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March 17, 2006
VIA FEDERAL EXPRESS

Chairman Ron Jones
ATTN: Sharla Dillon, Dockets Manager
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

RE: Docket No. 06-00010

Dear Ms. Dillon:

Enclosed herewith for filing in the above referenced matter are the original and 13 conformed copies of the Pre-Filed Direct Testimonies of Barry L. Thomas, Chris Potter and Stephen E. Early.

If you have any questions, please do not hesitate to contact the writer.

Very sincerely yours,

HUNTER, SMITH & DAVIS, LLP

William C. Bovender

WCB/pl
Enclosures
cc: James R. Bacha, Esq. (via e-mail and U.S. Mail, w/encl.)
Barry L. Thomas (via e-mail and U.S. Mail, w/encl.)

BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE
MARCH 20, 2006

IN RE:	§	
	§	
Appropriateness of Implementations of PURPA	§	
Standard 11 (Net Metering), Standard 12 (Fuel	§	
Sources), Standard 13 (Fossil Fuel Generation	§	TRA DOCKET NO. 06-00010
Efficiency), Standard 14 (Time Based Metering	§	
and Communication) and Standard 15	§	
(Interconnection) for Kingsport Power	§	
Company d/b/a AEP Appalachian Power	§	

PRE-FILED DIRECT TESTIMONY

OF

BARRY L. THOMAS

SUBMITTED ON BEHALF OF
KINGSPORT POWER COMPANY
D/B/A AEP APPALACHIAN POWER

Pre-Filed Direct Testimony of Barry L. Thomas

On Behalf of

Kingsport Power Company

Q. Please state your name, business address, and position.

A. My name is Barry L. Thomas. My business address is Three James Center, 1501 East Cary Street, Suite 702, Richmond, VA 23219.

I am a Director, Regulatory Services for the Appalachian Power unit of American Electric Power Company, Inc. (AEP). The Appalachian Power unit of AEP consists of Kingsport Power Company, d/b/a AEP Appalachian Power (Kingsport) and Appalachian Power Company (APCo). I am responsible for the regulatory functions for Kingsport and for APCo in Virginia.

Q. Please describe your educational background and professional employment.

A. I received a B.A. in Economics from Roanoke College in 1971. In 1973 I received an M.A. in Economics from Virginia Polytechnic Institute & State University where I concentrated my studies and wrote my thesis on Regulatory Economics.

I joined Appalachian Power Company in 1975 as a Senior Rate Analyst. I was promoted to Supervisor of Rate Research and Design in 1979 and promoted to my present position in January of 1996.

Q. Have you previously appeared before any regulatory commissions?

A. Yes. I have testified before the Virginia State Corporation Commission in rate proceedings and generic hearings in the area of rates and regulations. I have also testified before the Public Service Commission of West Virginia and have prepared testimony for proceedings before the Federal Energy Regulatory Commission (FERC).

Q. What is your understanding of the purpose of this proceeding?

A. By Notice of Hearing dated February 15, 2006, the Tennessee Regulatory Authority (TRA) scheduled this hearing to determine whether or not it is appropriate for Kingsport to implement any of five (5) new federal standards for electric utilities contained in the Public Utility Regulatory Policies Act of 1978 (PURPA) as amended by the Energy Policy Act of 2005 (16 7.S.C. § 2621(d)(11) through (15))(EPAct). An overview of the standards that the TRA is reviewing in this hearing, as a result of EPAct, are as follows:

> (11) NET METERING. – Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term "net metering service" means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.
>
> (12) FUEL SOURCES. -- Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.
>
> (13) FOSSIL FUEL GENERATION EFFICIENCY. – Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.
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>
> (14) TIME-BASED METERING AND COMMUNICATIONS. – (A) Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level. The Time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.
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> (15) INTERCONNECTION. – Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term "interconnection service" means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered shall promote current best practices of interconnection for distributed generation including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential.

These standards are not mandatory. Instead, as the TRA noted in its Notice of Hearing, the determination of whether or not it is appropriate for a public utility such as Kingsport to implement any of the standards rests with the TRA.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to identify which Kingsport witnesses will be presenting the Company's position on each of the federal standards enumerated above. In addition to addressing two (2) of the proposed standards, I will provide background information about Kingsport that will be useful to the TRA as it determines whether Kingsport should implement any of these new federal standards.

