



Challenges in Quantifying Optimal CO₂ Emissions Policy: The Case of Electricity Generation in Florida

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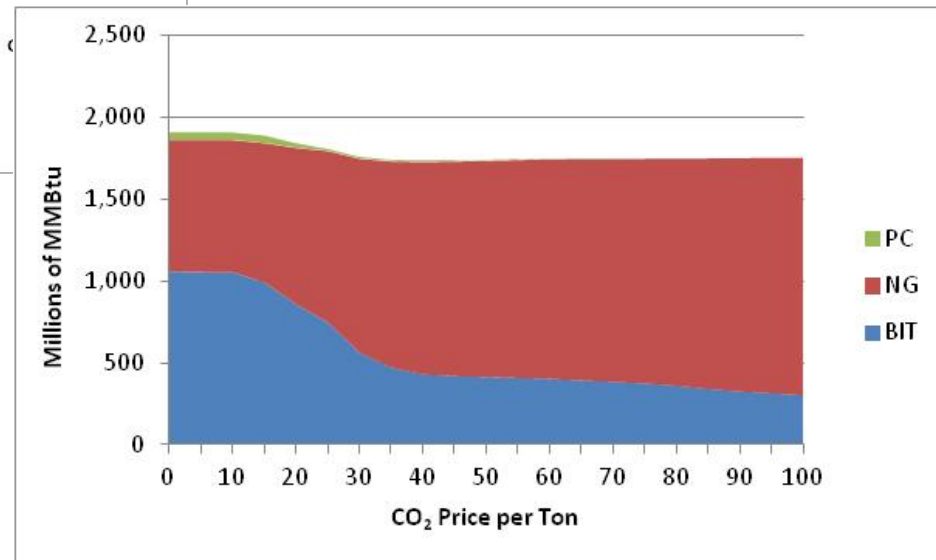
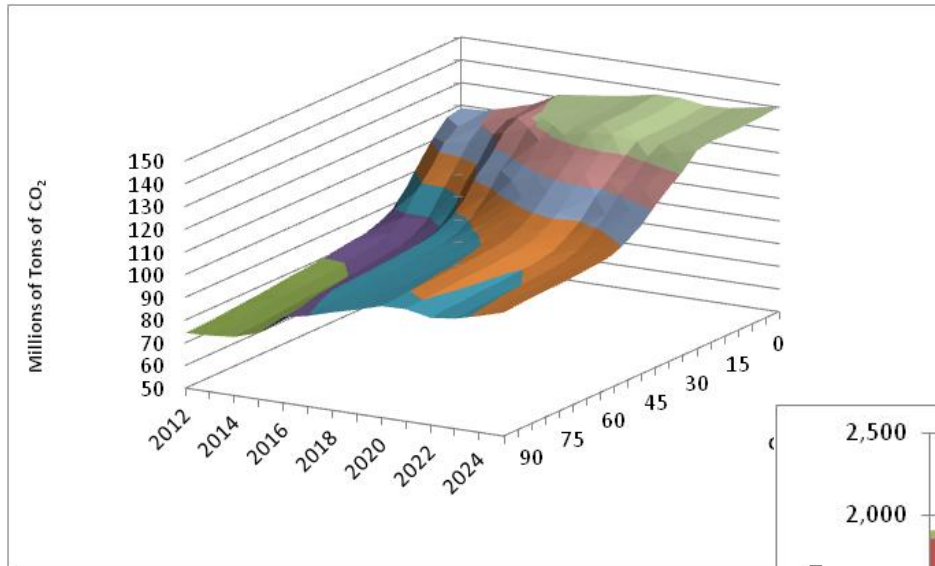


“The Carbon Dioxide Problem”

- Widespread recognition began in the 1970s
- Woodwell, et al. submit “The Carbon Dioxide Problem” (1979) for U.S. Senate Committee on Government Affairs report
- IPCC established in 1988 and (with Al Gore) awarded 2007 Nobel Peace Prize
- Considerable debate remains on the marginal costs and marginal benefits of CO₂ abatement

