Northwest Power and Conservation Council

February 28, 2007

MEMORANDUM

TO: Power Committee

FROM: Ken Corum

SUBJECT: Greenhouse gas legislation and cap and trade issues

We're hearing increasing discussion of legislation to reduce greenhouse gasses (GHGs), and concerns that, depending on the details of legislation, the Pacific Northwest could be put at a disadvantage. Mark Walker will discuss the features of several pieces of proposed legislation, based on his discussions with congressional staff in Washington D.C. this week. I've attached a table that summarizes some of the bills being discussed (ClimateLegislationMatrix.pdf).

The conceptual approach that seems most likely to be adopted is some kind of "cap and trade" arrangement. Allowances to emit GHGs would be created and distributed, and emitters would be required to turn in allowances equal to their emissions. The number of allowances would decline over time, reducing total emissions. Allowances would be tradable, allowing emitters that can reduce emissions most cheaply to sell any allowances surplus to their needs to other emitters whose opportunities for reduced emissions are more expensive.

The best-known example of a cap and trade program is the SO_2 program created by the 1990 Clean Air Act Amendment (the "Acid Rain Program"). This program will eventually reduce SO_2 emissions by nearly 50%, and estimates are that the reduction has been achieved for something less than half the cost of alternative regulation to achieve the same result. There are several other cap and trade programs in the U.S. and elsewhere -- cap and trade is regarded as a proven method for effective control of emissions at low cost.

A cap and trade program has a number of features that must be chosen before it can operate. One of the most contentious of these choices is the method of initial allocation of allowances. Since these allowances are tradable and have significant value, their allocation is in fact the distribution of considerable wealth. There is debate about how critical the initial allocation is to the economical achievement of emission reductions for society as a whole, but there is no debate that allocation is a big deal to each of the individual parties (utilities, coal mines, retail customers…). The other attachment (SenateENRAllocation101.pdf) explains some of the issues around allocation of allowances.

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At the Power Committee meeting I'll briefly go over the basic features of a cap and trade program, calling out the areas that could affect the Pacific Northwest relative to other regions.

Attachments

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How "Cap and Trade" Works

Power Committee Meeting

Boise, ID March 13, 2007

Basic Components

- "Allowances" are required to emit
- Allowances are capped -- declining levels over time
- Emitters can buy and sell allowances
- Parties that can reduce emissions most cheaply sell allowances to others
- Emissions must go down – cost is minimized by trading

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Conceptual Issues - 1

- How high is the cap?
  - Initial level
  - Reductions over time
  - Absolute cap (tons) or indexed (tons/$GDP)
  - “Safety valve” (e.g. maximum price for allowances)?

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Conceptual Issues - 2

- Who gets allowances?
  - Current emitters, who use or sell allowances
  - Government, who then auctions allowances to emitters
    - Proceeds of auction to current emitters, or offset other gov't revenue, or…
  - Other

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Practical Issues

- Where in stream to collect allowances?
  - Coal at mine mouth or combustion?
- Credits for sinks?
  - Geologic sequestration
  - Biological “sequestration” e.g. planting trees
- Other potential credits e.g. conservation before the base year

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Previous Experience – U.S. SO_2

- Applied to utilities
- Allowances based on emissions 1985-87
- ~35% reduction in emissions since 1990
- “Banking” allowed
- “Opt-in” allowed

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What Determines Winners and Losers?

- Size of initial allocation
- Internal opportunities for reduction
- Rate of growth in load
- Ability to pass on costs (downstream to customers or upstream to suppliers)

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Could Cap and Trade Hurt PNW?

- No simple answer -- PNW is diverse (SCL vs. PAC)
- Pure hydro utility might receive no allocation
  - Initially, doesn't need any
  - If utility becomes emitter to serve growth in load, will need to buy allowances at market
  - BUT, nonfirm hydro likely worth more
- Could be at disadvantage compared to historic emitter

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