Proposed Study of Increased Use of Renewable Energy Resources in Virginia

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Study objective: To provide legislators and policymakers with a factual basis to determine whether efforts to stimulate increased use of renewable energy[1] sources to generate electricity in Virginia would be warranted. Specifically, the study would determine if the purported benefits of increased use of renewable energy resources to generate electricity in Virginia outweigh the predicted increased costs, compared to the *status quo.*

Extract: There is general agreement that increased use of renewable energy sources to generate electricity in Virginia would provide a variety of benefits, but specific and current cost/benefit analyses do not exist to quantify them. Renewable energy proponents claim a variety of health, economic, employment and other benefits, but little current documentation exists to substantiate the claims. An objective study could attempt to monetize or otherwise specify the purported benefits and to compare the monetary and other values of the benefits to the predicted incremental financial costs. If monetizing or specifying the benefits demonstrates that the benefits outweigh the costs, the study could then recommend public policy initiatives to realize them, within the framework of Virginia's currently ongoing restructuring of the electricity industry.

Study components:

1. Identify existing renewable energy resources in Virginia.
2. Determine the cost of electricity produced by existing renewable energy resources in Virginia, by type.
3. Identify existing barriers to expansion of renewable energy resources in Virginia.
4. Identify existing federal, state and local incentives to use and/or expand use of renewable energy resources in Virginia.
5. Examine the effectiveness of existing incentives.
6. Determine the cost of new electric generating capacity additions using renewable energy resources in Virginia.

[1] As defined by § 56-576 of the Code of Virginia, "Renewable energy" means energy derived from sunlight, wind, falling water, sustainable biomass, energy from waste, wave motion, tides, and geothermal power, and does not include energy derived from coal, oil, natural gas or nuclear power.

7. Compare the cost of new electric generating capacity additions using renewable energy resources in Virginia with the cost of new "traditional" electric generating capacity additions in Virginia.
8. Determine future renewable energy resource potential in Virginia.
9. Evaluate the costs of present and future air emissions compliance in Virginia and potential reductions due to increased use of renewables.
10. Determine the effect of increased use of renewables on Virginia's efforts to improve air quality in ozone nonattainment areas and regions.
11. Determine potential employment increases in Virginia due to increased use of renewables, especially in economically distressed Southwest and Southside Virginia.
12. Examine the potential effects on suppliers of renewable fuel, equipment and services in Virginia.
13. Examine the potential effects on Virginia's agriculture industry of using switch grass, sorghums, or other crops as boiler fuels, replacing cultivation of tobacco.
14. Estimate potential local tax base increases due to increased use of renewables.
15. Examine anticipated health effects resulting from increased use of renewables in Virginia, including changes in aggregate air emissions.
16. Examine and consider other purported benefits of increased use of renewables.

Potential Participating State Agencies
Department of Environmental Quality
Department of Health
Virginia Employment Commission
State Corporation Commission
Coal and Energy Commission
Secretariat of Commerce and Trade
Department of Agriculture
Virginia Center for Coal and Energy Research
Department of Mines, Minerals and Energy

Recommended Consulting Firms, Agencies
Global Energy Concepts, Kirkland, Washington
ICF Consulting, Fairfax VA
Pace Global Energy, Fairfax, VA
Resources for the Future, Washington DC
Southern Research Institute
Virginia Department of Mines, Minerals and Energy, with Virginia Center for Coal & Energy Research