

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF MARYLAND**

In the Matter of the)
Application of Catoctin Power, LLC)
for a Certificate of Public Convenience and) Case No. 8997
Necessity To Construct a 600 MW Generating)
Facility in Frederick County, Maryland)

DIRECT TESTIMONY OF PETER D. HALL

1 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND CURRENT**
2 **POSITION.**

3 A. My name is Peter D. Hall. I am President of Metametrics, Inc., of
4 Charlottesville, Virginia, and a consulting economist who specializes in
5 regional economics and socioeconomic impact assessments. A statement
6 of my educational background, occupational history, and professional
7 qualifications is appended to this testimony as Appendix A.

8 **Q. PLEASE DESCRIBE YOUR SPECIFIC EXPERIENCE IN POWER**
9 **PLANT SITE EVALUATION AND IMPACT ASSESSMENT STUDIES.**

10 A. I have conducted numerous socioeconomic impact studies for federal,
11 state and private sector organizations for more than twenty years. For the
12 Maryland Department of Natural Resources, I directed the Power Plant
13 Research Program's (PPRP) socioeconomic assessment in the Western
14 Maryland Power Plant Siting Study. I have also conducted socioeconomic
15 assessments for Baltimore Gas and Electric's Perryman facility and Panda
16 Energy Corporation's Panda-Brandywine cogeneration facility. I directed
17 PPRP's preliminary site assessments and environmental reviews for
18 PEPCO's proposed Station H and Chalk Point facilities and performed a
19 preliminary site assessment for Delmarva Power's Dorchester project.
20 More recently, I conducted socioeconomic assessments on behalf of PPRP
21 for the ODEC/Reliant project in Cecil County, for the Kelson Ridge
22 project in Charles County, the Clipper and U.S. Windforce wind energy

1 projects in Western Maryland, and the Mirant expansion of the Dickerson
2 Power Plan in Montgomery County.

3 My federal government clients have included the U.S. Army Corps of
4 Engineers (COE), the Economic Development Administration (EDA), and
5 the Department of Energy (DOE). For these agencies, I directed detailed
6 economic assessments of administrative policies and on-going programs.
7 For example, for COE, I directed a detailed assessment of the regional
8 economic impacts of a proposed multi-billion dollar navigation project
9 targeted for the Coosa River in Alabama. For EDA, I directed an
10 evaluation of the economic benefits of its Job Targeting Program. For
11 DOE, I directed a comprehensive review of economic impact assessment
12 methodologies available to the agency and applied one of these to a major
13 coal development project in the western United States.

14 For private sector clients, I have undertaken assessments of the regional
15 economic impacts of alternative capital investment strategies, federal and
16 state tax policies and other economic development initiatives.

17 **Q. WHAT ARE YOUR RESPONSIBILITIES WITH RESPECT TO THE**
18 **STATE'S ENVIRONMENTAL REVIEW FOR THE PROPOSED**
19 **CATOCTIN POWER FACILITY?**

20 A. I am the Principal Investigator responsible for evaluating the
21 socioeconomic impacts associated with the proposed Catoctin facility. My
22 responsibilities included undertaking a regional overview of current and
23 anticipated socioeconomic conditions in the project area, and conducting
24 comprehensive assessments of the potential employment, income,
25 population, housing and fiscal impacts in addition to impacts upon land
26 use, transportation, visual quality and historical and cultural resources
27 associated with the construction and operation of the facility. These
28 analyses are contained in DNR's "Environmental Review of the Proposed
29 Catoctin Power Facility ". Specifically, I am sponsoring the following
30 sections of this document: Section 3.5 – Regional Socioeconomic Setting,
31 Section 5.4 – Socioeconomic Impacts, and Section 5.5 – Cultural Impacts.

32

1 **Q. WHAT WERE THE OBJECTIVES OF YOUR EVALUATION?**

2 A. The objectives of my evaluation were to characterize the nature and
3 magnitude of socioeconomic impacts attributable to Catoctin Power's
4 facility.

