

Governor's Task Force on Global Warming

Observations on Modeling

Technical Advisory Group

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Match the model to desired output

- Integration of emissions across sectors does not seem to be as important as TAG had expected.
- Sector specific models would allow for more sophisticated modeling of certain sectors, such as regional power systems and possibly transportation sectors – the two largest emission producing sectors.
- Sector models must be well vetted and meet industry standards

Match the model to desired output

- Feedback on how modeled policies affect the economy and how the economic impact feeds back into the specific policies and economy in general is important. The economic model could be the integrative model.
- Our conclusion: Consider models as a family of tools that are but one source of information for policy decision-making

Transmission/Dispatch

- There needs to be a way to rationalize the transmission/dispatch system with state and C&T market boundaries

Model should have “foresight”

- Model should have the ability to make economic choices based on foresight. This would allow for:
 - Banking of reductions
 - Retiring inefficient generation units
 - Adding new units

Price Elasticity

- Model should recognize price elasticity in consumption forecasts and other prices
- We observed very limited price elasticity and price sensitivity in Energy 2020 or REMI

Geographic scope of modeling

- Consistent, effective policies across states and regions more equitably distribute the emission reductions as well as the costs.
- The cap and trade region should align as closely as possible to a Regional Transmission Organization (eg MISO)
- Model a linkage to other C&T markets (we ran out of time to do this)

Leakage

- A limited area for cap and trade raises a serious risk of leakage, unless countervailing policies are adopted

Offsets

- The assumptions underlying the offset supply curves warrant significant scrutiny.
- They have an enormous influence over the reaction of the local power market to the emissions cap.

Keep modeled policies relatively simple...

- Don't make policy assumptions overly complicated
- Splitting the RPS between in-state and out-of-state renewables adds a lot of complexity to the modeling and is very difficult to track

Uncertainty about the results

- Decision-makers should be presented with a range of outputs rather than a single point
- One option: be sure there are sufficient time and \$ to model multiple scenarios
- Another option: use a statistically based model rather than a point-based model.

Be realistic

- About the time and scope of the project
- And then add to the time and complexity.....

Area Expertise

- Don't underestimate the value of a cadre of area-specific expertise to delve into the modeling assumptions and outputs