Carbon Tax Developments in Chile

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Long-awaited Tax Reform

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8,200 MM$USD (3%GDP)

Government’s Program

Educational Reform

Companies

20% (2014)

Gradual Increase

25% (2017)

People

40% (maximum personal income tax rate)

Decrease

35% (2017)

Products

Increase tax

alcoholic and non-alcoholic (sugar) beverages

Emissions (GREENTAXES)

Stationary Sources

Mobile Sources
Green Taxes (Article 5)

Stationary sources

• An annual tax on emissions from boilers and turbines with a thermal input greater than or equal to 50 MWt (thermal megawatts).

• Two environmental externalities to be addressed:

  i) Global damage regarding climate change: tax on carbon dioxide (CO$_2$) emissions;

  ii) Local damage to health: tax on emissions of Particulate Matter (PM), nitrogen oxides (NOx) and sulphur dioxide (SO$_2$),
Local damage to health: PM, Nox, SO₂

- Amount will be established in accordance with the valuation of such damage, on the basis of a floor value set in the law (i.e., 0.1$ USD per ton of local pollutant).

The draft points out that the tax should not be considered in the determination of the immediate marginal power cost, when this affects the marginal generating unit of the system (in line with provisions in article 149 of the General Law of Electrical Services).
Green Taxes (Article 2)

Mobile sources

• An additional tax on the import of most polluting light vehicles, using diesel as fuel, in order to encourage the use of less polluting vehicles.

• The formula includes the estimation of “urban performance”, based on a mix of measured emissions of hydrocarbons, carbon monoxide and CO₂.
CO\textsubscript{2} and local pollutants preliminary findings

Ministry of Finance

Projection period: 2015-2023

Two scenarios:

S1: Normal hydrologic conditions (baseline)

S2: Increased water availability

Percentage of energy taxed:

S1: 50% in 2017-2018, increasing afterwards as thermal power generation increases overtime.

S2: 48%-49% same period, stabilizing at 50% in the long term.

Annual average revenues estimated at:

S1: 265 MM$USD
S2: 247 MM$USD

Highest revenue component, both S1/S2:

CO\textsubscript{2}, averaging 83% of total revenues in 2017-2021

Most impacted energy generation, both S1/S2:

Coal-fired power plants, averaging 90% of total revenues in 2017-2021
CO2 Tax: Inputs from analyses from other sources

MAPS (Mitigation Action Plans and Scenarios)

Catholic University of Chile (2014)

- The impact on the cost of generation averages 2.7$USD/MWh (as reference, the average market price of the Interconnected Central System during 2013 remained around 100 $USD/MWh).

- The additional cost of energy would be close to 3%, which would translate into approximately 2% of the current cost of residential tariff.

Modelled different scenarios for the effect of a tax of US$10, 20 and 40 - results are pending.

- 3 million tons of CO₂ by 2020 (6% of total projected emissions of electricity generation and other transformation centers)

- 6 million tons of CO₂ by 2030 (11% of total projected emissions...)

GHG reduction explained mainly by a 3% replacement of coal-fired generation by wind and hydro:

Introduction of the tax, even at a low initial rate, can already display behavioral changes towards a more sustainable energy generation.
CO2 Tax: Analytical work needed

- Entry into force in 2017.

- Significant upstream policy analysis to understand the interaction (and impacts) of this carbon pricing instrument with existing policies and its alignment with economic growth and with mid- to long-term mitigation and development goals.

- Immediate analytical work:
  - Better understanding of how the carbon tax induces technological changes in the energy sector.
  - Interaction of carbon tax with existing policies and regulations (i.e., thermoelectric power plant emission norm).
  - Impacts on competitiveness, on end users.
  - Potential tax rises and their impacts in the whole economy.
  - Complementary/facilitative measures (especially looking at cap & trade and offsets)
Status of discussion at Congress

May ´14:

Lower House approved the initiative in all respects and now passes to the Senate’s Finance Committee.

Some issues that might arise during this discussion include, for example: separating debate on CO₂ tax from that on local pollutants, exclusion of plants based on biomass, compensations/offsets recognized for the calculation of the tax base, etc.
Thanks for your attention.