energymasterplan@bpu.state.nj.us

While I applaud the intent of the Energy Masterplan and much of its content I have the following concerns:

1, While it states that nuclear power is contributing more than 20 percent of current electrical power in the state, and is currently the least cost source of electricity, there is no discussion of the future of nuclear power, a non-polluting source of energy. It is my understanding that the Governor is in favor of not re-licensing the existing nuclear power stations in the state. If they are to be closed where would the replacement power come from? Fossil fuels? Both presidential candidates have indicated the need to expand the nation's nuclear power capacity in their energy programs. Where does New Jersey stand as this is most reliable potential source of electricity that does not emit greenhouse gases that is available to us. This needs to be discussed.

2. The plan proposes the installation of 1000 MW of wind turbines off-shore and 200 MW on-shore. Wind power is an interruptable source of electricity. Your figures for the annual output indicate an assumption of 31 percent availability for off-shore turbines and 29 percent for on-shore turbines. These appear to be reasonable assumptions based on numbers available in the literature. However, your plan does not discuss at what periods windpower will and will not be available. If it is available during winter nights but not available during hot summer days, as is quite likely, it will displace base power sources, reducing their efficiency, while it will not assist in meeting peak power needs. There are no doubt wind records available that would allow you to precisely estimate at what times and seasons windpower will be available. What type of power source is to installed when windpower is unavailable? Have grid links to other regions installing wind turbines been considered and investigated so that output from regions with different wind patterns could be balanced? Have methods of energy storage and their cost and efficiency been considered? I suggest that far more work needs to be done in the masterplan on this issue if its recommendations are to be viable.

3. The concerns with solar energy are different but also need to be discussed. Photovoltaic electricity is also interruptable. However, peak supply occurs on days of peak electricity demand but not at peak times. Peak supply will occur at mid-day when the sun is highest whereas peak demand for air conditioning will occur later in the afternoon. Passing clouds can reduce and restore output instantaneously. How is this be compensated for on the grid?

I do request that these issues be given serious consideration as they are important.

R. Andrew Blelloch P.E. (retired)
Princeton Junction, NJ 08550