5 **Q. HOW WERE THESE OBJECTIVES ACCOMPLISHED?**

6 A. I accomplished these objectives by first developing a detailed
7 understanding of the project area through reviews of published data and
8 site visits. I then conducted an independent analysis to estimate the
9 impacts of the proposed project using accepted analytical techniques,
10 detailed reviews of existing local area data, project documentation,
11 interviews with experts, and primary data collected during site visits.

12 **Q. UPON WHAT SOURCES OF DATA DID YOUR EVALUATIONS
13 RELY?**

14 A. Economic, demographic and fiscal impact estimates are based upon
15 project documentation provided by Catoctin Power and supplemental
16 information from a number of sources including Frederick County, U.S.
17 Bureau of the Census, the Bureau of Economic Analysis and the Maryland
18 Department of Business and Economic Development. Transportation,
19 land use, visual quality and historical/cultural impacts are based upon
20 planning documents from Frederick County, documentation and
21 correspondence from State sources. Sources of data used in the
22 socioeconomic analysis are identified in *DNR's Environmental Review of the
23 Proposed Catoctin Power Facility*.

24 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING LAND USE
25 IMPACTS DUE TO THE CATOCTIN POWER FACILITY?**

26 A. The Catoctin site is located on a 20-acre parcel in the central portion of the
27 2,200-acre industrial zone, within the 400 acres of secured property on an
28 area previous cleared and graded by Eastalco.

29 The Twenty Year Plan and Comprehensive Zoning adopted by the
30 Frederick County Board of Commissioners in October 2001 envisioned

1 almost all (1,635 acres) of the Eastalco land, including the parcel that
2 would be occupied by Catoctin, being developed under General Industrial
3 (GI) zoning guidelines.

4 The GI district is intended to provide areas for industries involving
5 manufacturing or processing and for those industrial uses that cannot
6 meet the performance criteria of the Limited Industrial (LI) district.
7 Section 1-19-4 of the Frederick County Zoning Ordinance classifies the
8 Catoctin facility as a non-governmental utility Section 1-19-289 of the
9 Ordinance states that a non-governmental utility is permitted in the GI
10 zoning district as a Principal Permitted Use subject to Site Development
11 Plan approval.

12 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING POPULATION**
13 **AND HOUSING IMPACTS OF THE CATOCTIN POWER FACILITY?**

14 A. Employment demand associated with construction of the facility would
15 not encourage workers to permanently migrate into the area. With a
16 relatively short construction timetable and a sizable labor force already
17 living within a commuting distance, most workers would commute to the
18 site on a daily basis. As a result, construction activities are not expected to
19 affect the population and housing trends of Frederick County.

20 The operational employment requirements associated with the facility are
21 relatively small and would have no effect on population and housing.

22 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE ECONOMIC**
23 **IMPACTS OF THE CATOCTIN POWER FACILITY?**

24 A. While sizeable in absolute terms, the employment and income impacts
25 from construction of the proposed facility would be modest relative to the
26 economy of Frederick County, with roughly 379 person-years of
27 employment earning \$22.7 million creating an additional 431 person-years
28 of employment over the construction period and more than \$20 million of
29 additional income in Frederick and surrounding counties. Catoctin
30 Power's estimate of \$31 million in non-payroll expenditures on
31 construction, design, and installation would generate an additional \$22
32 million of indirect sales (output) from supplying industries over the

1 construction period. Much of that economic impact would likely benefit
2 Maryland companies.

3 Once operational, the facility would employ 25 workers with an average
4 annual payroll of \$1.25 million. Annual operations and maintenance
5 (O&M) expenditures would be about \$2 million. This would result in a
6 small, positive effect on the Maryland economy, generating another nine
7 jobs, as much as \$500,000 in additional annual earnings, and about \$1.43
8 million in indirect spending through multiplier effects.

9 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING IMPACTS FROM**
10 **THE CATOCTIN POWER FACILITY ON GOVERNMENT REVENUES**
11 **AND EXPENDITURES?**

12 During construction, fiscal impacts would be mildly positive to Frederick
13 County and the State of Maryland from sales and income tax revenues.
14 The total revenue flowing to the State during the construction phase is
15 estimated to be \$4.7 million. The primary source of revenues to Frederick
16 County from the project over this period would be from the county
17 personal income tax. County income tax revenues would be highly
18 dependent on the proportion of the construction and indirect labor
19 residing in the county. If 40 percent of construction labor resides in
20 Frederick County, nearly \$1.4 million in county income tax revenues
21 would be generated over the construction period.

