CLEAN AIR **TASK FORCE**

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December 7, 2007

BY HAND DELIVERY

Ms. Sandra Squire
Executive Secretary
West Virginia Public Service Commission
201 Brooks Street
Charleston, WV 25301

RE: Appalachian Power Company
Case No. 06-0033-E-CN

Dear Ms. Squire:

The Clean Air Task Force is pleased to provide the attached statement for the consideration of the West Virginia Public Service Commission in the above-referenced proceeding.

Sincerely,

Mike Fowler
Technical Coordinator, Coal Transition Project
Clean Air Task Force

cc: All parties

WEST VIRGINIA PUBLIC SERVICE COMMISSION

CASE NUMBER 06-0033-E-CN

APPALACHIAN POWER COMPANY

d/b/a

AMERICAN ELECTRIC POWER

Application for a Certificate of Public Convenience

And Necessity to construct a 629 MW Integrated

Gasification Combined Cycle Generating Station in Mason County

Statement of

MIKE FOWLER

for

THE CLEAN AIR TASK FORCE

DECEMBER 7, 2007

The Clean Air Task Force (the "Task Force", or "CATF") is pleased to submit this statement for the consideration of the West Virginia Public Service Commission in the matter of Appalachian Power Company's proposal to construct a 629 MW power plant in Mason County, West Virginia. CATF is a national non-profit environmental organization dedicated to restoring clean air and healthy environments through scientific research, public education, and legal advocacy. Controlling power plant air pollution has been the major focus of CATF since its founding in 1996, and CATF has worked to oppose construction of many pulverized coal-fired power plants around the country. In recent years CATF has also taken on related projects to commercialize clean technology, control power plant solid wastes, reduce emissions from large diesel engines, and attack air and climate pollution more broadly across the globe.

CATF supports Appalachian Power Company's proposal to construct a coal-fired integrated gasification combined cycle ("IGCC") power plant in Mason County. Our support for the Mason plant is two-fold. First, IGCC technology has extremely low emissions of air pollutants, uses less water, and generates less solid waste than conventional plants. Appalachian Power Company is demonstrating important national and global leadership by pursuing IGCC technology. Second, IGCC offers the most likely path to successful large-scale capture of the greenhouse gas, carbon dioxide, emitted by coal-fueled power plants. CATF outlines below, for your reference, the path forward on carbon dioxide approved recently by the Indiana Utility Regulation Commission ("IURC") in the matter of Duke Energy's IGCC proposed for Edwardsport, Indiana. This path resulted from joint efforts of CATF, the Indiana Wildlife Federation, and the Indiana Office of Consumer Counselor in agreement with Duke Energy.

It is unusual for an environmental group to support construction of a new coal-fired power plant. Current projections indicate that coal-fired electricity generation will continue to

grow in importance, however, over the next several decades. In fact, recent analysis by the United States Climate Change Science Program indicates that global coal-based electricity generation could double or even triple by the year 2050. Advanced technology will be vital to ensuring that such rapid growth does not threaten the world's environment. In particular, coal gasification, a process in which the energy stored in coal can be put to productive use while rendering coal's impurities more benign, offers a way to bring coal use into the twenty-first century without sacrificing the environment or the economy.

If allowed to proceed, Appalachian Power Company's proposal for the Mason County IGCC plant can make West Virginia a leader in advanced coal technology. In particular:

- Appalachian Power's proposal will utilize coal gasification and combined cycle power generation using coal-derived syngas – through the IGCC process - to produce electricity with radically lower air pollution emissions compared to conventional coal-fired power plants. Appalachian Power's IGCC will use the Selexol process for sulfur control, for example, resulting in sulfur dioxide emission at $1/15^{th}$ the levels of a conventional plant burning bituminous coal. Appalachian Power's IGCC will also use a carbon bed to reduce mercury emissions by 90-95%, and perhaps by 98% or more.
- Appalachian Power's proposal will produce only about ½ the solid waste produced by a comparable conventional coal-fired plant and use only about 60% of the water of a comparable conventional coal-fired plant. In addition to these advantages, which result from Appalachian Power's choice of IGCC technology, the solid waste produced by Appalachian Power's IGCC plant will be in a glass-like "vitrified" form that is less subject to leaching than waste from a conventional coal plant.

- Appalachian Power's proposal will be capable of controlling carbon dioxide emissions using technology demonstrated on other types of coal gasification plants.

CATF's experience in the Duke Energy Indiana ("Duke") Edwardsport IGCC case before the Indiana Utility Regulatory Commission is directly relevant to this last point. In that case, decided just three weeks ago, the IURC ordered Duke, as a condition of their Certificate of Public Convenience and Necessity ("CPCN), to file for a separate proceeding within six months to examine and act on a carbon dioxide capture and sequestration ("CCS") plan for the plant. As described in the order and testimony of the case, Duke committed, subject to IURC approval and appropriate cost recovery, to the following steps:

- To conduct a supplemental FEED study specifically targeted at understanding the costs and performance impacts of partial (15-18%) CO2 capture at the IGCC plant in the 2008 timeframe.
- To conduct a study (or studies) to determine feasible and acceptable sequestration options through either the DOE Phase III program, enhanced oil recovery ("EOR") opportunities, or other sequestration opportunities in the 2008 timeframe.
- To take reasonable steps during the detailed engineering and construction phase of the Edwardsport project to include infrastructure, as identified in the supplemental FEED study, to support 15- 18% carbon capture.
- To work with interested parties toward state legislation constructively addressing potential liability and land rights issues associated with CCS.
- To seek necessary regulatory and environmental permitting for CCS and EOR if all other actions are approved by the IURC.

- To meet with CATF, the Indiana Wildlife Federation, and the Office of Consumer Counselor to update them on progress.

An approach like this, if adopted by the West Virginia Public Service Commission in the Mason Country IGCC case, would offer these important benefits:

- Appalachian Power Company's IGCC plant could proceed with construction based on the existing FEED study;
- Appalachian Power would develop a viable pathway for early experience with carbon capture and storage on IGCC technology;
- The process would provide detailed information on cost and storage options that would allow the West Virginia Public Service Commission to know the price and schedule implications of carbon dioxide capture, and
- The process would provide time to overcome other barriers such as liability protection for carbon storage that must be solved before capture and storage can be implemented.

CATF recommends this path to the West Virginia Public Service Commission in the Mason County IGCC plant proceeding. As Appalachian Power Company indicates in their testimony in this case, carbon dioxide regulations are almost certainly coming. Getting ahead of carbon dioxide reductions will be cheaper and easier than trying to address them later on. And, an 18% capture level strikes an important balance between cost and the environment at a time when federal restrictions on carbon dioxide seem certain but are not established. Furthermore, the 18% capture level does not, in CATF's opinion, require significant operational changes to the plant.