

# BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

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Testimony of Louis Zeller  
Blue Ridge Environmental Defense League  
Before the North Carolina Utilities Commission  
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## **Re: Docket No. E-100, Sub 103**

On behalf of the Blue Ridge Environmental Defense League, I want to thank the Utilities Commission for the opportunity to testify today. The major points which I wish to address today are based on the documents made available the Commission and our own experience in rate cases and energy issues since 1984.

First, the League categorically opposes pollution-generating sources of power including landfill gas, incineration of solid waste, poultry and hog manure, waste gasification, and nuclear. Support for coal and nuclear power retards the growth of renewable energy sources such as solar and wind. The costs of misguided energy decisions have been calculated and they are substantial. Continued reliance on outdated, polluting facilities such as coal-fired and nuclear power plants has real costs borne by all citizens.

Duke Energy, Progress Energy and Dominion Energy are pursuing *most-cost* energy policies which are both expensive and reckless. For example, Duke's IRP largely centers on the development of more coal and nuclear plants. Their Overall Planning Process Conclusions state:

The quantitative analysis suggests that a combination of additional baseload, intermediate and peaking generation and demand-side management (DSM) programs are required over the next fifteen years to reliably meet customer demand. The generation resource mix consists of natural gas combustion turbine and combined-cycle units as well as coal and nuclear capacity. In nearly all the sensitivities and scenarios tested, the plan featuring 1,600 MW of new coal capacity and 2,200 MW of new nuclear capacity performed best on a present value of revenue requirements basis.

The Duke Power Annual Plan, Docket E-100, Sub 103, November 1, 2005, p. 29

Second, total cost-benefit accounting for electric energy in monetarized terms reveals that wind and solar energy are more economical than coal and nuclear. Further, the general

statutes of North Carolina which require analysis of the long-range need for electricity and least-cost considerations (NCGS 62-110 and 62-2) compels the Commission to require a full cost accounting of all electric generation sources.

Although renewable forms of energy are growing, unnecessary financial costs to society are incurred because of the failure to introduce more renewable power sources sooner. A study done for the Commission of the European Communities by Olav Hohmeyer analyzed the impacts of renewable energy compared with fossil fuel and nuclear power. The study monetarized, or quantified in financial terms, the total costs and benefits of four major sources of electric power: coal, nuclear, solar, and wind. Hohmeyer found that the total costs to society of fossil and nuclear power are much higher than the market price would indicate and that the costs of solar and wind energy are much lower. Moreover, this skewing of rates for conventional electricity below actual costs delays the introduction of cleaner forms of power. Hohmeyer devised a method to calculate the financial cost of this delay. (See Appendix A for technical analysis.)

The Hohmeyer study of the social costs of renewable energy technologies found a net social *benefit* of 0.3 - 0.6 cents per kilowatt hour for wind energy and 0.9 - 3.3 cents per kilowatt hour for photovoltaic. (See Appendix B for the full study.) The benefits come from employment gains and wage and tax benefits from the installation of wind and solar technologies. In contrast to the hidden benefits of renewables, conventional fossil fuel and nuclear power plants have net social *costs*. The net *costs* of fossil fuel are 2.4 - 5.5 cents per kilowatt hour and for nuclear energy 6.1 - 13.1 cents per kilowatt hour. The hidden cost of conventional electric power is about equal to the electric power rate. In other words, the typical monthly electric bill covers only half the true costs. These expenses are buried in medical bills, lost workdays, decreased agricultural productivity, etc.

Hohmeyer's analysis takes into account insofar as possible the costs and benefits of coal, nuclear, photovoltaic solar, and wind sources for the generation of electricity. Although it was published in 1988, Hohmeyer's study is relevant today because 1) wind and solar power costs have decreased relative to coal and nuclear, and 2) difficult to quantify factors such as the lost of a species were calculated in favor of conventional fuels; that is, the assumptions and analyses are conservative. Even so, the results favor wind and solar power over coal and nuclear. Better quantification of difficult to monetarize external costs would further tip the balance in favor of the renewables, especially wind energy.

Finally, renewable energy is power which is ultimately made by solar-driven processes: photoelectric, passive solar, wind and hydro. It does not, of course, include fossil fuel; nor should landfill gas be considered renewable any more than the chemically similar compound natural gas which is also created by the breakdown of organic substances

underground. Duke incorrectly lists landfill gas as part of its “Renewable Energy Initiatives” in its IRP including Salem Energy Systems, the Hanes Road Landfill in Winston-Salem - 3 MW, and Catawba County Blackburn Landfill facility - 3 MW (Duke IRP 11/1/05 p. 13)

In conclusion, as ratepayers and taxpayers, the Blue Ridge Environmental Defense League hereby requests that the NC Utilities Commission promote policies which accelerate the growth of wind and solar power and discourage further incentives for fossil-fuel and nuclear power. The League feels strongly that least-cost analyses must include externalized costs. We submit that the Hohmeyer study provides a sound technical and financial basis from which to proceed in this matter. We look forward to your response.

Respectfully,

Louis A. Zeller

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## APPENDICES

A. *Total Cost-Benefit Accounting for Electrical Energy*, L. Zeller, Blue Ridge Environmental Defense League, 2004, [www.BREDL.org](http://www.BREDL.org)

B. *Social Costs of Energy Consumption*, Olav Hohmeyer et al, Document No. EUR 11519 Commission of the European Communities, © 1988, ISBN 3-540-19350-2 Springer-Verlag, Berlin Heidelberg New York; ISBN 0-387-19350-2 Springer-Verlag, New York Berlin Heidelberg