The Economics of Climate Change Legislation in North Carolina

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Climate Change Policy in North Carolina

- **LCGCC founded in 2005**
- **North Carolina Climate Action Plan Advisory Group (CAPAG) to focus on "*economic opportunities and co-benefits associated with potential climate mitigation actions*" CAPAG Background memo, February 16, 2006**
- **Two October 2007 Reports:**
  - **CAPAG Report – 56 mitigation options**
  - **Report on Appalachian State University (ASU) and results from North Carolina Energy Scenario Economic Impact Model (NC-ESEIM) – analysis of 31 options**
- **ASU report of February 2008 David Ponder, Jeffrey Tiller and Jason Hoyle, *Economic Impact Analysis of Various Climate Mitigation Options for North Carolina,* Appalachian State University Energy Center**

My Comments Today

- Cost-Benefit Analysis: Why we need it
- Eight CAPAG Recommendations
  - CAPAG Analysis and BHI Critique
  - ASU Claims and BHI Critique
- BHI Analysis: Identification of Negative Economic Effects
  - Energy
  - Transportation
  - Cap and Trade
- Summing up: Where does that leave the case for climate change legislation?

Cost-Benefit Analysis: Why We Need It

- Where it came from
- What is required
- Dos and don’ts

Cost-Benefit Analysis:
Where it Came From

- **"Divide half a Sheet of Paper … into two … Columns; writing over the one Pro, and over the other Con….I have found great Advantage from this kind of Equation in what may be called Moral or Prudential Algebra."** **Ben Franklin, September 19, 1772**
- **"Each agency shall…propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation exceed its costs."**
  Presidential Executive Order 12866, September 30, 1993

General Assembly of North Carolina: Charge to LCGCC

"The Commission shall conduct an in-depth examination …[that] shall include…the costs [and benefits] of any action taken by the State to address global climate change." **Session Law 2005-442.**

Cost-Benefit Analysis:
CAPAG Report

"Joint fact finding … will include…final benefit and cost analysis and related analysis of secondary impacts and ancillary and feasibility issues as needed." ***Report*****, p. A-8**

Cost-Benefit Analysis:
What is Required?

- **Benefits = dollar value of resources (labor, capital) saved or final goods (electricity) provided**
- **Costs = dollar value of resources used or final goods sacrificed**
- **Present Value of Net Benefits: greater than, less than or equal to zero?**

Cost-Benefit Analysis: Do's

- Do account for the capital, integration and operating costs of the projects
- Do understand what constitutes a social benefit – here the only benefit to North Carolina consists of reduced GHG emissions from North Carolina

Cost-Benefit Analysis: Another Do

- **Do understand that, absent benefits to NC from reduced GHG emissions, the project fails a cost-benefit test**
- **Because net benefits are negative, a legitimate cost-benefit analysis will show net losses, not gains**
- **That means *fewer* jobs, *reduced* investment, *reduced* GDP**

Cost-Benefit Analysis: Don’ts

- Don’t fail to account for the goods that must be sacrificed to capture reported “savings”
- Don’t use multipliers
- Don’t ignore price “distortions”
- Don’t count jobs as a benefit – jobs are a cost

Cost-Benefit Analysis: On Jobs

- Job gains, a proxy for benefits but only when distortions are removed
- Job losses, a proxy for costs but only when distortions are created
- New jobs – a benefit only if they add more value than the jobs they displace

CAPAG Recommendations:
Energy Supply and Demand

- **Dedicate 1% of utility revenues to public benefits programs (energy efficiency funds)**
- **Environmental Portfolio Standard (EPS) of 10% by 2017 and 20% by 2020**
- **Dedicate 1.5% of utility revenues to demand management programs.**
- **Institute Public Benefits Charge on Utility Bills, $8.44 per customer**

CAPAG Recommendations:
Transportation

- **Assess vehicle surcharge on high-emission vehicles (average $7.25/car for 5.1 million cars)**
- **California Vehicle Emission Standard**
- **Bio-Fuels Bundle, replace 10% of Gasoline and 5% of Diesel by 2010, 25% and 20% by 2025**