Q. Which Kingsport witnesses will be presenting the company's position on each of the five (5) new federal standards?

A. Kingsport witness Potter will present the Company's position on standards (11), Net Metering, and (14), Time-Based Metering and Communications. I will present the Company's position on standards (12), Fuel Sources, and (13), Fossil Fuel Generation

Efficiency. Finally, Kingsport witness Early will present the Company's position on standard (15), Interconnection.

Q. Please describe Kingsport.

A. Kingsport, a wholly-owned operating company subsidiary of AEP, is a public utility engaged in furnishing electric power to approximately 46,000 retail customers in a 220 square mile area primarily in Sullivan, Hawkins and Washington Counties in the State of Tennessee. This area includes the City of Kingsport and the Town of Mount Carmel.

Q. What is the source of the electric power which Kingsport distributes to its customers?

A. Kingsport has no generating facilities and purchases all of its electric power requirements at wholesale from APCo, another AEP operating company. APCo's wholesale rates to Kingsport are regulated by the FERC.

Both Kingsport and APCo are part of the AEP-East System. The AEP-East System consists of five other AEP operating company subsidiaries that provide electric service to retail and/or wholesale customers in Tennessee, Virginia, West Virginia, Kentucky, Ohio, Indiana and Michigan. The five (5) AEP-East System companies, including APCo, that own generation facilities are parties to the FERC-approved AEP Interconnection Agreement, pursuant to which they "pool" their generation resources to reliably and efficiently meet the electric requirements of the customers of all of the AEP-East System companies, including Kingsport.

Q. What is the company's position regarding EPAct standard (12), Fuel Sources?

A. As I indicated above, adoption of standard (12) would require Kingsport to develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including

renewable technologies. Since Kingsport owns no generation, Kingsport recommends that the TRA find that it would be inappropriate and unnecessary for the Company to implement standard (12), Fuel Sources. The Company wishes the Authority to be aware that the AEP-East System already plans its generation to give due regard to fuel diversity, while concentrating on providing low cost generation to reliably and efficiently meet the load of all of its customers.

As a general comment, it should be noted that fuel diversity, in and of itself, is not an appropriate objective. Utility systems are planned to consider an appropriate mix of capacity/fuel types ranging from base load generation, with higher capital cost but lower fuel cost, to peaking generation with lower capital cost but, typically, higher fuel cost. Evaluations of capacity and fuel type also consider the potential impacts associated with reliance on a particular fuel source (e.g. the possibility of interruption of electric supply to customers due to a fuel shortage or the risk of increased cost due to reliance on a single fuel). However, in large measure, economics dictate which fuels generally are used to supply certain portions of an electric system's load.

The generating companies in the AEP-East System, including APCo, which provides the electricity supply for Kingsport Power, own generation that uses a reasonably diverse mix of fuels. The table below shows the amount and proportion of owned capacity, by type of fuel:

Resource	Capacity (MW)	Percent of Total
Nuclear	2,143	8.6
Coal	20,545	82.3
Natural Gas	1,383	5.5
Oil	3	0.0
Hydro	284	1.1
Pumped Storage	615	2.5

Again, in general terms, as the load served by the AEP-East System grows, the proportion of capacity fueled by natural gas is also likely to grow if and as additional peaking capacity is added. While fuel diversity may increase overtime, the vast majority of the energy produced by the AEP-East System will continue to be provided by low-cost nuclear and coal generation.

Renewable resources have the potential to become an efficient generation resource. In fact, AEP via it western fleet is a major wind producer in the United States. However, the cost of renewables is uncertain at this time and renewable resources generally cost more than conventional resources. Based upon preliminary reviews, the AEP-East System has determined the following: 1) generally, wind and biomass can provide the most renewable generation for the least cost compared to other renewables; 2) landfill gas and solar can provide incremental distributed generation at higher costs than wind and biomass; 3) hydro upgrades can potentially provide incremental (renewable) generation at existing dams. Biomass as a boiler fuel seems to be the renewable resource with the most potential for the AEP-East System, but additional studies are required before any decision is made regarding such resources.

To recap, the information provided above indicates that the AEP-East System already uses a diverse range of fuels and technologies to generate electricity. Although fuel diversity, in and of itself, should not be a primary goal, as costs change and technology develops the AEP-East System will continue to evaluate alternative generation technologies and fuels, including renewable resource options, taking into consideration the associated risk and cost factors. This information, when combined with the fact that Kingsport owns no generation, means that the TRA need not require Kingsport to implement standard (12), Fuel Sources.

