

Astronautics

Nuclear Engineering

Engineering Physics

Engineering Mechanics

January 20, 2007

To: MEMBERS OF THE SPECIAL COMMITTEE ON NUCLEAR POWER

Michael Conradue From: Michael Corradini, Committee Member

RE: Preparations for the Special Committee's January 29, 2007 meeting.

At the December 2006 meeting of the Special Committee on Nuclear Power, Chairman Montgomery noted that at the next meeting of the Special Committee, we would discuss policy recommendations related to its assignment. He asked committee members to consider what policy options they would like the Special Committee to consider and to submit them in writing to staff, who will compile and distribute them to the Special Committee in advance of the meeting, to be held on January 29th, 2007.

The December 21st, 2006 memo indicates that Chairman Montgomery considers the committee's charge to be broader than considering whether to continue or repeal the state's moratorium on construction of new nuclear power plants. His desire would be for the committee to develop policy recommendations designed to move Wisconsin forward in concrete steps toward securing the state's energy future in a sustainable way, with particular, though not exclusive, attention to the role of nuclear power in doing so.

As part of this broader perspective, the Committee reached general agreement on a set of principles to guide them in evaluating policy options related to its charge. These principles are:

1. The Legislature should act in the next session on long-term electric energy concerns and to design Wisconsin's energy future, and not wait for a crisis to develop.

2. Nuclear power is an integral part of the electric energy mix now in Wisconsin, the United States, and world, and will remain so in Wisconsin as long as current plants continue to operate. The state needs to address the benefits and costs of generating electricity with various fuels in a rational and balanced manner.

3. Wisconsin needs a sound electric energy portfolio, and improved energy conservation and efficiency is the cornerstone that this portfolio should be built upon.

4. Energy conservation and efficiency cannot solve our electric energy situation alone; the state needs a balanced portfolio that allows for the needed growth in electric energy from a wide variety of sources without undue constraints.

5. The development of the state's future electric energy policy should be guided by consideration of costs, safety, reliability, and environmental and facility siting concerns.

1500 Engineering Drive Fax: (608) 263-7451

In addition to these principles, Dr. Shaten suggested that "energy policy proposals on electrical generation should consider the full extent of economic risks to current and future residents of Wisconsin". I interpret this statement to mean that by-product emissions costs need to be considered in future considerations and I would agree with this as a general principle.

So based on these principles, I would propose the following policy changes:

Proposal A: To provide for the State of Wisconsin in maintaining a balanced portfolio, which allows for the needed growth in electric energy from a wide variety of sources without undue constraints, it is proposed that the current moratorium on nuclear power plant construction be repealed (Section 196.493).

Proposal B: The state needs to address the benefits and costs of generating electricity with various fuels in a rational and balanced manner. The committee gained some excellent insights based on the information and discussion provided by Mike Messenger's testimony on a carbon-free portfolio standard for electrical generation and use.

Based on this discussion, it is proposed that the Legislature direct the State of Wisconsin Public Service Commission to review the need for a 'Carbon-Free' Energy Portfolio Standard and report back to the Legislature with specific recommendations based on a technology neutral principle for electrical generation. In addition, there should be consideration of the relation between this standard and the state's current renewable portfolio standard (e.g. implement the carbon-free portfolio standard in accordance with or after the renewable portfolio standard reaches its planned level of 10% in 2015).

Proposal C: In an effort to foster long-term energy planning and to design Wisconsin's energy future, and not wait for a crisis to develop, it is proposed that State of Wisconsin Public Service Commission developed a long-range study over the next three decades, to provide a prudent plan as the current operating licenses of Wisconsin nuclear power plants (after 60 years) are set to expire. This study would be a non-periodic PSC investigation, such as those called for in the integration framework discussion on page 53 in the draft June 2006 SEA. The PSC could project the portion of electric generation and electric generation capacity by fuel types under a limited number of scenarios for different electricity growth rates and carbon-emission regulations.

Future electric demand and expected plant retirements could also be factored into the analysis. The PSC could also be instructed to project the costs of the scenarios using a common methodology and to identify changes in state law and commission policies and regulations necessary to implement each scenario. (Essentially, Rep. Montgomery's "pie charts" that were identified at the December committee meeting.)

I would finally note that we have only addressed generating electricity with various fuels in a rational and balance manner. Wisconsin urgently needs to also address energy alternatives for transportation energy use that are sustainable for long-term economic growth; e.g., tourism. This was not part of this activity, but I would recommend that this be a specific task for a future Legislative Council Committee. I would draw your attention to the fact that the California Governor recently signed an executive order "Establishing World's First Low Carbon Standard for Transportation Fuels" (See: http://gov.ca.gov/index.php?/press-release/5174/) calling for a separate standard.