CAPAG Recommendations: Cap and Trade

- Emissions cap of 5.8 million MMTCO2 for covered sectors/gases by 2012, declining to 1.7 MMTCO2 by 2050
- Coverage includes:
  - Facilities that use more than 5,000 tons coal/year
  - Petroleum and coal-based facilities
  - Chemical facilities that produce or import fuels that emit greenhouse gasses
- Allowance trading, borrowing and banking are permitted

CAPAG on Benefits

"Because we do not have good information on the dollar value of GHG reduction benefits, we use physical benefits instead, measured as MMTCO2e." ***Report*****, p. *D-2***

Cost-Benefit Analysis:
As Rendered by CAPAG

- Benefits = 0.
- Costs = energy saved, treated as a cost reduction and with a minus sign
- Net benefits = 0 – (–)Costs
- Thus, net benefits are positive

CAPAG Findings

Recommendation	GHG Reduction (MMtCO2e)	NPV of Cost Change ($ million)
Energy Supply and Demand Proposals	322.5	- 2,502.2
Transportation Proposals	95.6	- 3,490.0
Cap and Trade Proposal	47.4	284.0
Total	465.5	- 5,708.2

Report, pp.I-12 – I-14, G-1

BHI Critique

- **Energy:**
  - **If the private benefits are really so large, why are consumers not taking advantage of them already?**
- **Transportation:**
  - **Vehicle surcharges: $37 million of additional spending per year will generate more than $860 million per year in savings – a return of 2,300%!**
  - **Tailpipe standards: If vehicle upgrades save on fuels, why don't drivers demand the upgrades?**
- **Cap and Trade: Underestimates cost**

ASU Claims, October 2007

- Increase employment in the state by about 23,500 annually – 325,000 new jobs by 2020, 8% of the current number of jobs or 61% of existing manufacturing jobs
- By 2020:
  - Boost income by over $14 billion
  - Raise Gross State Product (GSP) by $20.67 billion

ASU Claims, February 2008

- One example:
  - Renewable Energy Production Subsidy – incentives of $0.005 per KWh of electricity
  - Renewable Portfolio Standard – 12.5% of electricity sales from renewable sources
  - Biomass Production subsidy – $1.27/MMBtu
- Economic "benefits" – in 2020:
  - 4,750 jobs
  - $268 million in income
  - $447 GSP
- Why not double all the incentives - $0.010 per KWh, 25% of electricity sales, $2.54MMBtu? Why not quadruple the incentives?
- Why not double or quadruple the benefits?

Moral

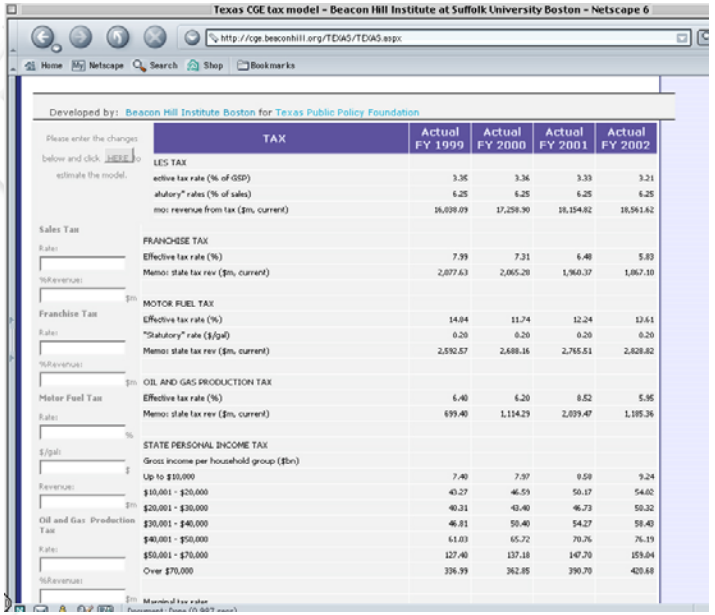
- GHG mitigation is a conceivably valuable goal
- But these proposals would induce consumers and producers into substituting less efficient for more efficient ways of consuming and producing
- The result will be job, income and production losses, not gains

