

BEFORE THE : **IN RE:**
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TENNESSEE VALLEY AUTHORITY : **PURPA STANDARD HEARINGS**
: :

TO: Tennessee Valley Authority
One Century Place
26 Century Boulevard
Nashville, Tennessee 37214
Attention: Carl Seigenthaler

RE: Proposed Standards on Smart Metering, Interconnection, Net Metering, Fuels Sources, and Fossil Fuel Generation Efficiency

DATE: June 1, 2007

The Tennessee Valley Public Power Association, Inc. ("TVPPA") in response to a notice in the *Federal Register* of Monday, January 22, 2007, files these comments with the Tennessee Valley Authority ("TVA") to become a party of the record in these proceedings.

TVPPA is an association representing the interest of 158 municipal and cooperative distributors of power purchased at wholesale from the Tennessee Valley Authority ("TVA"). Because each of members of TVPPA receive almost all of their revenues and income from the sale of the electricity produced and sold at wholesale by TVA to the distributors, and by the distributors to the ultimate end-user, TVPPA and its members have a vital interest in the outcome of these proceedings. TVPPA has prepared and is filing these comments in the belief that its views, developed and adopted through its Committee structure and approved by its Board of Directors, will be beneficial to the TVA Board and management in this proceeding. The positions presented here by TVPPA reflects a composite of the views of the distributors. Nevertheless, all members of TVPPA have been notified of the substance of the comments being made herein, and are urged to file their respective statements to the extent that they have

comments in addition to, or varying from, the comments of TVPPA as an Association representing the interests of the municipal and cooperative distributors of TVA power.

In these comments, TVPPA will address the standards on (1) smart metering; (2) interconnection; (3) net metering; (4) fuel sources; and (5) fossil fuel generation efficiency.

TVPPA will comment on each standard separately.

STANDARD 1
SMART METERING

THE STANDARD UNDER CONSIDERATION IS:

(1) *Smart Metering.*

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.

B. The types of time-based rate schedules that may be offered under the schedule referred to in subparagraph (A) include, among others--

i. Time-of-use pricing whereby electricity prices are set for a specific time period on an advance or forward basis, typically not changing more often than twice a year, based on the utility's cost of generating and/or purchasing such electricity at the wholesale level for the benefit of the consumer. Prices paid for energy consumed during these periods shall be pre-established and known to consumers in advance of such consumption, allowing them to vary their demand and usage in response to such prices and manage their energy costs by shifting usage to a lower cost period or reducing their consumption overall;

ii. Critical peak pricing whereby time-of-use prices are in effect except for certain peak days, when prices may reflect the costs of generating and/or purchasing electricity at the wholesale level and when consumers may receive additional discounts for reducing peak period energy consumption;

iii. Real-time pricing whereby electricity prices are set for a specific time period on an advanced or forward basis, reflecting the utility's cost of generating and/or purchasing electricity at the wholesale level, and may change as often as hourly; and

iv. Credits for consumers with large loads who enter into pre-established peak load reduction agreements that reduce a utility's planned capacity obligations.

C. Each electric utility subject to subparagraph (A) shall provide each customer requesting a time-based rate with a time-based meter capable of enabling the utility and customer to offer and receive such rate, respectively.

D. For purposes of implementing this paragraph, any reference contained in this section to the date of enactment of the Public Utility Regulatory Policies Act of 1978 shall be deemed to be a reference to the date of enactment of this paragraph.

E. In a State that permits third-party marketers to sell electric energy to retail electric consumers, such consumers shall be entitled to receive the same time-based metering and communications device and service as a retail electric consumer of the electric utility.

F. Notwithstanding subsections (b) and (c) of section 2622 of this title, each State regulatory authority shall, not later than 18 months after the date of enactment of this paragraph conduct an investigation in accordance with section 2625(i) of this title and issue a decision whether it is appropriate to implement the standards set out in subparagraphs (A) and (C).

TVPPA Recommendation on Standard 1:

Much has been written by many authors discussing the merits and various considerations with regard to time-based metering and communications (sometimes referred as “Smart Metering”). In some instances these principles have been implemented by utilities. Smart Metering, and the associated rate designs and rate schedules, are often advocated as a method to control demand at peak periods, to allow consumers to minimize their cost for the purchase of electrical energy and to help utilities avoid the capital costs to build more capacity than might otherwise be needed. Indeed, within the TVA region, TVA has adopted rate schedules under the terms and conditions of the wholesale power contract with TVPPA Members, for time-of-day usage and pricing through general power rate schedules TGSA, TGSB, TGSC, and TGSD. These rate schedules are presently in effect and available to commercial and industrial ratepayers of TVA and the Distributors.