Q. What is Kingsport's position regarding EPAct standard (13), Fossil Fuel Generation Efficiency?

A. Adoption of standard (13), Fossil Fuel Generation Efficiency, would require Kingsport to develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation. Since Kingsport does not own any generation, it is the Company's position that it would be inappropriate and unnecessary for the TRA to find that Kingsport should implement standard (13). While it would make no sense to require Kingsport to implement standard (13), the Company wants the TRA to know that the AEP-East System is committed to fossil fuel generation efficiency.

The AEP-East System recognizes the economic need to improve fossil fuel generation efficiency. We strive to improve the operating performance of our generating units through wise capital expenditures, the use of proven new technologies, efficient operation and careful planning. AEP has employed these concepts over time in the development and utilization of generation efficiency improvements to provide reliable, low cost electricity to its customers. Some of AEP's notable accomplishments include:

- The development and operation of the first supercritical double reheat unit.
- The development of a Sliding Pressure Technique for supercritical units to improve part load efficiency.
- The installation of Advanced Design Steam Path to the System's larger units.

In addition to still enjoying the benefits of these accomplishments, more recently, AEP has focused on the utilization of tools to help it assess the efficiency of its plants. Examples of this include:

- The development of online performance monitors for plant operators.
- The creation of a Heat Rate Deviation Calculation and Reporting tool that allows engineers and management to identify problem areas in major equipment.
- The introduction of Facility Health Reports for outage planning and condition monitoring.

Q. Please summarize your testimony with respect to standards 12 and 13.

A. Kingsport Power owns no generation and, therefore, it would be inappropriate for standards 12 (fuel diversity) and 13 (generation efficiency) to be implemented by the TRA. The Company asks that the Authority take note of and recognize that Kingsport, as a member of the AEP-East System and as a result of its full requirements purchased power agreement with Appalachian Power, has and will continue to be the recipient of the benefits of the AEP-East System's current and future fuel diversity and commitment to implementing appropriate efficiency measures for its generation fleet.

Q. Does that conclude your pre-filed direct testimony?

A. Yes.

Respectfully submitted,

Kingsport Power Company
d/b/a AEP Appalachian Power

By: _____

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for Kingsport Power Company d/b/a AEP	§	
Appalachian Power	§	

PRE-FILED DIRECT TESTIMONY

OF

CHRIS POTTER

SUBMITTED ON BEHALF OF
KINGSPORT POWER COMPANY
D/B/A AEP APPALACHIAN POWER

Pre-Filed Direct Testimony of Chris Potter

On Behalf of

Kingsport Power Company

Q. Please state your name, business address, and position.

A. My name is Chris Potter. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I currently hold the position of Manager in the Regulated Pricing and Analysis department for American Electric Power Service Corporation (AEPSC), a subsidiary of American Electric Power Company, Inc. (AEP).

Q. Please summarize your educational background and employment history.

A. I received my Bachelor of Business Administration degree from Corpus Christi State University (CCSU) in 1991. While attending CCSU I was employed by the former Central Power and Light Company, now AEP Texas Central Company (TCC), as an intern in the Budgeting section of Accounting. In November of 1991 I accepted the position of General Ledger coordinator for TCC. My duties as General Ledger coordinator included monthly closing of TCC's financial books, preparation of external financial statements and implementation of various mainframe systems used in the day to day operations of TCC. In July of 1994 I transferred to Central and South West Services, Inc. (CSWS) as the Closing Coordinator of TCC and Southwestern Electric Power Company (SWEPCO). In June of 1995 I was promoted to Accounting Consultant for CSWS but maintained the same Closing Coordinator responsibilities. In March of 1996 I transferred to the CSWS Pricing/Costing department as a Pricing/Costing Consultant. In October of 1996, I was promoted to Project Manager in the Pricing/Costing

department and in May of 1999, I was promoted to Senior Project Manager. In June of 2000, I accepted the position of Principal Regulatory Consultant for AEPSC. In June of 2003, I accepted my current position as Manager in the Regulated Pricing and Analysis department.

Q. What are your principal areas of responsibility as a manager in the regulated pricing and analysis department?

A. My responsibilities are to manage pricing and costing services for rate cases, regulatory filings and rulemakings, as well as to provide pricing and costing services to Kingsport Power Company, d/b/a AEP Appalachian Power (Kingsport or the Company) and other AEP electric utility operating companies in the areas of regulatory analysis, cost of service studies and rate design. I am also responsible for assisting Kingsport and other AEP electric utility operating companies in the preparation of filings before this Authority as well as the other commissions under whose jurisdiction these companies provide electric service.

