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MEETING SUMMARY
SOUTH CAROLINA CLIMATE, ENERGY AND COMMERCE ADVISORY
COMMITTEE

Energy Supply (ES) Technical Work Group (TWG)

Teleconference meeting #10a, March 11, 2008 from 3:00 PM to 4:30 PM

Attendance:

1. Technical Work Group Members:

- Marc Tye (for Lonnie Carter – President and CEO, Santee Cooper)
- John Clark – Director, South Carolina Energy Office
- Bob Fledderman – Manager, Environment and Regulatory Assurance, MeadWestvaco
- Jerry Freck – Environmental Engineer, South Carolina Department of Health and Environmental Control
- Emerson Gower – Vice President, Southern Region, Progress Energy Carolinas
- Ben Moore – Coastal Conservation League
- David Odell – President, Sunstore Solar of Greenville, South Carolina
- Mark Hollis (for James E. Rogers – Chairman, President and CEO, Duke Energy Corporation)
- C. Dukes Scott – Executive Director, Office of Regulatory Staff
- Steve Smith – Executive Director, Southern Alliance for Clean Energy
- Paul Conway (for John Tiencken – Former CEO, Santee Cooper)

2. Center for Climate Strategies (CCS) Staff:

- Ezra Hausman – Lead facilitator
- Alice Napoleon
- Kenji Takahashi

3. South Carolina Department of Health and Environmental Control (DHEC):

- Michael Juras – SCDHEC; Agency Liaison

4. South Carolina Agency Observers

5. Public Attendees:

- John Wilson – Southern Alliance for Clean Energy
- Tom Clements – Friends of the Earth
- Tom Howell
- Susan Corbett
- Chester Sansbury

6. Technical Work Group Members not attending:

- Robert Boyles – Deputy Director, Marine Resources Division, Department of Natural Resources
- Joan Bozzone – Physical Scientist, National Nuclear Security Administration
- Jeff Hinson – Utilities Manager, Clemson University
- Fred Humes – Chairman of the Board of Directors of the South Carolina Hydrogen and Fuel Cell Alliance
- Mark Lewis – Vice President, Westinghouse Electric
- Kevin Marsh – President, South Carolina Electric & Gas
- John Plodinec – Savannah River National Lab
- Nick Rigas – Director, South Carolina Institute for Energy Studies
- Coleman Smoak – General Manager, Piedmont Power
- Joette G. Sonnenberg – Associate Laboratory Director, Energy Security, Savannah River National Laboratory

Background documents:

1. Meeting Notice and Agenda was posted at http://www.scclimatechange.us/Energy_Supply.cfm:
2. ES-1 Portfolio Analyzer Spreadsheet Tool was e-mailed to TWG members

Discussion items and key issues:

This was a supplemental meeting of the ES TWG.

1. CCS called the meeting to order, completed the roll call and reviewed the agenda and plans for the call.
2. Ezra described the goals for the meeting:
 - a. develop a specific policy for ES-5 — should the costs and emissions reductions be quantified?
 - b. what components - energy efficiency (EE), renewable energy (RE), & nuclear energy - should be included in ES-1, and in what proportions?
 - c. what costs should be used for nuclear power and renewable energy resources?

Ezra circulated a spreadsheet tool prior to the meeting for illustrating and rapidly analyzing portfolio composition alternatives. He also sent the results for a couple of scenarios: one suggested during the Feb. 22 CECAC meeting (3% RE, 3% EE, 6% nuclear), and another suggested later by a TWG member (all available RE potential – roughly 8.5% - and 10% EE with no nuclear). Not all TWG members had received the results of the scenario runs.

3. A question was raised about the applicability of the Production Tax Credit for resources after the current year. Steve Smith confirmed that the PTC does have a sunset. Kenji said that the analysis assumed that any qualified resources built before 2015 can receive the PTC. The TWG agreed that the analysis should present results both with and without the credit.