22 Once operational, the facility would add from \$1 million to \$2.5 million in
23 state tax revenues from corporate income taxes, income taxes on O&M
24 workforce incomes, sales taxes from the consumption expenditures of the
25 O&M labor contingent, and property taxes on real property. The primary
26 tax revenue source for Frederick County from the Catoctin facility would
27 be from real property taxes which would be about \$397,000 in the first
28 year of operation, declining to about \$144,000 after 20 years. Catoctin
29 Power would also be liable for the Carroll Manor Fire and Ambulance
30 Tax. Annual county income tax revenues would be modest, amounting to
31 about \$32,000 if one-half the O&M workforce resided in Frederick County.

1 The project is not expected to have a significant demographic effect, and
2 any demands it places upon the existing physical and economic
3 infrastructure in Frederick County would be contained within the
4 demands created by the County's continued population growth. As a
5 result, no expenditures for public services are expected to be required
6 from State or County governments if the project is developed as planned.

7 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING IMPACTS FROM**
8 **THE CATOCTIN POWER FACILITY ON STATE AID TO FREDERICK**
9 **COUNTY?**

10 A. A number of state funding programs that flow to counties are based upon
11 relative wealth, which is measured by a county's assessed tax base and the
12 net taxable income of the county. As a nongovernmental utility, the
13 assessed value of the proposed Catoctin facility's real property would be
14 included in the calculation of wealth. Using the State's wealth calculation
15 formula, Catoctin Power would increase Frederick County's wealth by \$16
16 million in the first year of operation, which, all other things being equal,
17 would lower the county's education funding by about \$131,000 and total
18 state funding by \$148,000. In the first year of the Catoctin facility's
19 operation, county revenues are projected to increase by at least \$400,000,
20 primarily from property tax revenues. Therefore, the net revenue benefit
21 to the county is expected to exceed \$250,000.

22 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING VISUAL IMPACTS**
23 **DUE TO THE CATOCTIN POWER FACILITY?**

24 A. Prominent structural features of the Catoctin facility include the
25 combustion and steam turbine generator building (76 feet above grade
26 level, AGL), HSRG penthouse (88 feet AGL), administration building (41
27 feet AGL), cooling tower (65 feet AGL), exhaust stacks (160 feet AGL), and
28 switchyard components (17 to 67 feet AGL). Non-structural visual
29 attributes of the facility would include occasional plumes from the
30 mechanical draft cooling tower and exhaust stacks.

31 The Catoctin facility will be located adjacent to an existing industrial
32 facility - Eastalco. The visual impact of the Catoctin facility will be

1 additive but certainly not novel. The area around the proposed site is
2 visible from some elevated locations, such as Sugarloaf Mountain, but
3 these are “far” views, which reduce the acuity of tall structures and bring
4 other environmental and man-made features into perspective. Prominent
5 structures would be visible from several “near” views due to surrounding
6 terrain. However, most terrain-enabled views are from the southeast,
7 which are mostly obstructed by the Eastalco facility. Trees and other
8 vegetation, plus residential and other man-made structures, are expected
9 to intercept “near” views of the facility from many perspectives.

10 Visual impacts from the proposed facility would affect few locations and
11 would be framed within an existing industrial landscape from most
12 perspectives. However, views from some locations to the northeast,
13 particularly Saint Matthew's Evangelical Lutheran Church, would be
14 adversely affected by the facility. These visual impacts could be mitigated
15 through the selective placement of buffers.

16 With respect to light trespass, the proposed facility is expected to utilize
17 the minimum lighting required to satisfy state and federal requirements,
18 and be consistent with safety requirements.