Consequently, both TVA and Distributors have had experience with regard to time-of-use pricing to many of the commercial and industrial customers where, from a cost standpoint, the cost of meter installation and reading can be better justified because of the very large monetary

amount involved in serving those relatively few customers as compared to the large numbers of residential ratepayers.

On the other hand, service to residential customers appears to have received much less acceptance by residential ratepayers of those utilities outside the TVA service area that have made Smart Metering and time-based rate schedules available to their ratepayers. Within the TVA service area, demand for time-based rate schedules has been very low. The TVPPA Members are very diverse in the characteristics of their respective distribution systems as to the numbers of customers, density of customers served, composition or concentration of customers with respect to meter turnover rates, connections and disconnections of service, and other characteristics requiring more frequent contact for meter reading and other customer transactions. As well, the availability of financial resources to install meters and the attendant equipment and software required for a full-functioning automated meter reading system has substantial variations among TVPPA Members depending on a variety of factors. Among the more important factors are those related to projected capital budgets and associated financing, and for other required system expansion, improvements and the periodic renewal and replacement of distribution plant and equipment.

Because of the varying characteristics of the 158 Distributors of TVA power, it should be remembered that a formal and broad all-inclusive regulatory proceeding such as this one will affect both the Distributors' financial planning and the rate schedules in effect between Distributors and TVA. Thus this proceeding is not a suitable forum to establish the Standard on Smart Metering. Under the terms of the contract in effect between TVA and the Distributors and TVA power, any changes in the rate schedules must take place according to the provisions of that contract, through a contractual process with notice and negotiation that takes into

consideration the best interest of the ratepayers of the TVA region and permits both individual Distributor concerns as well as system-wide concerns of TVA and all Distributors to be considered based upon more extensive data concerning each Distributor and its circumstances than is reasonably possible in this proceeding.

To implement time-based metering and communication metering programs, many Distributors will likely find that there is little, if any, demand from the residential customers for time-differentiated tariffs; yet, there is a disproportionate expense associated with the necessary equipment, software, and personnel to make time-based metering available to residential customers when there is little, or sparse, demand among those residential ratepayers who would wish to have available most types of advanced meter reading capabilities and a variety of time-based rate schedules. For example, in the August 10, 2006, Order of the Tennessee Regulatory Authority in proceedings in regard to Kingsport Power's PURPA determinations, the TRA Hearing Officer found, in part, that "... only 40 out of approximately 40,200 residential customers are receiving a service under the (Kingsport Power) Company's time-differentiated tariffs." Docket No. 06-000010, Initial Order, August 10, 2006, Page 6. TVA has had a time-of-use rate available for residential customers since July 1983, but TVPPA is not aware of any residential customers taking advantage of these rates.

On the other hand, because of local circumstances several Distributors, have found automated meter reading to be cost effective..

With respect to suitability for their respective distribution systems, Distributors of TVA power should be encouraged to study and analyze the advisability or feasibility of implementing advanced meter reading, including whether or not the financial investment justifies the cost savings to be realized. Nevertheless, Distributors should be encouraged to analyze whether or

not additional benefits are likely to be realized in the future in the event that TVA and the Distributors should adopt rate schedules that would utilize the availability of Smart Meters to accomplish the necessary recordkeeping and invoicing. In the last analysis though, these decisions should be made by each individual Distributor at its option, rather than being mandatory by TVA, based upon each particular Distributors local circumstances.

Notwithstanding the above comments, some Distributors have found with respect to their particular distribution systems that the benefits of automated meter reading capabilities exceed the investment required to install, service, maintain and provide administrative services for the devices. These benefits have accrued to those distributors, as well as better conveniences to their customers, even though time-of-use retail rates have not yet been adopted through any contract negotiations between TVA and the Distributors of TVA power. On the other hand, TVPPA also believes that some of its Distributors may conclude, based upon their own internal studies and analyses, that automated meter reading capability should be installed and maintained on their distribution system in anticipation of potential rate changes at either the retail or the wholesale level, following contract negotiations with TVA, anticipating that even the benefits to be received pending such possible rate schedule implementations will exceed the costs for equipment, installation, software and administration for Smart Metering to be used initially for purposes other than time-based rates.

