



Governor's Commission on Climate Change
Electricity Generation/Other Stationary
Sources Workgroup

July 31, 2008
1:00 – 5:00 p.m.
Richmond, Virginia
Meeting Summary

The Electricity Generation/Other Stationary Sources Workgroup of the Governor's Commission on Climate Change met on July 31, 2008. The Chairman called the meeting to order at approximately 1:04 p.m.

Attendance

The following Workgroup members were present: The Honorable L. Preston Bryant, Jr. (Chair), Mr. Dan Carson, Jr., Christine Chmura, Ph.D., Mr. Bob Fledderman Mr. Alleyn Harned (representing The Honorable Patrick O. Gottschalk), Mr. David Heacock, Mr. Robert F. Hemphill, Jr., The Honorable Kenneth R. Plum, Mr. Mike Quillen, and The Honorable Bruce Smart.

Those Workgroup members not in attendance were: The Honorable Paul Ferguson, Jagadish Shukla, Ph.D., and Lydia W. Thomas, Ph.D.

Angie Jenkins (DEQ) attended the meeting and will help to staff this Workgroup.

Introduction

Chairman Bryant began the meeting by discussing the charge to the Commission in Executive Order 59. Pursuant to the Commission's charge, the goals of the Electricity Generation/Other Stationary Sources Workgroup include developing strategies for generation, conservation, and greenhouse gas reduction. For the July 31, 2008, meeting, the Workgroup goals highlighted by Chairman Bryant were to: identify "no-regrets" strategies/recommendations and move; and define/narrow strategies/recommendations requiring more discussion for the next meeting.

Chairman Bryant noted that each of the four Commission workgroups would attempt to limit the number of recommendations to 15. Cross-cutting issues would be reserved for full discussion among the broader Commission, but each workgroup could work to redefine or narrow cross-cutting issues to be appropriately vetted within a group or suggest discussion among another group. If any of the Commissioners have an issue or suggestion for another group, then the Commissioner should notify the chairman of the appropriate workgroup or Chairman Bryant (or Angie Jenkins).

The Commissioners discussed the need to develop a way to “score” or rank the recommendations and identify the most economical recommendations in order to narrow the field of options. Chairman Bryant suggested that ranking/scorekeeping would be discussed at the next full Commission meeting in August. The Commissioners also noted that the electric utility members on the Commission could provide the group with estimated costs (to each utility) for various options (e.g., various RPS standards).

Assumptions

The Workgroup agreed to certain assumptions for the Workgroup process:

- The Workgroup will rely on the best available, reputable information received by the Workgroup/Commission to date.
- The Workgroup will use the projections for generation (through 2025) from the Virginia Energy Plan.
- The Workgroup will assume that there will be a national policy capping greenhouse gas emissions.

The Workgroup discussed the need to identify a reasonable timeframe for its recommendations. Although the group agreed that, with respect to generation projections, the use of the projections through 2025 from the Virginia Energy Plan is appropriate, the group decided to think further about the appropriate assumptions/projections relating to gross domestic product. The group discussed whether it was appropriate to assume growth occurs in waves and that the use of a historical period is an appropriate means for projecting economic growth. Some Commissioners expressed concern that using a historical period to project economic growth may mask progress. **Dr. Chmura will provide the group with a cheat sheet on the advantages for looking at the last 20 years of GDP to make assumptions about future GDP versus projecting the rate of growth over the next 20 years.**

The Workgroup discussed the extent to which the group should consider the means for achieving any of its recommendations, with several members expressing that some concept of the means to achieve the recommendations should be included and that vague recommendations should be avoided, but that there were limits as to how far this group could go in defining the specific tools for achieving its recommendations. There also was a question as to how the group would measure success – that is, whether an assumption may be made that the group is successful if they develop recommendations which, if achieved, would address 40% of the total emissions reduction the full Commission must attempt to achieve. Members discussed that emissions trade-offs among the various workgroup recommendations would need to be addressed (e.g., the impact of plug-in cars on electric generation). At least one member suggested that the group aim to develop recommendations to address more than 40% of the total goal in order to account for such trade-offs.

Timing out of recommendations also was discussed. The question was raised as to whether 5 years is an appropriate time for implementation of recommendations. It was noted that some recommendations may become irrelevant if not implemented within 5 years but that some of the recommendations may take longer than 5 years to implement.

