Implications of carbon pricing for MA: an economic analysis

"Analysis of a Carbon Fee or Tax as a Mechanism to Reduce GHG Emissions in Massachusetts"

An evaluation prepared for the Massachusetts Department of Energy Resources, Dec. 2014

***British Columbia (BC) precedent*:** BC provides a precedent for Massachusetts, having instituted a revenue-neutral carbon tax in 2008 that is now $30/ton. Since 2008, BC cut its GHG emissions substantially compared to the rest of Canada, while experiencing economic growth slightly higher than the rest of its nation.

***Economy-wide coverage of the fee/tax*:** it would be administratively feasible and effective for the state to impose a fee/tax on our major sources of carbon dioxide emissions: direct combustion of fossil fuels and electricity consumption. However, the small emission cuts from including the electric sector argue for considering exempting it from the fee/tax.

***Fee/tax rates modeled*:** we modeled three scenarios. In all three, the fee/tax begins at $10/ton and rises to $30/ton in year five (replicating British Columbia). In following years through 2040, rates rise gradually to either $50, $75, or $100/ton. At $30/ton, residential natural gas prices would rise by about 12%.

***Feasible system for returning all funds to the public*:** it is feasible to return all of the revenue to households, businesses, and institutions through tax cuts or rebates. The revenues could be divided into two parts: (1) funds obtained from households, which would be returned to this sector as a whole, and (2) funds obtained from businesses and institutions, which again would be returned to these sectors.

***Positive impacts on economic indicators*:** impacts from the fee/tax would be small in relation to the overall size of the state economy. However, economic indicators such as disposable personal income, personal income per capita, and the labor share of state income would rise due to the fee/tax.

***Positive impacts on employment*:** employment is forecasted to grow by 4,000 to 10,000 jobs by 2030 due to the tax/fee, primarily because the state would be spending less on importing fuels and energy. Households at the lowest income levels would see the greatest job gains.

***Carbon dioxide emissions would fall substantially*:** the greater the fee/tax rate, the greater the drop in pollution, with carbon dioxide emissions falling by 5% to 10%, larger than almost any of the state's other greenhouse gas reduction policies are projected to achieve.

***Most households can be fully compensated for rising prices*:** fossil fuel cost increases will be relatively small, especially in the early years of a fee/tax. Under a system that gave equal rebates either per person or per household, or a mixture of these designs, on average low- and moderate-income households would have a net gain or come out about even. We find that a per-person rebate, or a mixed system, would be more equitable than a per household rebate.

***Businesses and institutions can be compensated*:** a system that gives all businesses, non-profit institutions, and governments rebates in proportion to their shares of either 1) percentage of total state employment or 2) percentage of state payroll, would leave most entities with small gains from the fee and rebate combined, while for most others the fee would exceed the rebate by only a small amount in relation to their overall operating costs.

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Read the full report at: http://www.mass.gov/eea/docs/doer/fuels/mass-carbon-tax-study.pdf