



Public Service Commission of Wisconsin

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TO: Representative Phil Montgomery, Chair
Special Committee on Nuclear Power

FROM: Eric Callisto
Executive Assistant to the Chairperson
Public Service Commission of Wisconsin

Re: Committee Member Questions Regarding the September 14,
2006, Presentation by Public Service Commission Staff

During my presentation I received a question from Pat Schillinger regarding international nuclear waste practices. Following my presentation, I received a question from Dr. Michael Corradini regarding the plant costs used by Commission staff during our CPCN process. I have answered each member's questions directly. I am forwarding my responses to you via this memo should you desire to post them on the Committee's web page or otherwise distribute.

Mr. Schillinger asked a question concerning international practices in regard to nuclear waste. I responded:

Staff here has done some preliminary research on the topic, much of which comes from the World Nuclear Association (WNA), whose website is at <http://www.world-nuclear.org/info>.

According to WNA, commercial reprocessing capacity exists in France, UK, Russia, Japan and India. China is building reprocessing capacity.

Belgium, China, France, Germany, India, Japan, Russia, Switzerland and UK reprocess, either within their own borders or via shipment elsewhere. Canada, Finland, South Korea, Spain, Sweden and the US have opted for direct disposal. There are no geologic repositories currently constructed or operational for direct disposal. Finland may be the nation closest to operating a repository.

Dr. Corradini's question: "You showed the various units that are planned to go on-line (or have) and I wondered what are the PSC estimates for the Busbar costs for electricity from the various plants. We heard from Dr. Meier about his planning tool and his use of EIA-NEMS cost and financial assumptions, but I wondered what were the assumptions and values (financing, capacity factors, cost of money etc) used by the staff to cost out the new generation you spoke about and the busbar cost you estimated. This would be helpful to me in my understanding of the financial aspects of future plant costs and PSC planning.

Also, you noted that the CPCN process would need to be used for new generation nuclear, IGCC etc, and I wondered has the staff developed policies/guidance for carbon disposal from advanced fossil units?"

I responded to Dr. Corradini:

The approximate busbar costs recently used by Commission staff are \$122/MWH for a CT, \$66/MWH for a (Port Washington type) CC, \$52/MWH for advanced coal (SCPC - Elm Road type), and \$67/MWH for wind.

The proposed capital structure and cost of debt will vary depending on the applicant and are reviewed for reasonableness during the CPCN process. The capacity factor for a new SCPC unit is typically in the mid-80% range.

A discussion of the IGCC technology and sequestration of CO₂ for either IGCC or SCPC units is contained in the PSC/DNR IGCC Technology draft report. This report is available at http://psc.wi.gov/apps/erf_share/view/viewdoc.aspx?docid=55090.

At this time, Commission staff has not developed formal policies or guidance for carbon disposal from advanced fossil units.