

**DIRECT TESTIMONY OF
BARRY L. THOMAS
ON BEHALF OF KINGSPORT POWER COMPANY
BEFORE THE TENNESSEE REGULATORY AUTHORITY
DOCKET NO. 09-00062**

INTRODUCTION

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Barry L. Thomas. My business address is Appalachian Power Company, 1051 E. Cary St., Suite 702, Richmond, VA 23219.

BACKGROUND

Q: BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by American Electric Power Service Corporation (AEPSC) as Director of Regulatory Services for Virginia and Tennessee. AEPSC is a wholly owned subsidiary of American Electric Power Company, Inc. (AEP). AEP is the parent company of Kingsport Power Company ("KgPCo") and Appalachian Power Company (APCo)..

Q: WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR OF REGULATORY SERVICES FOR VIRGINIA AND TENNESSEE?

A. As Director of Regulatory Services, I am responsible for many of the regulatory functions and duties for APCo in Virginia and KgPCo Tennessee.

Q: HAVE YOU PREVIOUSLY PROVIDED TESTIMONY BEFORE THIS COMMISSION?

A. I have given testimony on a number of issues before the Tennessee Regulatory Authority ("TRA"), the Virginia State Corporation Commission as well as the

Public Service Commission of West Virginia and the Federal Energy Regulatory Commission (“FERC”).

PURPOSE OF TESTIMONY

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: I am responding, on behalf of KgPCo, to the Tennessee Regulatory Authority’s determination of the Appropriateness of Implementation of PURPA Standards for Kingsport Power Company D/B/A AEP Appalachian Power, TRA Docket No. 09-00062.

I will address whether the Authority should adopt the federal standards established by Section 111 of the Public Utility Regulatory Policies Act of 1978 (“PURPA”), 16 U. S. C. § 2621 with respect to Consideration of Integrated Resource Planning (Section 532(a)(16)), Rate Design (Section 532(a)(17)), Smart Grid Investments (Section 1307(a)(16)), and Smart Grid Information (Section 1307(a)(17))

Q: MUST THE AUTHORITY ADOPT THE EISA 2007 STANDARDS?

A. EISA 2007 does not mandate adoption of the standards by the Authority. Like other PURPA standards, the Authority is only required to consider adoption of these standards. After consideration, the Authority then has discretion to adopt or reject the proposed standards.

Q: DOES THE COMPANY FAVOR THE ADOPTION OF THE FEDERAL EISA 2007 STANDARDS YOU JUST IDENTIFIED?

A: The Company encourages the Authority to decline to adopt the Federal standards. This is predicated upon TRA’s existing state statutory authority to regulate the

issues identified in the Federal standards, in addition to other measures that the Company has taken, and will continue to take to improve service to its customers.

Integrated Resource Planning

Q: PLEASE DESCRIBE THE FEDERAL STANDARD FOR INTEGRATED RESOURCE PLANNING

A. The federal standard would require each electric utility to integrate energy efficiency resources into utility, State, and regional plans; and to adopt policies establishing cost-effective energy efficiency as a priority resource.

Q. DOES KINGSPORT POWER OWN ANY GENERATION?

A. Kingsport Power owns no generation and obtains its power through a long term wholesale contract with Appalachian Power (“APCo”).

Q. IS THERE A NEED FOR KINGSPORT TO CONDUCT ITS OWN INTEGRATED RESOURCE PLAN?

A. No. Due to the fact that KgPCo has no generation, there is no need for the Company to perform its own Integrated Resource Plan (“IRP”) study, nor to submit it to the TRA. As will be explained further, adequate AEP system information already exists to examine cost effective energy efficiency; and planning occurs for all of AEP’s operating companies including Kingsport.