Q. For whom are you testifying in this proceeding?

A. I am testifying on behalf of Kingsport.

Q. Have you previously testified in any regulatory proceedings?

A. Yes. I have testified before the Arkansas Public Service Commission and the Louisiana Public Service Commission for SWEPCO, the Oklahoma Corporation Commission for Public Service Company of Oklahoma, the Public Utility Commission of Texas for AEP TCC, AEP Texas North Company (AEP TNC), and SWEPCO, the Federal Energy Regulatory Commission for AEP TNC and the

Virginia State Corporation Commission and the Public Service Commission of West Virginia for APCo.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present the Company's position on two (2) of the five (5) standards contained in the Energy Policy Act of 2005 (EPACT). I specifically address standards (14), Time-Based Metering and Communications, and (11) Net Metering.

Q. What is the requirement set forth in EPACT for Time-Based Metering and Communications?

A. EPACT requires that:

> "Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customer upon customer request, a time-based rate schedule under which the rate charge by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology."

This section of EPACT goes on to state:

> "each State regulatory authority shall, not later than 18 months after the date of enactment of this paragraph conduct an investigation in accordance with 115(i) and issue a decision whether it is appropriate to implement the standards set out in subparagraphs (A) and (C)." Consequently, the TRA must determine if it would be appropriate for Kingsport to implement the Time-Based Metering and Communications requirement contained in EPACT."

Q. Does Kingsport currently provide electrical service through any time-based tariffs?

A. Yes. The Company currently offers a variety of time-based or time-differentiated tariffs as well as several load management options designed to encourage customers to reduce on-peak usage.

Q. Would you please describe the Company's current tariff offerings that contain time-based pricing or load management provisions?

A. Yes. As shown in the table below, the Company offers a wide variety tariffs that reflect time-based pricing differentials. The provision of service under at least one of these tariffs is available to the vast majority of the Company's customers, whether they are residential, commercial or industrial customers. Based upon January 2006 revenue data, there are 40,200 plus residential customers of Kingsport that are eligible to receive service under the Company's various time-differentiated tariff offerings. However, only 40 customers are doing so.

Tariff	Provisions	Requirements
RS - Residential Service	Load Management Water heating Provison - the last 250 kWh of use in any month will be billed at a rate of 2 755 cents per kWh vs. the standard charge of 4 142 cents per kWh.	Customer installs a Company approved water heating system which consumes electrical energy during Off-Peak hours and stores hot water for use during On-Peak hours
RS TOD - Residential Time-of-Day Electric Service	RS TOD has an On-Peak charge of 7 541 cents per kWh and an Off-Peak charge of 2.755 cents per kWh.	Any Residential customer can take service under the RS TOD tariff
RS LM TOD - Residential Load Management Time-of-Day Electric Service	RS LM TOD has an On-Peak charge of 7 541 cents per kWh and an Off-Peak charge of 2 755 cents per kWh. If qualified for Conservation and Load Management Credit, customer will be credited .937 cents per kWh for each kWh consumed during the Off-Peak periiod	To qualify for the Conservation and Load Management Credit, the customer must have a combination of approved electric thermal storage, space heating and/or cooling system and water heater all of which are designed to consume electrical energy only during the Off-Peak billing periods
SGS LM TOD - Small General Service Load Management Time-of-Day Provisons	SGS LM TOD has an On-Peak charge of 9 293 cents per kWh and an Off-Peak charge of 2 755 cents per kWh.	To qualify for this offering a customer must have energy storage devices with time-differentiated load characteristics which consume electrical energy only during the Off-Peak hours and store energy for use during On-Peak hours.
MGS TOD - Medium General Service Load Management Time-of-Day Provisons	MGS TOD has an On-Peak charge of 8.847 cents per kWh and an Off-Peak charge of 2 755 cents per kWh.	Availabe to the first 100 general service customers that apply with a demand greater than 10 KW but less than 300 KW
MGS LM TOD - Medium General Service Load Management Time-of-Day Provisons	MGS LM TOD has an On-Peak charge of 8 847 cents per kWh and an Off-Peak charge of 2 755 cents per kWh.	To qualify for this offering a customer must have energy storage devices with time-differentiated load characteristics which consume electrical energy only during the Off-Peak hours and store energy for use during On-Peak hours.
IP - Industrial Power	IP has an Off-Peak excess demand charge that depending on the voltage level at which service is provided between $6..20 per KW and $6.13 per KW less than the On-Peak demand charge	To qualify for the IP tariff the customer must be an industrial or large commercial customer with a contract capacity of greater than 3,000 KW

Q. Should the TRA require Kingsport to implement standard (14), Time-Based Metering and Communications?

A. No. It is apparent that for a number of possible reasons, at the current price level of the Company's rates, customers have decided that the economic rewards associated with participating in the various time-based programs do not outweigh the inconvenience or cost associated with changing their usage characteristics. It is also very clear that the Company currently offers a variety of time-based options for its customers and that any further action on this matter would not be beneficial to the customers of Kingsport.