19 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING IMPACTS ON**
20 **HISTORICAL AND CULTURAL RESOURCES DUE TO THE**
21 **CATOCTIN POWER FACILITY?**

22 A. Construction of the proposed facility would disturb less than 20 acres for
23 hosting facility structures and supporting infrastructure, with another 20
24 acres temporarily disturbed for construction lay down. There are no
25 known archeological sites in or around the proposed project area. The
26 Maryland Historical Trust concluded that there is little likelihood that the
27 area contains significant archeological properties, and that no
28 archeological investigations are warranted for the project site.

29 Some historical properties are within the area of potential effect of the
30 proposed facility. Over the longer term, the proposed facility would add
31 to an already industrialized viewscape that encompasses several
32 inventoried historical properties.

1 Construction impacts would be both intermittent and temporary. Most
2 noise, dust, and vibration impacts are not expected to extend outside the
3 Eastalco property line. Construction machinery, such as cranes, may be
4 occasionally visible from some historic properties, but views in the
5 direction of the construction site are already compromised by Eastalco.

6 Operational impacts on historic properties would be primarily visual. The
7 facility would likely be partly visible to only a few of the estimated 31
8 historic properties within two miles of the site.

9 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING**
10 **TRANSPORTATION IMPACTS DUE TO THE CATOCTIN POWER**
11 **FACILITY?**

12 A. During construction, an average of about 175 workers would commute to
13 the site, but the number would increase to as many as 450 during the peak
14 employment period in summer 2006. Construction worker traffic would
15 be concentrated between 6:00 and 7:00 am and 4:00 and 5:00 pm. Delivery
16 trucks would probably arrive at the site throughout the day to bring in
17 materials and equipment.

18 Although one cannot predict with certainty the number of workers that
19 would commute from any given direction, most construction traffic would
20 probably travel from I-270 to Manor Woods Road via Buckeystown Road,
21 English Muffin Way and New Design Road. The geometry of the
22 intersection of New Design Road and English Muffin Way has changed
23 since Catoctin Power estimated traffic impacts. An analysis of traffic
24 counts, including turning movements, for May 2004 indicates that the
25 intersection operates at LOS B during the 4-5 pm period. Excluding
26 construction traffic associated with the proposed Catoctin facility, the
27 intersection is projected to operate at Level of Service (LOS) B in 2006. The
28 critical right-turn traffic movement from New Design Road onto English
29 Muffin Way is expected to operate at LOS A (little or no delay) in 2006 in
30 the absence of construction traffic.

31 The addition of construction traffic would degrade the intersection LOS
32 during the peak construction period. Catoctin Power estimated that 316

1 vehicles would be added to northbound New Design Road in the late
2 afternoon during the summer of 2006. Although the overall intersection
3 LOS is expected to remain at B, the additional traffic turning right from
4 New Design Road onto eastbound English Muffin Way is expected to
5 reduce the right-turn LOS from A to C during the afternoon peak period
6 due to vehicle queuing. LOS C is not an unacceptable level of service,
7 particularly for short periods of time, and construction worker traffic
8 would be the flow primarily affected by delays.

9 There is some evidence to suggest that the intersection of English Muffin
10 Way and New Design Road would be congested in the morning peak
11 period, when construction traffic is turning left against a predominantly
12 northbound traffic flow on New Design Road and outbound traffic from
13 the Wellington Trace subdivision. The intersection currently operates at
14 LOS A, indicating little or no delay, between 7:00 am and 8:00 am.
15 Exclusive of construction traffic, the intersection level of service is
16 projected to decline to LOS B by 2006. Adding construction traffic to
17 morning traffic flows through the intersection during the peak
18 construction period would reduce the overall intersection level of service
19 to LOS C, and would particularly increase delays to westbound traffic
20 turning left from English Muffin Way onto southbound New Design
21 Road. This could encourage construction worker traffic to divert
22 southbound on MD 85 (Buckeystown Road) to Manor Woods Road
23 instead of turning onto English Muffin Way to New Design Road. The
24 diversion would increase traffic through the Buckeystown Historic
25 District and an at-grade crossing of the CSX railroad line on Manor Woods
26 Road during the morning peak period, both of which raise safety
27 concerns.