4. There was a question about how the analysis treats biomass that substitutes for coal. Ezra explained that the cost of biomass co-firing generation per kWh is considered incremental to the cost of coal-fired generation.
5. Costs of new nuclear power – Ezra had circulated a table of assumptions a few weeks ago. A TWG member noted that Progress Energy just filed an application for two 1100 MW units with Florida with an overnight cost of \$6400/kwh (plant only - no transmission) on a green-field site. This is higher than Moody’s “high” estimate of \$6000/kW. After some discussion, the TWG agreed that the new upper limit should be \$6400/kW and the average used in the analysis changed to \$5700/kw.
6. The TWG discussed whether reprocessing should be included in the policy (ES-5) if it’s not quantified. Ezra noted that the CECAC will have to decide whether to keep it in or not. Ben Moore suggested recommending to CECAC that it drop the reprocessing portion of ES-5. Steve Smith said that the proponents should put forward cost figures that others can react to. As the meeting was running out of time, Ezra suggested that the TWG revisit ES-5 on Thursday.
7. Ezra asked what the TWG thought about the three proposals for the structure of ES-1 – all of the potential; 3% RE/3% EE/6% nuclear; or all available RE potential/10% EE. Referencing the title of the stakeholder group, which includes the words climate and commerce, Ben Moore noted that the all available RE potential/10/0 portfolio is a clear winner from both a cost effectiveness and GHG-reductions perspective.
8. John Wilson thought that the tool needs some tweaking to include on-shore wind, based on NREL’s findings.
9. Alice Napoleon asked what the difference is between the 10/10/0 portfolio and what was recommended in NC. The NC legislation has 12.5% including 5% EE, and 7.5% RE, but EE is optional. John Wilson noted that 10/10/0 is not what he proposed; his proposal works out to about 8.5% RE.
10. Bob Fledderman asked whether ES-1 is still using all of the biomass potential in the state. Kenji said ES-1 only uses woody biomass. Bob pointed out that the AFW TWG is using woody biomass in its policy options. Is TLU also using it? Alice clarified that for the individual analysis, it is not a problem if both TWGs are using this potential. However, this will be considered when we look at the affects of both ES & AFW policies together in the cumulative analysis.
11. Marc Tye indicated that Santee Cooper has been unable to find 100 MW of available hydro out there to satisfy the RE/EE only portfolio, and that he didn’t think there is another 450 MW in the state. All identified small hydro is low head, run of the river. It was suggested that centralized power producers are may not be interested in this but that it could be explored for smaller applications. John Wilson said that he doesn’t want to discount hydro potential outright. A hydro screening tool from Idaho University was mentioned.
12. For EE, Ezra indicated that the RCI group is using 1% energy reductions by 2015 and 1.5% by 2020. The NC legislation’s target for EE is 5%; i.e., the legislation does not reach the EE goal set in the CAPAG process. The CAPAG process endorsed 12.5% EE in NC; that’s why 10% EE was suggested in SC.

13. CCS solicited input from the public.

- a. Tom Clements – Friends of the Earth – said that the Boston study on nuclear fuel reprocessing (referenced during the call) was not credible; it was commissioned by a plutonium company. Also, he suggested asking Fred Humes about the costs of reprocessing. He suggested that the analysis be within the context of the GNEP proposal – that there will be a need for waste management on the other end. England hasn't used a single gram of its reprocessed fuel. There are all sorts of unknown costs. A reprocessing program will be fiercely opposed.
- b. Tom Howell expressed concern about the money needed to manage nuclear waste if a new plant is built; only some of the fuel is suitable for reprocessing. In reprocessing, strong acids are needed, which become radioactive while remaining strongly acidic. Nuclear plants create water problems – either water evaporates from cooling towers, in which case it's not available for local use, or hot water is returned to the river and damages the ecosystem. Tom pointed out that there are water disputes ongoing in Georgia, Alabama, and other southeast states, and already 40% of the Chattahoochee River is going to power plants.
- c. Susan Corbett noted that on p. 26 of the policy option document under ES-5, it says that nuclear plants generate no GHG emissions, but it left out that the enrichment process releases of CFCs which are strong greenhouse gases.

Next steps and agreements:

14. At its next meeting, the TWG will pick up where we left off today with ES-1 and ES-5, and also discuss the regulatory model for utility incentives (ES-4) and work to refine our policy on incentives for distributed renewables (ES-3). Ezra recommended that the next TWG meeting be changed to 2 hours, from 3:00 – 5:00 PM (same date). There were no objections to extending the meeting to 2 hours.