Q. What is the requirement set forth in EPACT for Net-Metering?

A. EPACT Section 1251, which deals with net metering and additional standards, requires that state regulators begin the consideration of, or set a hearing date to establish a proceeding to consider whether or not to adopt the section's "standard" within two years of enactment. State regulators must complete the consideration and make a determination within three years of enactment.

Q. What is the net-metering standard that the State regulators are to consider?

A. Per EPACT, the net-metering standard the State regulators are to consider is as follows:

> "(11) NET METERING.—Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term 'net metering service' means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period."

Q. Would you explain the Company's position as to the provision of a net-metering tariff offering?

A. Yes. It is the Company's position that the TRA should find that it is unnecessary for Kingsport to implement the net metering standard. Inadequate interest exists in Kingsport's service area to warrant offering a net metering tariff. The Company is not aware of any requests from its customers for such service. Experience in other AEP jurisdictions where net metering tariffs are available indicates minimal customer interest in this type of service. The Company is willing to work with its customers who desire non-standard service arrangements. Such non-standard arrangements have typically been handled through the use of special contract provisions. Should a Kingsport customer request a net metering type of service from the Company, such request could be handled through a special contract.

Q. If the TRA were to decide that it is appropriate to require the Company to offer net metering to its customers, are there concerns that should be addressed prior to implementing such a program?

A. Yes. Care must be taken in the development of any net metering tariff or program, because customers participating in net metering programs are typically subsidized by other customers and by the utility. Exhibit 1 to my testimony lists many important issues that must be considered during the development of an appropriately designed net metering program. For example, care should be taken to assure that (1) no subsidy is created for the net-metering customer, (2) that only credits associated with generation service are recognized and (3) eligibility for net

metering service is limited to residential and small commercial customers utilizing renewable energy sources. Should the TRA ultimately decide to pursue the development of a net metering program, the Company is willing to participate in a collaborative process that will result in an appropriately designed net metering program.

Q. Would you please summarize your testimony?

A. Yes. Kingsport currently offers a wide variety of tariffs that reflect time-based pricing differentials and even with these offerings the Company is seeing minimal customer interest in these programs. The TRA should not require any further action on the behalf of Kingsport to implement the Time-Based Metering and Communications standards set out in EPACT.

My testimony also supports the Company's position that it would not be beneficial to our customers to require the implementation of a net-metering standard given the limited interest experienced in Tennessee as well as other AEP jurisdictions. Request for net-metering service can be handled on a customer-by-customer basis through a special contract. For the reasons discussed in my pre-filed direct testimony the TRA should find that it is unnecessary for Kingsport to implement the net-metering standard.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.

Respectfully submitted,

Kingsport Power Company
d/b/a AEP Appalachian Power

By: _____

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Company d/b/a AEP Appalachian Power	§	

EXHIBIT 1

TO THE PRE-FILED DIRECT TESTIMONY

OF

CHRIS POTTER

SUBMITTED ON BEHALF OF
KINGSPORT POWER COMPANY
D/B/A AEP APPALACHIAN POWER

Net Metering Issues

Net metering is described by the Energy Policy Act of 2005 (EPAct 2005) as the provision of service to an electric customer where electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period. Net metering has typically been used to encourage small generators of renewable energy at the expense of other customers via subsidization. Although Kingsport believes that a net metering standard is not necessary in Tennessee, should the Tennessee Regulatory Authority deem it appropriate to create rules, it is in the interest of AEP and its customers to ensure that rules are in place that provide the net metering customers an opportunity to self-generate, while ensuring that operations are maintained on a safe, reliable, and financially sound basis.

First and foremost, customer-owned generation facilities must be installed and operated in a manner that does not present safety hazards to other customers or utility personnel, and must not adversely impact the operation of the utility's equipment and service. Ensuring that the size of individual resources are limited and not concentrated in specific areas aids in reducing these concerns. A maximum limitation of load to which net metering can apply should be clearly established as well to further reduce these concerns.

