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July 28, 2011

MEMORANDUM

TO: Power Council

FROM: Ken Dragoon

SUBJECT: Carbon Sequestration Project Presentation

In May 2008, Dr. Pete McGrail of Pacific Northwest National Laboratory (PNNL) presented a proposal for field testing carbon dioxide sequestration at the Walla Walla Council meeting. Dr. McGrail will present a progress report on the implementation of this demonstration project near Wallula, Washington. This project is consistent with action item GEN-8 in the Council's Sixth Power Plan.

Carbon sequestration is the long-term storage of carbon dioxide (CO₂) in geologic formations that has the potential to limit effects on climate due to fossil-fueled power plant emissions. The Pacific Northwest is home to one of the most promising geologic formations for storing CO₂. In 2005, the U.S. Department of Energy awarded the Big Sky Carbon Sequestration Project (BSCSP) funding to conduct a small-scale injection of CO₂ into basalt rocks. The project is a partnership between BSCSP, Battelle and Boise Inc. to take promising laboratory results for capturing and permanently storing CO₂ to the next testing step – a field test on Boise property near Wallula, WA. This demonstration project is unique in the world for confirming the feasibility of permanently and safely sequestering large quantities of supercritical CO₂ within deep flood basalt formations.

Dr. McGrail is a geophysicist at Pacific Northwest National Laboratory where he has worked for over 28 years and earned the position of Laboratory Fellow, the highest level of scientific achievement at the laboratory. He leads the BCSP Wallula storage project, the world's first and only field pilot study examining supercritical CO₂ storage in a flood basalt formation.

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