28 Two roadway construction projects are scheduled to occur in the
29 Adamstown Region during the construction period. A project in 2006 will
30 upgrade English Muffin Way between MD 85 and New Design Road from
31 a two- to a four-lane undivided arterial. This will likely cause a temporary
32 reduction in LOS and diversion of commuter traffic to alternate routes.
33 The county also plans to upgrade a weight-restricted bridge on Ballenger
34 Creek Pike, part of Catoctin Power's preferred truck route, to

1 accommodate the full weight of Maryland's legal load. There could be
2 temporary reductions in LOS along Ballenger Creek Pike and diversions
3 of truck traffic during the bridge construction period.

4 The Catoctin facility would not be a source of traffic congestion during the
5 operations phase. Tanker trucks delivering 5,000-gallon loads of 19
6 percent aqueous ammonia solution would travel to the facility once or
7 twice a week over public roads. There are no prescribed truck routes in
8 Frederick County but Catoctin Power has indicated that it would adopt
9 Eastalco's designated truck route, which connects to US 15 via Mountville
10 Road, Ballenger Creek Pike and Manor Woods Road. The route has
11 advantages for ammonia delivery since traffic counts are low and the
12 route does not pass sensitive receptors such as schools or housing
13 developments. A bridge on Ballenger Creek Pike imposes the only
14 restriction along this route. However, the county has allocated funds to
15 upgrade this span in 2007 to allow it to accommodate the full weight of
16 Maryland's legal load.

17 **Q. WHAT ARE YOUR CONCLUSIONS REGARDING IMPACTS FROM**
18 **LINEAR FACILITIES ASSOCIATED WITH THE CATOCTIN**
19 **FACILITY?**

20 A. In late August, Catoctin Power provided information pertaining to the
21 various water supply options and associated linear facilities needed to
22 transport water and natural gas to the proposed power plant. According
23 to the procedural schedule set for the case, information provided in
24 Catoctin Power's August filing will be addressed in PPRP's supplemental
25 filing on November 24.

26 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

27 A. Yes, it does.

APPENDIX A
STATEMENT OF QUALIFICATIONS
for Peter D. Hall

Experience and Employment

Dr. Peter D. Hall is a consulting economist and president of Metametrics, Inc., a Charlottesville consulting and software services firm. He has over twenty years of experience in regional economic analysis and socioeconomic impact analysis. Over that period he has directed numerous consulting engagements assessing the economic, social and other effects of economic development and infrastructure investment projects. Dr. Hall has undertaken consulting assignments for a large number of clients including major telephone utilities, banks, the U.S. Army Corps of Engineers, the Department of Energy, the U.S. Department of Commerce and the Environmental Protection Agency.

For the Maryland Department of Natural Resources, Dr. Hall directed the Power Plant Research Program's socioeconomic assessment in the Western Maryland Power Plant Siting Study. He also conducted the socioeconomic assessments for Baltimore Gas and Electric's (BG&E's) proposed Perryman facility and Delmarva Power and Light's proposed Dorchester facility. Dr. Hall directed PPRP's environmental reviews for PEPCO's Station H power plant, PEPCO's Chalk Point CT project, Panda Energy Corporation's Panda-Brandywine cogeneration facility, and projects in Laytonsville and College Park, Maryland. He has also been involved in the estimation and forecasting of residential, commercial, industrial and peak-load electricity demand in the Allegheny Power System service territories. More recently, Dr. Hall directed socioeconomic assessments on behalf of PPRP for the ODEC/Reliant project in Cecil County, for the Kelson Ridge project in Charles County, the Mirant combined cycle facility in Montgomery County, and the Clipper and U.S. Windforce wind energy projects in western Maryland.

Dr. Hall was previously employed as a Managing Associate of Urban Systems Research and Engineering, Inc. and as a Senior Technical Engineer at the Sorites Group, Inc. He has also served as an adjunct instructor in the Department of Civil Engineering of Tufts University. He is currently president of Metametrics, Inc. and a Senior Systems Consultant to the Health Industry Business Communications Council.

Education

B.A. in 1974 and M.A. in 1975 from McMaster University in Economic Geography.

Ph.D. in Civil Engineering (Transportation) from the Massachusetts Institute of Technology in 1980.