Interaction with Federal Action / Carbon Cap-and-Trade

The Workgroup discussed the likelihood of action by the Federal government to develop a national carbon cap-and-trade program. The Workgroup agreed that federal action in the form of a national cap-and-trade is likely and that a recommendation from the Climate Change Commission regarding the preferred design/parameters for such a program was appropriate. Because of the likelihood of federal action, the Workgroup did not think Virginia should develop its own cap-and-trade program or join an existing regional program, like the Regional Greenhouse Gas Initiative (RGGI). The Workgroup was supportive of Virginia participating in a policy discussion with other Southern states, through the Southern Governors Association, to develop a strategy for the region to participate in the national discussion regarding federal greenhouse gas policies in an organized way to ensure that the unique aspects of the South, including the fuel mix of the Southern states, are part of the national discussion.

The Workgroup also discussed the various facets of a cap-and-trade program: whether there should be a benefit to sources that act early to reduce emissions; whether the program should be economy-wide or focused on the electric generating sector; the method of allocating allowances (free v. auction); whether trading/purchase of allowances and offsets should be national or global; and whether there should be a "safety valve" if allowance prices are higher than expected. With respect to early action, members of the Workgroup believed that sources that act early to reduce emissions of greenhouse gases should reap the benefits of early action but that early action should be verified and there should be a reasonable date-certain before which early action cannot be counted.

Members of the Workgroup expressed concern about an economy-wide cap-and-trade program with respect to the method for dealing with transportation in such a program, suggesting that a cap-and-trade program that included transportation would effectively act as an additional tax on other parts of the economy. Generally, the discussion and recommendation focused on a cap-and-trade focused on electric generating units.

There was much discussion among the Workgroup regarding the method for allocating allowances in a cap-and-trade program (i.e., free allocation v. auction/fee-based) with members discussing the advantages of each allocation method. At least one member of the group believed that an auction method may be preferable as a means to help generate revenues for the government to fund other climate change programs and technology research. Other members preferred a free allocation method, believing that the purpose of a cap-and-trade, to lower carbon, would not be affected by the allocation method and that auctions would make it more expensive to conduct business in the United States and would make it difficult for companies to compete with foreign products. The group generally believed that allowances should be traded nationally, but that there should be opportunity

to generate offsets globally, noting that both Kyoto and RGGI allow international offsets. The concern with allowing generation/trading of offsets internationally is that there is potential for sources in rapidly developing nations to profit both from generating offsets (e.g., slightly lowering emissions as a plant) and still produce products more cheaply than companies subject to a national cap on emissions. The group was interested in exploring ways for Virginia to help develop/aggregate offset credits. The group noted that education, training, and technical assistance may be the less expensive method for helping sources and individuals in Virginia to generate offsets. Another method discussed by the group was guarantees for low interest loans to small businesses and residences to finance energy efficiency projects (e.g., legislation last session to provide Virginia Resources Authority loans to fund energy efficiency projects by municipalities). There also was some discussion that mechanisms may need to be developed to move industry to act, for example, by planting trees or plants that contribute more to sequestration or biofuel development, and that consideration be given to efforts by one industry that lowers carbon emissions from another industry. **Messrs. Carson and Heacock agreed to think about and identify ways the state may be able to help companies with the good programs they have already started (e.g., efforts in Massachusetts to consolidate manure and capture the methane and sell offsets to utilities).**

With respect to a "safety valve," several members of the group noted that a cap-and-trade program is a regulatory program first, not just for investment. Because there is no commercially available technology to control carbon dioxide emissions, there should be some safety valve to keep allowance prices from going above certain high levels. The group agreed that care would need to be taken in setting the safety valve to ensure that the valve is not too low. The group noted that it also will be important for any federal program/legislation to help accelerate the development of technology to control or sequester emissions and that Virginia may need to consider providing funding for carbon sequestration research (recommendations regarding funding for research and development will be placed on the agenda for further discussion at the next Workgroup meeting).

The Workgroup agreed to draft/explore a recommendation(s) along the following parameters:

- That Virginia support a national cap-and-trade program for electric utilities which allows trading of allowances in the United States and allows the use of offsets generated outside of the United States that have been verified/measured in accordance with Kyoto standards. Such a program should credit early action by sources within a reasonable time period and include a safety valve established to prevent allowance prices from going too high but also to be high enough to encourage/facilitate the development of technology to control/sequester emissions.
- That Virginia participate in a policy discussion with other Southern states to develop a strategy for the region to participate in the national discussion regarding federal greenhouse gas policies in an organized way to ensure that the unique aspects of the South, including the fuel mix of the Southern states, are part of the national discussion.

Staff will try to determine whether there is federal legislation currently proposed that may meet the parameters outlined by the Workgroup for a supportable cap-and-trade program and what reductions may be attributed to such a federal program or what additional information/assumptions must be made to attribute reductions to a future federal program.