For the foregoing reasons, TVA should not adopt the PURPA Standard, but rather should encourage Distributors to continue to study and, if appropriate, implement such automated meter reading systems as may be most suited for each particular Distributor's circumstances. In the event TVA or Distributors should wish to consider residential time-based rates or other "advanced" or "smart metering" technology for Distributors, they should engage in such

wholesale power contract discussions as may be necessary or appropriate to implement any such changes in Smart Metering on the basis of local option for each Distributor and based upon its particular circumstances.

The TVA staff has recommended that the PURPA Standard under consideration be adopted in a modified form as follows:

TVA will initiate a rate change in accordance with the provisions of its wholesale power contract with the distributors of TVA power to assess in detail 1) the benefits and cost of implementing a mandatory time-based rate schedule for large retail customers, under which the retail rates reflect seasonal and time-of-day variations in the costs of generating and purchasing electricity, 2) the benefits and cost of implementing advanced metering and communications technology to help the electric consumer manage energy use and cost, and 3) other factors affecting the implementation of such structures as soon as feasible. (emphasis supplied)

TVPPA recommends that at a minimum there should be a further modification made to the TVA recommendation by changing the phrase "... will initiate a rate change ..." to "... will present a proposal for a possible rate change..." The phrase "will initiate a rate change" suggests that TVA has pre-determined that a rate change in some form will be implemented by TVA to require distributors of TVA power, regardless of the distributor's size, local circumstances and capital adequacy to offer "smart metering." By adopting such a Standard in these proceedings, distributors of TVA power are concerned that TVA's discretion in the wholesale power contract process will be constrained because of a previously adopted PURPA Standard on smart metering that, under the 2005 PURPA amendments, could arguably be an implied repeal of TVA's discretion on contract matters if TVA indeed adopts the Standard on smart metering or some variation thereon.

As suggested for further modification, the Standard that TVPPA would prefer be adopted in this matter, if one is to be adopted, would then read as follows:

TVA will present a proposal for a possible rate change in accordance with the provisions of its wholesale power contract with the distributors

of TVA power to assess in detail 1) the benefits and cost of implementing a mandatory time-based rate schedule for large retail customers, under which the retail rates reflect seasonal and time-of-day variations in the costs of generating and purchasing electricity, 2) the benefits and cost of implementing advanced metering and communications technology to help the electric consumer manage energy use and cost, and 3) other factors affecting the implementation of such structures as soon as feasible.

The provisions of the 2005 PURPA amendments are focused on requiring consideration of Standards for those electric utilities with annual sales in excess of 500 million kilowatt hours. Although TVA is designated as the regulatory authority for the purposes of implementing PURPA within the TVA service area, it is proposed by staff that the TVA Board adopt a determination on the Standard made applicable to all distributors of TVA power under TVA's authority as a regulator by contract over those distributors, regardless of the distributor's size, local ratepayer characteristics, demographics, capital adequacy, and all other considerations that vary from distributor to distributor. It was not the intent nor statutory expression of Congress that PURPA proceedings be conducted for electric utilities with fewer than 500 million annual kilowatt hour sales. The Standards being considered by any other regulatory authority under the 2005 PURPA amendments are only as to those electric utilities under their jurisdiction with more than over 500 million kilowatt hours annual sales. If subject to a Public Service Commission PURPA Proceeding, an overwhelming majority of the distributors of TVA power would not even be required to participate in, nor be subject to, proceedings such as this one.

Consequently, if a Smart Metering Standard is to be adopted, it should be implemented, if at all, through a series of contract negotiations between distributors of TVA power and TVA. Those negotiations would consider, among other things, those elements that are proposed to be considered in the staff recommendation of TVA. There is too much variation in the financial, operational, customer demographic mix, and numerous other factors to be considered in the

proceeding that TVA has initiated under the 2005 PURPA amendments by adopting, under the force of federally suggested administrative proceedings, a standard more appropriately considered through a contract negotiation process.

No other electric utility regulatory body would likely adopt such a Standard *carte blanche* uniformly applicable as to every electric utility under its jurisdiction, rather than considering the standard most appropriately suited as to each separate covered electric utility. This is particularly true as to those electric utilities which the federal statute exempted from mandatory consideration of the PURPA Standards, notably those with less than 500 million annual kilowatt sales. Adoption of a standard uniformly applicable to all distributors would distinguish the most appropriate non-discriminatory standard for the larger systems such as Memphis Light, Gas & Water Division or Nashville Electric Service that also considers smaller distributors such as a Chickamauga (Georgia) Electric System or Courtland (Alabama) Electric Department. As noted above, the characteristics of the distributors of TVA power vary widely.