Q. DOES AEPSC PREPARE AN IRP?

A. AEPSC prepares an IRP plan on behalf of APCo and the other AEP East Operating Companies. The IRP allows AEP’s operating companies to integrate energy efficiency standards into the IRP analysis and to adopt on a company by company basis, policies establishing cost-effective energy efficiency as a priority

resource. The IRP is quite detailed, contains confidential, sensitive and/or proprietary data and includes, among other things: (a) a long term forecast of load; (b) detailed information on existing supply-side resources; (c) an assessment of supply-side resource options; (d) demand-side options; and (e) evaluation of resource options including a cost evaluation that would allow demand-side options to be compared on an equal footing to supply-side options.

The IRP provides a discussion on the utility's goals and plans with regard to energy efficiency, energy conservation, demand side and demand response programs, and the provision of electricity from renewable energy resources. In Virginia, for example, the IRP filing is prepared in response to directive of Section 56-599 of the Code of Virginia and can include the following steps:

- The development of an energy and peak demand forecast for internal load, as well as an estimate of current Demand-side Management impacts;
- Evaluation of physical and economic factors, including those that may affect the continued operation of any of the system's current generation resources;
- Consideration of RTO or zonal requirements concerning sufficiency of capacity planning reserves;
- Matching existing and currently planned capacity resources against total requirements (load plus reserve requirements) to determine projected future needs;
- Consideration of various methods of potential capacity resources to address need, including: market purchases of firm capacity, generating unit additions utilizing various technology options and alternatives, and purchase of existing generating assets. Also includes consideration of demand reduction options and energy efficiency measures; and
- Consideration of the analytically-optimal resource technology and fuel-source diversity "mix", as well as optimal timing of new capacity resources within the planning period, all assessed under various economic risk factors.

Similar information on APCo's West Virginia operations is also submitted annually as part of the West Virginia Public Service Commission oversight and process.

Thus, on the basis that KgPCo is a non-generation affiliate of AEP, and the on-going actions requires by other states, and as complied with by AEP operating companies, there is no need for the TRA to adopt the new IRP standard. Likewise, KgPCo obtains the benefit of the planning process that is performed on a system-wide basis for all AEP utilities.

Q. WHAT AUTHORITY DOES THE TRA CURRENTLY HAVE TO PROMOTE RESOURCE PLANNING BY ELECTRIC UTILITIES?

My legal counsel has advised that the TRA already has the authority under existing statutes to promote resource planning by electric utilities. TCA Section 65-4-117 gives the Authority the power to fix just and reasonable standards, practices, and services to be observed and followed by public utilities. It has the power to specifically consider the efficiency of the services furnished by the public utility. TCA Section 65-5-103. It has broad, general supervisory and regulatory authority over public utilities. TCA Section 65-4-104. Thus, under existing law, the TRA has the authority to regulate in areas involving the same goals to which the federal standards in IRP seek to achieve. Adoption of the federal standard is unnecessary.

Rate Design

Q: PLEASE DESCRIBE THE FEDERAL STANDARD FOR RATE DESIGN.

A. There are two parts to the Rate Design standard. First, the standard requires that utility rates shall align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments. The second part of the standard would require state regulatory agencies to consider various rate design measures.

Q. DOES THE TRA HAVE AUTHORITY TO DESIGN RATES THAT ENCOURAGE AND PROMOTE ENERGY EFFICIENCY?

A. Yes. I have been advised by counsel that the TRA currently has sufficient authority under its general ratemaking authority to design rates that encourage energy efficiency and promote energy efficiency investments on both the demand-side and the supply-side. This occurs both within its general approval of filed tariffs as well as its authority to allow implementation of special contracts. TRA Rules and Regulations, Rule 1220-4-1-.07 gives the Authority supervision, regulation and control over special contracts between public utilities and certain customers as to rates, services, and practices not covered or permitted in general tariffs, schedules or rules filed by such utilities. Further, the Authority is granted statutory power to consider the adequacy and efficiency of services furnished by public utilities in determining whether rates are just and reasonable. TCA Section 65-5-103. Therefore, the TRA has broad ratemaking authority. TCA Section 65-5-101.