Eligibility should be limited to residential and small commercial customers owning renewable energy resources, such as wind or solar, and the facility must not exceed capabilities beyond levels necessary to offset part or all of the customer's own usage. Larger self-generators have other options available to them for selling their excess generation into the market.

There are a number of financial impacts that must be addressed as well. While the credit to net metering customers should reflect only avoided generation costs, net metering customers frequently receive credit for not only the generation component of the rates, but also for the transmission and distribution cost components as well. Instead, the transmission and distribution components of the rates should be charged on the total energy flowing both in and out of the customer's system (not "net" values) since the customer is making use of the transmission and distribution system whether it is importing or exporting power. Net metering customers should pay monthly billing demand charges regardless of whether the customer provides enough excess generation to the grid to result in a monthly net credit in consumption charges. Additionally, net metering customers should not be able to avoid full shares of standard customers riders, such as system benefit charges, storm funds, renewable funds, etc. Otherwise, other customers are inappropriately subsidizing costs incurred to serve net metering customers. Net metering customers should receive credit for energy such that it appropriately reflects the time-value of energy. The existence of these subsidies further establishes the need for net metering arrangements to be applied on a limited basis.

Unless a net metering program is properly designed, customers may be incented to oversize their generation, despite that the intent is to only offset all or a portion of their energy requirements. AEP believes that net-metering customers should not receive excess credits for over sizing their generators and, other customers should not subsidize such credits. Net metering customers should be required to pay for costs that the utility must incur, as the net metering customer is the party that receives the benefit. Other customers should not be expected to subsidize the costs incurred to establish or maintain non-standard arrangements for these customers including application processing, metering, meter-reading, facility upgrades, study fees, inspection and testing, manual billings, etc. Lastly, net metering customers should pay the utility's incurred cost to stand ready at all times to back-up that customer's generator when it is not operating.

BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE
MARCH 20, 2006

IN RE:	§	
	§	
Appropriateness of Implementations of PURPA	§	
Standard 11 (Net Metering), Standard 12 (Fuel	§	
Sources), Standard 13 (Fossil Fuel Generation	§	TRA DOCKET NO. 06-00010
Efficiency), Standard 14 (Time Based Metering and	§	
Communication) and Standard 15 (Interconnection)	§	
for Kingsport Power Company d/b/a AEP	§	
Appalachian Power	§	

PRE-FILED DIRECT TESTIMONY

OF

STEPHEN E. EARLY

SUBMITTED ON BEHALF OF
KINGSPORT POWER COMPANY
D/B/A AEP APPALACHIAN POWER

Pre-Filed Direct Testimony of Stephen E. Early

On Behalf of

Kingsport Power Company

Q. Please state your name, business address, and position.

A. My name is Stephen E. Early. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I currently hold the position of Principal Engineer in the Distribution Engineering Services department for American Electric Power Service Corporation (AEPSC), a subsidiary of American Electric Power Company, Inc. (AEP).

Q. Please summarize your educational background and employment history.

A. I received my Bachelor of Science in Electrical Engineering degree from Ohio University in 1972. After graduation I accepted the position of Distribution Engineer with the Ashland Division of Kentucky Power Company (KYPCO) in Ashland, KY. From 1972 until 1995, when I became System Improvements Manager, I held a succession of positions of increasing responsibility at KYPCO. After a corporate wide re-organization in 1996, I became the System Improvements Manager for the Kentucky Distribution Region of AEP. As System Improvements Manager I was responsible for planning, designing, engineering and construction of major projects involving the KYPCO distribution system and portions of the distribution systems of Appalachian Power Company, Ohio Power Company and Columbus Southern Power Company. In 1999, I transferred to Gahanna, Ohio as an Engineer I with the AEP Distribution Engineering and Operations Department's Columbus Branch. In this position I

was responsible for distribution system area planning in parts of Ohio, West Virginia and Kentucky. In 2000, I transferred to the Distribution Asset Management Department where I first served as an Engineer I and then as a Senior Engineer. My duties included distribution service reliability and asset utilization improvement initiatives and new technology applications. I participated as an AEP technical advisor in distributed generation interconnection rulemaking proceedings in the States of Virginia, Indiana, Michigan and Ohio and I participated in the development of the Institute of Electrical & Electronics Engineers (IEEE) standard 1547, which deals with interconnections. In 2004 I was promoted to my current position as Principal Engineer over the Distribution Standards Team in the Distribution Engineering Services Department.