One ASU Economist on ASU Findings

"Using a simple supply and demand analysis, … renewable energy forcing will increase the costs of production….The increased production costs will decrease the supply of goods and services and prices will rise." John Whitehead, "Climate Policy is Not Likely to Increase Jobs," posted on http://www.env-econ.net/2007/10/climate-policy-.html, October 24, 2007

BHI Analysis of Economic Impacts

- State Tax Analysis Modeling Program (STAMP) used to estimate the effects of proposals to reduce greenhouse gas emissions
- Inputs. Changes in: tax rates and, government spending, energy and transportation costs
- Outputs. Changes in: employment, investment, state fiscal stance, wage rates and capital stock compared to the baseline of no changes



Energy Impacts

($ millions)

Variable	2011
Net Employment (Number of Jobs)	-2,473
Investment	-76.7
Real Disposable Income	-242.5
Real State GSP	-360.3
State and Local Revenue	170.3

Transportation Impacts

($ millions)

Variable	2011
Net Employment (Number of Jobs)	-1,202
Investment	-27.7
Real Disposable Income	-46.5
Real State GSP	-168.0
State and Local Revenue	-17.5

Cap and Trade Impacts

($ millions)

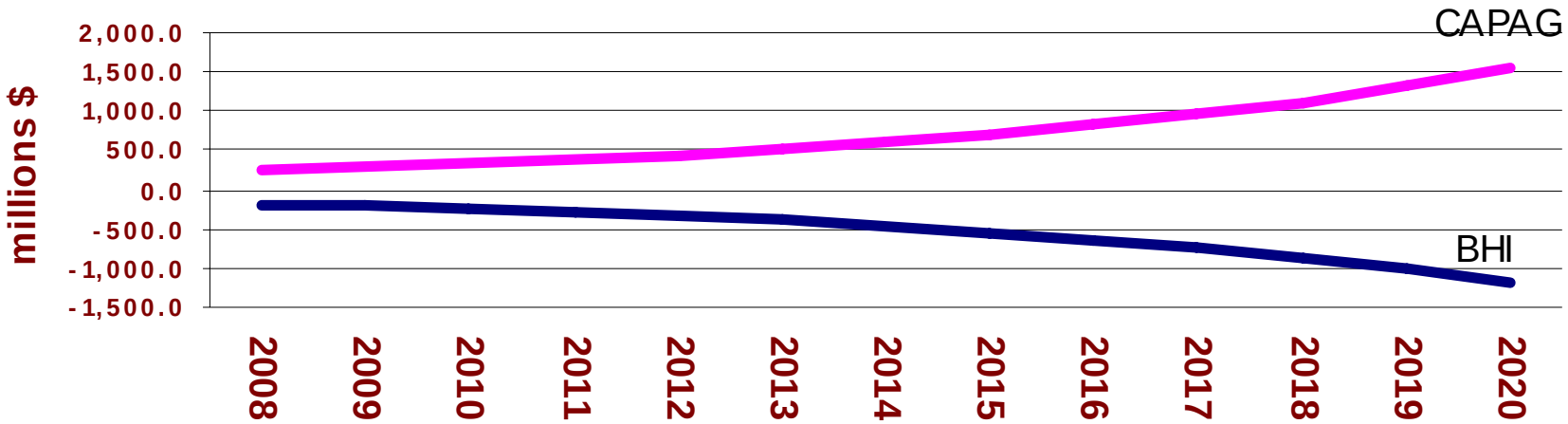
Variable	2011
Total Employment (Number of Jobs)	-29,808
Investment	-397.9
Real Disposable Income	-1,976.5
Real GSP	-4,002.6
State and Local Revenue)	-337.3

Total Impacts

($ millions)

Variable	2011
Total Employment (Number Jobs)	-33,483
Investment	-502.4
Real Disposable Income	-2,265.5
Real GSP	-4,530.9
State and Local Revenue	-184.6

Net Benefits of Energy and Transportation Proposals: CAPAG v. BHI



Where Does That Leave Us?

- Proposed legislation may provide benefits but they have yet to be determined
- The legislation would impose measurable costs on business and on the economy
- Commission should
  - weigh these costs against the purported (and so far unsubstantiated) benefits
  - consider the effects on competitiveness

The Beacon Hill Institute at Suffolk University

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