

CLIMATE SOLUTIONS PORTFOLIO

#3: Carbon Pricing

Background

A carbon tax is designed to correct a negative externality. By putting a price on CO₂ emissions from burning fossil fuels, it causes people to seek to reduce their emissions - similar to a tobacco tax. It also sends a clear social and political sign, and shows political leadership. See www.carbontax.org

Sweden introduced its carbon tax in 1991 at 0.25 SEK per kg (\$40/tonne), rising in 1997 to 0.36 SEK (\$57/tonne). Industry is charged at a 50% rate, and biofuels are exempt. Commercial horticulture, mining, manufacturing, and pulp and paper are exempt for competitive reasons. When it was introduced, Sweden's energy taxes (among the highest in Europe) were cut by 50% to compensate. Sweden's Ministry of Environment estimated that CO₂ emissions in 1995 were 15% lower than if it and other energy taxes had not been introduced, and that CO₂ emissions would be 20-25% lower by 2000.¹ It led to an increased use of biomass for district heating and by energy producers, but not to the industrial innovations Swedish policy-makers had hoped for.

Norway, Finland, Holland, Denmark, Austria, Germany and Italy have all introduced carbon taxes. The 25-member EU is supporting a carbon tax of \$13/tonne, increasing to \$33 for 2008-12. Norway's carbon tax (\$50/tonne) caused StatOil to sequester the CO₂ emissions from its Sleipner offshore gas field, since it was cheaper than paying the tax. The Danish Ministry of Finance has estimated that their \$20 tax led to a 4.6% reduction in CO₂ emissions (*A Review of Carbon and Energy Taxes in EU*: www.tinyurl.com/2ve2jm).

Proposed Measure

- Phase in a retail carbon sales tax on all fuels, based on their carbon content, rising to \$100/tonne of CO₂ as part of a wider package of climate-related fiscal measures. \$100 would add 23 cents to the price of a litre of gas. The UK's Stern Review estimated the future cost of climate change at \$100 per tonne, which provides the basis for this price, but a carbon tax lever can be adjusted and fine-tuned to avoid harsh impacts.
- Place a similar CO₂ equivalent tax on methane, nitrous oxide and the F gases.
- To make the new tax revenue neutral, reduce income taxes or PST; increase taxable thresholds; issue an annual flat per capita energy refund; or link the tax to consumer efficiency upgrade programs, where they would see the benefits being returned to them.
- Produce a monthly fuel surcharge report, and make it mandatory for taxi drivers and truckers to pass the price on to their customers, to avoid competitive pressure to absorb the price increase.

Benefits

- Consumers and industry will seek to reduce their carbon emissions in response to the price signal.
- Zero and low carbon technologies will receive a market advantage, encouraging the growth of BC's smart energy technology sector.
- If Denmark's 4% factor is right, a \$20 tax would reduce BC's 68 MT by 2.7 MT. If Sweden's 15% factor is right, a \$50 tax would reduce BC's emissions by 10.2 MT.

Execution

- Ministry of Finance – review the impacts of a carbon tax ranging from \$50 to \$500/tonne.
- Commission a Position Paper for public consideration to start an informed debate.
- Cabinet – give approval for the serious exploration of carbon pricing in BC.

#3 in a Series July 2007 Written and Researched by Guy Dauncey

¹ Can eco-taxation be effective in reducing carbon emissions? www.colby.edu/personal/t/thtieten/eco-taxation.htm.
See also Economic Instruments in Practice 1: Carbon Tax in Sweden www.oecd.org/dataoecd/25/0/2108273.pdf