Additionally, the Authority is granted broad general powers by statute to regulate public utilities. For example, TCA Section 65-4-107 grants the Authority the power to impose conditions on public utilities as to the maintenance, service

or operation as the public convenience and interest may reasonably require. TCA Section 65-4-117 grants the Authority the power to “fix just and reasonable standards, classifications, regulations, practices or services to be furnished, imposed, observed and followed thereafter by any public utility.” Tennessee law further specifically recognizes the value of alternative energy sources and requires public utilities treat customers who use such sources reasonably and equitably. TCA Section 65-4-105.

Q. WHAT RATE DESIGN EFFORTS HAS KGPCO UNDERTAKEN IN TENNESSEE OR IN OTHER STATES IN ORDER TO ENCOURAGE AND PROMOTE ENERGY EFFICIENCY AND DEMAND RESPONSE.

- A. Kingsport Power has voluntarily undertaken a number of rate design steps designed to encourage and promote energy efficiency as well as demand management by customers. These steps currently exist in the Company’s filed tariffs and special contracts.

Traditional rate design steps include continued movement toward full cost-based rates including customer charges, demand charges and commercial and industrial tariffs which encourage customers to improve their load factors. This is evidenced by several features of the Company’s approved tariff. Currently, Kingsport’s approved tariff contains mandatory time of day rates encouraging off peak utilization for all of its large industrial customers. The tariff also includes Load Management Provisions for load controlled water heating and non-water heating load management uses for residential customers. Similar tariff schedule features exist for small and medium general service schedules and a separate time

of day tariff exists for medium general service customers. Another approved cost-based pricing component is the current PPA Rider provision which permits updating of appropriate class allocation factors and purchased power costs rates for classes reflecting each class's appropriate share of the power supply cost. In addition, the Company has entered into a net metering agreements with government customers, and has recently revised its contract with a large industrial customer to permit that customer to optimize its new generation facilities through participation and receipt of market based pricing in the PJM market for such generation.

Q. WHAT OTHER STEPS IS KGPCO AND APCO UNDERTAKING TO ENCOURAGE AND PROMOTE ENERGY EFFICIENCY AND DEMAND RESPONSE

- A. Both Kingsport and APCo, as part of the AEP systems' integrated planning efforts, are evaluating implementation of Smart Grid systems and concepts that would be compatible with and support additional programs and tariff pricing options and provisions such as direct load control, more dynamic time-of-use tariffs and critical peak pricing. For example, APCo has filed an application for approval of a Demand Response program in Virginia. Kingsport is evaluating but has not yet determined whether to offer a similarly structured Demand Response pricing option in Tennessee.

A number of Smart Grid- related rate designs may become more feasible as the elements of any Smart Grid initiative unfold. However, such rate and pricing options can be relatively costly based upon their relationship to a required

Smart Grid infrastructure. These pricing and other Smart Grid-related options must evolve as technology develops and be based upon regulatory and public policy considerations. The Company believes that, as with other rate and pricing options, the Authority has adequate regulatory oversight to review the appropriateness of such matters.

Q. IS IT NECESSARY FOR THE TRA TO ADOPT THE FEDERAL RATE DESIGN STANDARDS?

No. The Company is already taking substantial steps toward promoting greater energy efficiency both in the way energy is delivered to and utilized by its customers. The stated purpose of EISA is presently being fulfilled by both Kingsport and APCo (as Kingsport's wholesale provider) and nothing further could be gained by layering on of a separate set of federal requirements which simply duplicate what is already being done.

Smart Grid Investments

Q: PLEASE DESCRIBE THE FEDERAL STANDARD FOR SMART GRID INVESTMENT.

A. The Smart Grid investment standards generally consists of three subsections, and require utilities to consider smart grid technologies before investing in traditional transmission and distribution systems.

The first subsection (A) would require that prior to making an investment in non-advanced grid technologies, an electric utility considered (and presumably rejected) investment in "a qualified smart grid system" based upon appropriate factors. The provision goes on to list six non-exclusive factors, such as total cost,

security and cost-effectiveness, the electric utility should weigh in considering its investment. In the second subsection (B) the State shall consider permitting rate recovery of “any capital, operating expenditure, or other costs of the electric utility relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures....” The third subsection (C) deals with recovery of the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system.

