



Opportunities for Modeling to Inform State Clean Energy Policy: Concluding Remarks from a Policy Perspective

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- Excellent exchange of ideas over the course of last two days. I commend ACEEE for bringing this group together to:
 - exchange ideas about new modeling approaches
 - have the kind of critical discussion needed to bring these ideas to the policy community and have a positive impact on decision-making
- Much of what we talked about over the last two days revolves around methods for evaluating long-term impacts, and how modelers can inform a national solution to a global issue. However, many states are addressing climate change right now by investing in energy efficiency and renewable energy:
 - 7 states have energy efficiency portfolio standards
 - 17 states have public benefits funds for energy efficiency
 - 23 states have renewable energy portfolio standards
- More and more, these policies are not one-off objectives. They are coming out of an integrated state energy planning process that:
 - Is designed to meet multiple strategic objectives for the state
 - Enjoys broad support from the public
 - Is supported by energy and economic analysis of policy options, including consideration of externality benefits
- US EPA's Clean Energy-Environment State Partnership tracks these policies, helps identify what works and what doesn't, and creates opportunities for states to have a dialogue about what they've learned. EPA also works directly with states to help develop, implement, and analyze the impacts of their policy choices.
 - States say they need more information about the macroeconomic and energy impacts of a single policy or package of policies.
 - States need to know:
 - What models are out there
 - How they are different from one another
 - What financial and staff resources are required to run them
 - Whether there are back of the envelope approaches available that cost less but can provide a good indication of the economic and energy implications of policy choices

- So here is a situation where clean energy policy is moving ahead at a rapid pace, yet state officials have little to no information about the economic and energy analysis tools that the modeling community has developed (let alone the limitations and biases of models).
 - The result is sometimes a “dueling models” scenario in which both sides of an issue (i.e., those for and against the policy) release modeled results supporting their positions. It is widely acknowledged that this harms the credibility of the modeling community and furthers the notion that models are “black boxes” that can be manipulated to deliver any number of desired results.
- This represents a significant opportunity for modelers to reach an audience that is both:
 - Hungry for information about modeling approaches and options
 - Making important policy decisions (or informing those that do) on a regular basis
- While many of you don’t work in the state policy context, or on the specific models that inform state decisions, this situation speaks to the disconnect between policymakers and modelers that has been reiterated over the last two days.
- US EPA’s Clean Energy-Environment State Partnership has been taking steps to bridge this gap, and will continue to work with the modeling and policy communities to identify solutions.
 - The discussion should address barriers identified over the last two days:
 - There are many different energy-economic models available (developed by government agencies, universities, private consulting firms), but policymakers know little about the:
 - Best applications for the models
 - Assumptions and algorithms
 - Costs and resource requirements
 - Model limitations and how to communicate about them
 - Policymakers and modelers work in different worlds and speak different languages.
 - There is confusion about roles of the two groups (i.e., the policymakers job is to lay out where society needs to go, while the modelers job is to help understand the most effective way to get there)
- In order to “illuminate the black box,” policymakers need more than just info about model options. There needs to be opportunities for them to engage directly with modelers in the policymaking process. This would provide states with greater transparency among modeling options and help identify the best approach for their circumstances and objectives.
 - Such forums would be a welcome complement to meetings in which modelers talk with each other (and speculate about what policymakers need), and meetings in which state agency staff talk about the need for greater information about the energy and economic impacts of policy options.

- Advancing a dialogue between modelers and policymakers could achieve several important goals:
 - Provide an opportunity for modelers to get to know their customers
 - Provide policymakers with information about their products
 - Allows modelers to better customize models that better meet policymaker needs
 - Equip policymakers to be better consumers of models
 - Address the perceptions and misconceptions that policymakers and the public have about energy and economic models:
 - They fail to properly evaluate policymaker's questions about the most effective means to achieve policy goals
 - Their assumptions are not reasonable, or based on real-world observations
 - They are lobbying tools designed to support a particular outcome

- The good news is that there are a growing number of collaborative policymaking processes at the state level in which the modeling and policymaking communities are working together to identify the energy and macroeconomic impacts of clean energy policies.
 - For example, states with recently-convened climate change stakeholder initiatives include NC, MT, AZ, NM, and UT. Typically, a modeling workgroup is established to evaluate the likely impacts of policy options.
 - Outcomes from these collaborative processes include:
 - Collaboration between policymakers and modelers on model inputs and assumptions
 - Dialogue on model assumptions, strengths, and weaknesses
 - Policymakers are engaging and challenging the modelers rather than simply being passive recipients of information they don't understand
 - Policymakers are starting to rely on multiple models
 - Take away message: There are an increasing number of forums in which policymakers and modelers are bridging the communication gap through constructive interaction on real-world policy decisions.