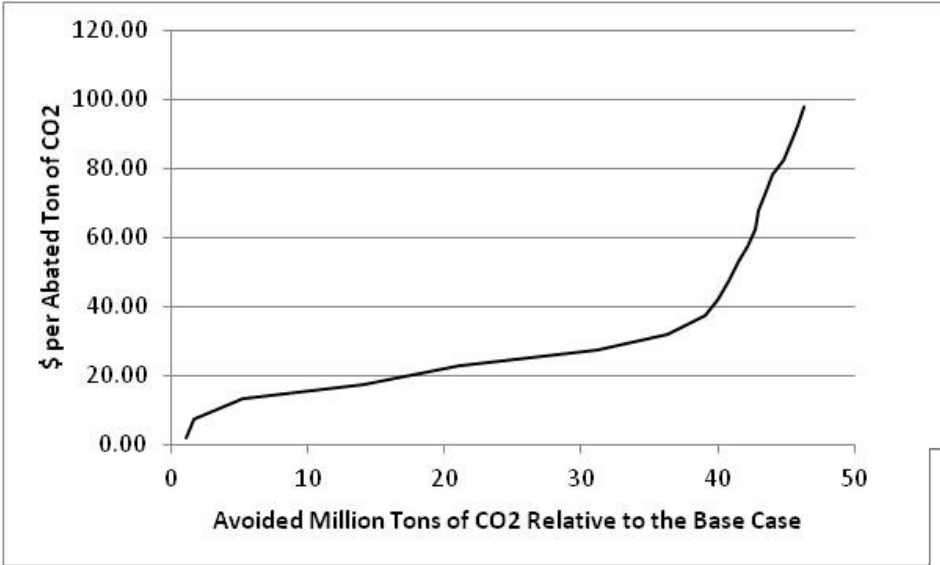


Marginal Emissions Effects of CO₂ Price



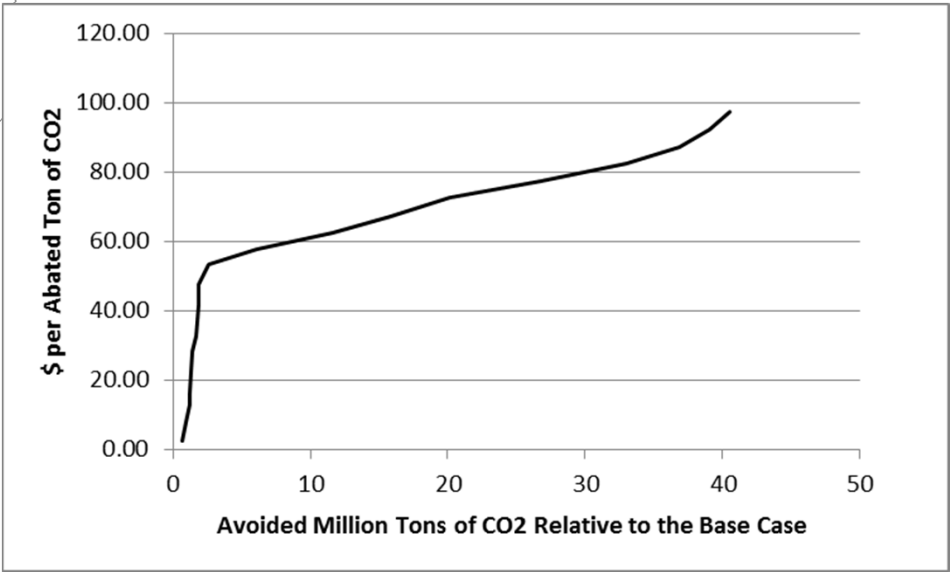


Incremental Costs of Abatement



2015 Base Case

2015 High Gas Case





Conclusions

- Marginal effects of CO₂ pricing are dynamic
 - Vary across years
 - Vary depending on price
 - Vary depending on generation mix
- Cost curves may not be well-behaved and this can complicate the determination of what is ‘optimal’
- Understanding of marginal costs and marginal benefits are necessary, but not sufficient, for formulation of policy