Q: WHAT IS A SMART GRID SYSTEM?

A: Although neither EISA 2007 nor PURPA (nor any other federal statute) explicitly defines a smart grid system, Section 1301 of EISA, in setting forth the policy of the United States, identifies ten characteristics of a smart grid:

It is the policy of the United States to support the modernization of the Nation’s electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve each of the following, which together characterize a Smart Grid:

1. Increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid.
2. Dynamic optimization of grid operations and resources, with full cyber-security.
3. Deployment and integration of distributed resources and generation, including renewable resources.
4. Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.
5. Deployment of “smart” technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.

6. Integration of “smart” appliances and consumer devices.
7. Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.
8. Provision to consumers of timely information and control options.
9. Development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.
10. Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.

Presumably, a smart grid would embody some or all of these characteristics.

More generally, as one consultant to the United States Department of Energy explained, a smart grid system will assist in converting the current system for generating and delivering electric power from one that is centralized and producer-controlled to “one that is less centralized and more consumer-interactive.” Litos Strategic Communications, *The Smart Grid: An Introduction* (2008). Significantly, although smart-metering is an important component of a smart grid, the smart grid is not limited to smart-metering.

Q. HAS KGPCO OR AEP UNDERTAKEN CONSIDERATION OF ANY SMART GRID PROGRAMS?

- A. AEP has voluntarily begun consideration of smart grid programs. For instance, Kingsport along with Appalachian Power, as operating company subsidiaries of AEP, are participating in the on-going development of AEP’s smart grid initiative, known as *gridSMARTSM*. This program is a multi-year initiative by AEP and its operating companies that includes consumer programs, new energy

delivery system technologies, integrated future generation and storage devices, and advanced internal system efficiencies. The main components of AEP's *gridSMART*SM initiative align directly with the EISA 2007's definition of a smart grid. These include advanced meter infrastructure, distribution automation, distribution grid management, and home area networks.

The Company contemplates that under existing general statutory authority, the reasonableness of any Smart Grid investment that KpPCo undertakes on behalf of its customers will have to be demonstrated before the Authority when KpPCo seeks any appropriate implementation approvals or cost recovery of those measures.

Finally, the Company would note that sound regulatory and recovery policies are important components of an appropriate and cost-effective implementation of Smart Grid programs for Tennessee. The Company does not believe that it is necessary to adopt the Federal EISA standards to accomplish adoption of sound policies for Tennessee, but that sound analysis and case-by-case review of specific plans and proposals under the Authority's general regulatory and special contract authorities are sufficient to accomplish a reasonable implementation of Smart grid related measures. It should be further noted that Smart grid systems will likely require large investments, and depending upon when undertaken, some premature obsolescence of existing facilities. These issues create the necessity of a utility being assured of its ability to earn a return on and to recover their investments in these facilities and suggests that a more case-by-case review process will provide the flexibility and opportunity for better

regulatory and policy decisions to occur. Sound recovery policies are critical to ensuring that appropriate programs are implemented in Tennessee.

Q. IS THE COMPANY PROPOSING THE ADOPTION OF ANY SMART GRID PROGRAMS AS PART OF THIS PROCEEDING?

A. No. The Company is only replying to the Authority's determination of the Appropriateness of Implementation of PURPA Standards and is not seeking approval of any of the Smart Grid programs listed above. The Company envisions that it will seek approval of Smart Grid programs in a future, unrelated proceeding.

Smart Grid Information
Q: WHAT IS THE EISA 2007 STANDARD WITH RESPECT TO SMART GRID INFORMATION?

