

The Role of Non-CO2 Greenhouse Gases in Climate Policy: Analysis using the MIT IGSM

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A CGE model is used in an integrated modeling framework to examine the economic and climate impacts of various low cost (\$15/ton carbon equivalent) non-CO2 GHG policies. We estimate that global mean surface temperature in 2100 could be decreased by 0.57 degrees C with a non-CO2 policy, of which more than half the reduction is due to methane alone. In comparison, Kyoto maintained in its current form for the remainder of the century would yield only 0.30 degrees C temperature reduction, with a significantly higher cost (as measured by net present value of consumption over the century). A further benefit of methane reduction is a 5% decrease in global mean tropospheric ozone concentrations.