Virginia City Hybrid Energy Center
Response to Data Request
Vivian Thomson, Vice Chair, Virginia Air Pollution Control Board

Question (Page No. 6):

The Virginia City Hybrid Energy Center's large greenhouse gas emissions (5.37 million tons/year of carbon dioxide, plus emissions of N_2O) are of concern.

Response:

Dominion is taking three steps to mitigate greenhouse gas emissions associated with this project:

1. As a part of the project, Dominion has committed to convert its Bremo Power Station from coal to natural gas. This conversion will represent a reduction in carbon emissions of more than one million tons per year.

2. Biomass is a carbon neutral fuel source. Dominion has proposed to burn up to 20 percent biomass at the VCHEC. Utilizing biomass will mitigate carbon emissions from the station by a percentage equivalent to its share of the fuel.

3. Dominion is gaining hands-on experience with technologies related to carbon capture and storage. In October 2007, Dominion announced that it will host a large-scale coal gasification test facility and research center at our Brayton Point Power Station in Massachusetts. The test facility owned by GreatPoint Energy will convert coal, petroleum coke and biomass into pipeline-quality natural gas and a separate stream of sequestration-ready carbon dioxide. The process also captures mercury, sulfur and other pollutants.

   Dominion is also one of the leading natural gas transport companies in the world and can apply this experience to the transportation of carbon dioxide from capture to storage.

   Successful commercial application of carbon storage on a utility scale is a critical part of our energy future. With regard to carbon storage, Dominion is a major sponsor of research being conducted by Virginia Tech on carbon storage in unmineable coal seams. Some of the most-promising potential sites for carbon storage are in the Virginia coalfield region, near the location of this project. This proximity would substantially simplify the process of carbon transport and would enable effective carbon storage.