A: Section 1307(a)(17) would require electric providers such as APCo to provide customers with direct access to time-based information on electricity and usage as well as annual reports on sources of generation, to the extent practicable. That information includes the following:

(i) Prices. - Purchasers shall be provided with time-based electricity prices in both the wholesale and retail markets;

(ii) Usage. -Purchasers shall be provided with the number of electricity units, expressed in kilowatt-hours, they purchase;

(iii) Intervals and Projections. -Purchasers shall be provided updates on prices and usage on a daily basis, including hourly price and use information, and a day-ahead projection of such price information, where available; and

(iv) Sources. - Purchasers and other interested parties shall be provided annually with information on the sources of the power provided by the utility, to the extent it can be determined, by type of generation, including greenhouse gas emissions associated with each type of generation, for

intervals during which such information is available on a cost-effective basis.

Q: IF THE STANDARD IS ADOPTED, WHAT INFORMATION MUST BE PROVIDED REGARDING PRICES?

A: If fully implemented, the standard would require utilities to provide time-based prices for electricity in both the wholesale and retail markets.

Q: TO WHOM MUST THE INFORMATION BE PROVIDED?

A: To both purchasers and “other interested persons.” The statute does not define who “other interested persons” might be, but the term seems broad enough to include the general public.

Q: DOES KGPCO SUPPORT PROVIDING INFORMATION ON WHOLESALE RATES?

A. No. KgPCo should not be required to provide customers with direct access to information such as price, usage, sources, and intervals and projections as would be mandated under the federal standard. AEP has already voluntarily accomplished these requirements such that customers already have access to the required information through various portals. For instance, the operating companies of AEP, KgPCo’s parent, are members of PJM Interconnection, a regional transmission organization. Wholesale sales of energy and capacity are scheduled and settled at market prices through the PJM Interconnection. Information regarding market wholesale prices is available to wholesale purchasers through PJM Interconnection or to Kingsport retail customers who might choose to participate in various components of the PJM market process. In addition, quarterly wholesale sales, including prices, are reported to the Federal

Regulatory Commission and available to the public, as are APCo's wholesale rates to KgPCo.

The Company will continue to facilitate availability of necessary information as new non-traditional tariff offerings become available in a manner that is both practical and consistent with the customers needs under existing tariffs or special contract.

Q: DOES KPGCO OBJECT TO MAKING RETAIL PRICE INFORMATION AVAILABLE?

No. Unlike wholesale sales of capacity and energy or participation by customers in PJM markets, retail sales are made through Kingsport, and regulated by this Authority. Information concerning Kingsport's rates, including on-peak/off-peak and traditional rates are available around the clock through the Company's website and call centers. Customers can also access up to 12 months prior usage through the Company's website. Retail customers already have access to the most-current information regarding pertinent retail prices as required by the federal standard. Thus any requirement to provide such information would require a duplication of the information already available.

Q. HAVE KGPCO's CUSTOMERS EXPRESSED INTEREST IN REAL TIME PRICING?

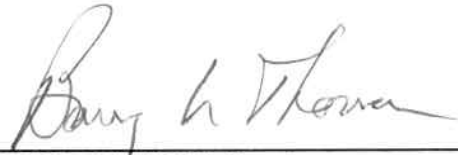
A Currently there has not been broad interest in this type of price information from Kingsport customers, and where that interest has developed; it has been satisfied through currently available sources. Additionally, any alleged improvement in the type of cost information, beyond what is already desired by customers and

provided by the Company, would require additional investment or on-going costs, of which Kingsport would seek recovery of its respective share.

Therefore, the Company believes that the Authority already has jurisdiction over and regulates information transfer issues related to rates, costs and prices consistent with filed tariffs or special contract conditions and that adoption of the Federal standard would not improve a customer's ability to obtain information.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

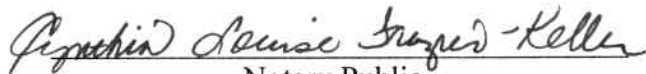


BARRY L. THOMAS

COMMONWEALTH OF VIRGINIA

~~CITY~~
COUNTY OF Richmond

SUBSCRIBED AND SWORN to before me, this 12th day of March, 2010.


Notary Public

My commission expires:

August 31, 2013