Q. What are your principal areas of responsibility as a Principal Engineer?

A. My responsibilities are to supervise the preparation and maintenance of distribution line construction and maintenance standards used by Kingsport Power Company, d/b/a AEP Appalachian Power (Kingsport), and other AEP electric utility operating companies and to chair the AEP Distribution Standards Committee. This committee, made up of representatives from each Operating Company, decides what new standards are developed and what major revisions are made to existing standards. I am also responsible for assisting Kingsport and other AEP electric utility operating companies in the formulation of distribution asset program strategy and representing Kingsport and other AEP electric utility operating companies in the development of various industry standards including the IEEE 1547 family of standards.

Q. For whom are you testifying in this proceeding?

A. I am testifying on behalf of Kingsport.

Q. Have you previously testified in any regulatory proceedings?

A. Yes. I have testified before the Kentucky Public Service Commission.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present the Company's position on one (1) of the five (5) standards contained in the Energy Policy Act of 2005 (EPACT). I specifically address standard (15), Interconnection.

Q. What is the requirement set forth in EPACT for Interconnection?

A. EPACT requires that

> "Not later than one year after the date of enactment of this paragraph, each State regulatory authority (with respect to each electric utility it has ratemaking authority) and each nonregulated utility shall commence the consideration referred to in section 111 or set a hearing date for consideration, with respect to the standard established by paragraph (15) of section 111(d)."

Paragraph (15) of Section 111(d) states:

> "INTERCONNECTION- Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term 'interconnection service' means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services are offered shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential."

Q. Does standard (15), Interconnections, address interconnection standards for all generators?

A. No. Paragraph (15) of Section 111(d) of EPACT requires 'interconnection service' be provided. 'Interconnection service' means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Paragraph (15) of Section 111(d) of EPACT requires interconnection service to be offered based upon IEEE standard 1547. The IEEE 1547 standard is limited to interconnection of generators to the power system at typical primary and/or secondary voltages, i.e., the distribution system, and having an aggregate capacity of 10 MVA or less at the point of common coupling, i.e., 10 MVA or less at the point where the customer's electrical system connects to the utility's distribution system. Therefore, standards are only required for customer owned generators having an aggregate capacity of 10 MVA or less interconnecting to the distribution system.

Q. Does Kingsport currently have processes and procedures in place to provide interconnection service to any electric consumer that it serves who may request such service?

A. Yes. Kingsport and the other AEP operating companies have a well-established process for handling inquiries for information regarding customer-owned generation and the processing of applications for interconnection of customer-owned generation.

Only a small number of inquiries are received each year from customers requesting information on interconnection of customer-owned generation to the

Company's distribution system. The vast majority of customer interconnection applications are for very small units having a capacity of less than 10 kW. AEP Operating Companies serve portions of eleven states. Several of these states have developed rules for interconnection of small generators. AEP has participated in rulemaking proceedings in the States of Indiana, Michigan, Ohio, Texas and Virginia and at the Federal Energy Regulatory Commission to develop rules for the interconnection of small generators. While there are some differences between the rules established in each state, the basic process and procedures are essentially the same, especially for small units having a capacity of less than 10 kW.

Q. Would you please describe the process and procedures that Kingsport customers who desire more information on customer-owned generation and interconnection would follow?

A. Customers interested in interconnecting generators can learn about customer-owned generation from our www.aep.com website. At this same website they can download a brochure on generator interconnection, send an e-mail to the Distributed Generation Coordinator (Coordinator) requesting more information and obtain the mailing address and phone number of the Coordinator. Customers can also call our Customer Solutions Center at a toll free number to request information about customer-owned generation and interconnection. For Kingsport the number is 1-800-967-4237. This number is listed in local phone books and is also available on our website and on customer bills. The Customer Solution Center will connect the customer call to the Coordinator.

If the customer is interested in interconnection, the Coordinator will discuss the interconnection process with the customer and forward the customer the appropriate application form, interconnection agreement and technical requirements documentation.

Q. Would you please describe the process and procedures that a Kingsport customer who desires to apply for customer-owned generation interconnection would follow?

A. Yes. A customer desiring to interconnect a customer-owned generator submits a completed application to the Coordinator on the form provided by the Coordinator along with an application fee. For single-phase generators with capacities of 25 kW and below the application fee is $100. For single phase generators larger than 25 kW and for three phase generators, the application fee is $500. The Coordinator reviews the application to make sure it is filled out completely with all the pertinent information required to evaluate the proposed generator. If the Coordinator determines that the application is incomplete, the Coordinator returns the application to the customer with an explanation of what information is needed to complete the application. The customer can re-submit a completed application providing the additional information necessary for review.