Renewable Portfolio Standard

The Workgroup considered whether a recommendation should be made to change Virginia's renewable portfolio standard (RPS). Currently, Virginia has a voluntary RPS goal that, by 2022, 12% of an electric utility's total electric energy sales come from renewable sources. Virginia also has a goal for the Commonwealth to reduce consumption of electric energy use by retail customers through the year 2022 by an amount equal to 10 percent of the amount of electric energy consumed by retail customers in 2006. Some members of the group noted that there may be a belief in the public that the current standard is not stringent enough when compared to other states. Members of the group suggested that when comparing Virginia's RPS goal with standards in other states, care should be taken because other states may count certain fossil fuels, such as gas (Vermont) and waste coal (Pennsylvania) as renewable. The group also discussed that it may be difficult to tighten the RPS goal (as that is currently defined) because of the limited renewable energy sources available in Virginia. It was suggested that there is not much additional hydroelectric power available in Virginia and that development of off-shore wind power may be difficult due to high construction and maintenance costs. Members also indicated that it may be difficult to move up the deadline for reaching the 12% goal because the utilities' plans for reaching the goal must be approved by the State Corporation Commission as reasonable and prudent.

Discussion as to how to improve the current RPS statute included the suggestion to make the RPS standards mandatory, subject to a safety valve based on price. A suggestion was made that pump storage facilities/generation associated with non-dispatchable renewable sources (e.g., wind) should be counted towards the RPS goal. It also was noted that if the goal of an RPS or of the Commission is to reduce emissions of greenhouse gases, then nuclear energy should be included as an option for meeting the RPS or that nuclear energy should be subtracted from a utilities total generation in order that nuclear generation does not count against a utility trying to reach the RPS goal. Another suggestion included increasing the RPS goal after 2022 (e.g., 15% by 2025).

The suggestion also was made that perhaps rather than recommending a revision of the RPS goal, the group should establish an "emissions free energy" goal or standard which would count traditional renewable sources as well as nuclear generation. No determination was made as to where such a goal/standard would be set.

Staff will attempt to pull together data on costs/kw-hr of generation in other states and provide that information to the group before the next meeting.

Nuclear Energy

In addition to discussing nuclear energy in relation to Virginia's RPS goals, the Workgroup discussed the potential for supporting and encouraging the development of nuclear energy. The group discussed the barriers on development of nuclear energy: only one supplier of turbine blades (Japan Steel) and the waiting list is 7-8 years; limited sources of uranium; huge economies of scale; and long construction/development period. It was noted that new nuclear generation will address demand growth and also will replace some fossil fuel-fired plants. It was estimated that to get to the Electricity Generation Workgroup's share of the 30% reduction goal, Virginia would need to bring 2 more nuclear reactors on-line and shut off all of its coal facilities. **Staff will attempt to identify a way to determine what existing generation will be replaced by currently proposed new nuclear units.**

The Workgroup agreed to draft/explore a recommendation(s) along the following parameters:

- A statement supporting nuclear energy.
- Virginia will encourage the federal government to develop a nuclear waste facility.
- That the potential for uranium mining in Virginia be studied.

Waste-to-Energy/Landfill Gas

The Workgroup began considering whether the group could develop recommendations for mechanisms to make it easier for more landfills to capture methane for energy generation or for the development of waste-to-energy projects. Members of the group noted that the State Corporation Commission is required to make sure the state has a safe, reliable supply of energy at the lowest cost and this requirement could make it cost prohibitive for small generators. Members also suggested that the group may be able to consider whether there could be a carve-out to facilitate getting smaller generators onto the grid. The group also raised questions about how much more energy is available from these types of facilities; what could be done with methane capture with farming (e.g., North Carolina regulation); and whether there are financial incentives to encourage these types of facilities (tax exempt bonds; generation of offsets for sale on a climate exchange). These issues will be discussed further, along with other distributed generation/combined heat and power issues, during the next Workgroup meeting. **In the interim, Staff will attempt to identify some suggestions for potential incentives for the development of landfill gas or waste-to-energy projects.**

Public Comment

Before the close of the meeting, Chairman Bryant provided the opportunity for members of the public to provide comments. No members of the public chose to comment.

Conclusion and Next Meeting

Chairman Bryant adjourned the meeting at approximately 4:20 p.m. after suggesting that Distributed Generation/Combined Heat and Power (including follow-up discussion regarding waste-to-energy); Conservation Pricing; and Research and Development would be placed on the agenda for discussion during the next Workgroup meeting to be held on August 27, 2008.