2013 encouraged the replacement of coal by natural gas and low-carbon fuels. And between 2012 and 2016, the country halved the carbon intensity of its power generation.

Carbon pricing was also the cheapest instrument in reducing emissions to consumers, in comparison to other fiscal instruments. According to the [UK energy regulator](#), the cost of abating one tonne of greenhouse gases using the carbon price was £52 in 2016, while subsidies for renewable electricity cost between £133 and £308 for each tonne of greenhouse gas emission reduced.

While energy taxes such as fuel taxes are an important mechanism to raise revenues for government budgets, the main purpose of a carbon tax is to shift consumption away from carbon-intensive fuels through the imposition of the carbon tax itself. Therefore, revenues raised from a carbon tax can be returned to consumers, while still effectively achieving a reduction in the carbon-intensity of energy use.

Indeed, [according to a report that synthesizes findings from 38 empirical studies](#), using carbon tax revenues to increase government budgets is the least popular amongst voters.

Reducing the cost-burden of switching from high carbon fuels, particularly to the most socially vulnerable, is the most popular option. However, voters do not believe a carbon tax alone will change consumer incentives, so they support using carbon-tax revenues for subsidies in order to drive down greenhouse emissions.

This can be done by earmarking carbon tax revenues for low-carbon subsidies, with a larger proportion going to those who are less able to afford the switch to low-carbon fuels.

Part of the problem in France is that the hugely unpopular fuel tax – now suspended – was to finance a tax credit for employment and competitiveness, not for easing the pain of switching from carbon-intensive fuels. The key lesson from those protests is that governments that implement carbon taxes, without explicitly addressing the distributional implications of the tax, do so at their peril.

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