Once an interconnection application has been received with the applicable application fee and the application is deemed to be complete by the Coordinator, the application is sent to the Distribution Asset Planning Department (Planning) for evaluation. Planning evaluates the proposed generator and the proposed interconnection system to determine if they meet the Company's technical

requirements. If the generator and the proposed interconnection system met the technical requirements, Planning then uses a screening process to determine if the generator needs a more detailed study to determine its impact on the distribution system or if it can be interconnected to the distribution system with no significant negative impact. After completion of the technical review and screening process evaluation, Planning will inform the Coordinator of the results.

If the proposed generator met the technical requirements and passed the screening process, the Coordinator will execute the interconnection agreement and forward a copy to the customer along with notification of approval of the interconnection. Experience has shown that the majority of customer requests for interconnection are very small generators of 1-2 kW capacity that pass the screening process and do not require further study.

If the proposed generator did not meet the technical requirements or did not pass the screening process, the Coordinator will notify the interconnection customer. The customer can then decide if it would like to proceed with further evaluation of the proposed generator or withdraw the application. If the proposed generator or interconnection system failed to meet the technical requirements, the customer may modify its proposal to meet the technical requirements. If the screening process indicates that a system impact study is needed the customer must pay a deposit to cover the estimated cost of the study. The system impact study determines 1) if the proposed generator and interconnection system can be interconnected safely with no significant negative impact or 2) what modifications to the proposed generator and interconnection system, distribution system

modifications and/or distribution system improvements are required to safely interconnect the generator and interconnection system so there is no adverse impact on the distribution system. For single-phase generators up to 25 kW, the deposit is $500. For single-phase generators from 26 kW to 100 kW and three-phase installation up to 100 kW, the deposit is $1,000. For single phase and three phase generators from 101 kW to 500 kW, the deposit is $3,000. For single phase and three phase generators greater than 500 kW, the deposit is $5,000. Once the study is completed the customer will be refunded or billed the difference between the deposit amount paid and the actual cost of the impact study. If the impact study determines the proposed generator will not have a negative impact on the distribution system, the Coordinator will inform the customer of Kingsport's approval of the interconnection upon receipt of the executed interconnection agreement. If the impact study determines the proposed generator will have a negative impact on the distribution system, the Coordinator will inform the customer of the system improvements or system modifications necessary to accommodate the proposed generator and the estimated cost of such improvements or modifications. If the customer wishes to proceed with the interconnection, the customer must pay the estimated cost of the improvements or modifications. Once the improvements or modifications are completed, the customer is informed that it has been approved to interconnect the proposed generator upon receipt of the executed interconnection agreement. Once the system improvements or modifications are completed the customer will be refunded or billed the difference between the estimated amount paid and the actual cost of the system improvements or

modifications. Prior to the first paralleling of the proposed generator, Kingsport, at its option, may inspect the generator and its interconnection system to verify the equipment installed and witness the commissioning tests.

Q. Is the interconnection service Kingsport offers based upon the IEEE Standard 1547?

A. Yes. AEP participated in the working group that developed IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems. AEP operating companies, including Kingsport, but with the exception of the AEP Texas Central Company and AEP Texas North Company, have adopted this IEEE standard as the basis for their interconnection requirements. The State of Texas requires the use of technical requirements that are similar to IEEE 1547.

Q. Do the process and procedures that would be used for interconnection of Kingsport customer generators represent best practices of interconnection for distributed generation?

A. Yes. The process and procedures contain the basic elements found in practices stipulated in the model code adopted by the National Association of State Utility Regulatory Commissioners, including a method to expedite the interconnection of small generators through the use of a screening process, a simplified application for small generators, and a simplified interconnection agreement with reasonable provisions. The process and procedures are overseen at an AEP System level to insure that applicants are treated fairly, reasonably and non-preferentially.

Q. Please summarize your testimony.

A. Kingsport currently has processes and procedures in place to provide interconnection service to its customers. Interconnection service to the Company's distribution system is based upon IEEE standard 1547. The interconnection process and procedures used contain the basic elements found in practices stipulated in the model code adopted by the National Association of State Utility Regulatory Commissioners. The process and procedures are overseen at an AEP System level to insure that applicants are treated fairly, reasonably and non-preferentially. Therefore, an interconnection standard is already in place that complies with the requirements of EPACT.

Q, Does this conclude your pre-filed direct testimony?

A. Yes.

Respectfully submitted,

Kingsport Power Company
d/b/a AEP Appalachian Power

By: _____

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