In summary, the adoption of a PURPA Standard on “Smart Metering” uniformly applicable to all distributors would not be practicable and should only be done through proposed changes to the wholesale power contract between TVA and the distributor of TVA power who form the constituency of TVA, and conducted through negotiations.

STANDARD 2
INTERCONNECTION

THE STANDARD UNDER CONSIDERATION IS:

(2) *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.

TVPPA Recommendation on Standard 2:

Under the present circumstances, it would not be appropriate for TVA to adopt the Interconnection Standard as a mandatory standard applicable to Distributors of TVA power (sometimes "Distributors" or "TVPPA Members"). Distributors have an all-requirements contract with TVA that does not presently permit them to purchase their wholesale power requirements from sources other than TVA. Notwithstanding the terms and conditions of the wholesale power contract, TVPPA believes that many, if not most or all, of its members are willing to accommodate an interconnection request of its ratepayers with on-site generation facilities to interconnect with TVA or with the TVPPA Member's distribution system upon execution of agreements that, subject to TVA's approval, permit such an interconnection. Such agreements should include provisions that the ratepayer will be and continue to be, in compliance with all applicable IEEE standards and with obligations to pay charges and fees that avoid cost-shifting of any associated on-site generation and interconnection expenses. Ratepayers and Distributors who do not have or maintain on-site generation facilities upon the

ratepayer's property should not be required to unfairly bear the expense of subsidies embedded in the rate base for the benefit of owners of on-site generation facilities.

With respect to interconnection with TVPPA Members' distribution systems, TVA should not mandate TVPPA Members to provide interconnection services with Distributors' lines and equipment to on-site generation facilities of ratepayers who maintain and operate such facilities. The Distributors should be allowed the local option to permit interconnections where, in the Distributor's judgment, such interconnections are electrically compatible with all applicable IEEE standards, and with all applicable federal, state, and local statutes and regulations. Ratepayers of the on-site generation equipment should enter into financial arrangements that are acceptable and suitable to the Distributor who chooses to exercise a local option to permit interconnection.

To the extent that TVA adopts the Interconnection Standard for itself, it should do so in a manner that allows TVA management and staff the flexibility to periodically review, develop and modify the interconnection protocol and cost required of inter-connectors to have an interconnection made available, along with such associated agreements, based upon TVA's experience with interconnecting on-site generators from time to time, as management deems appropriate to protect the transmission and Distributor's systems and fully recover costs imposed by reason of the application for and use of an interconnection by self-generation owners. This flexibility in the Standard, if adopted, should be without there being any necessity by the TVA Board to initiate another process to amend or modify a Standard adopted under PURPA in this proceeding should TVA management and staff conclude that its terms and conditions for interconnections need to be modified based upon its actual experience with ratepayer on-site generation facilities.

STANDARD 3
NET METERING

THE STANDARD UNDER CONSIDERATION IS:

(3) *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.

TVPPA Recommendation on Standard 3:

For the ratepayers of the TVA region with self-generation facilities, the Generation Partners[®] program makes available a net-metering mechanism that otherwise would be impracticable under the present all-requirements contract between TVPPA Members and TVA. TVA should adopt the Standard in a modified form essentially as TVA's existing Generation Partners[®] program. By doing so, the Generation Partners[®] program would permit the ratepayers of the Distributors of TVA power to use net-metering without the Distributor and TVA having to any legal impediments under the wholesale power contract between TVA and the TVPPA Member.

The TVA Generation Partners[®] program has worked well for those ratepayers who wish to help avoid building new expensive capacity through the use of renewable resources and other methods for self-generation. The Standard to be adopted by TVA should, as the Generation Partners[®] program does, include provisions that the ratepayer will be and continue to be, in compliance with all applicable IEEE standards. Ratepayers utilizing net-metering should continue to be obligated to pay charges and fees that avoid cost-shifting of any associated net-metering expenses to other ratepayers of the Distributors in the form of subsidies embedded in

the rate base for the benefit of owners of on-site generation facilities who need or require net-metering.

TVPPA recommends that in the Standard adopted, TVA should permit the administration of the Generation Partners[®] program to be administered in a way that Distributors can continue to be assured to be able to fully recover their costs in connection with that program without there being any necessity by the TVA Board to initiate another process to amend or modify the Standard adopted under PURPA in this proceeding.

In conclusion, under the Generation Partners[®] demonstration model, there is flexibility for TVA to continue to try to accommodate consumers with on-site generating facilities and yet do so in a manner that places the costs of net-metering where it properly should be – with those ratepayers who need or require net-metering in connection with self-generating equipment and facilities.

STANDARD 4
FUEL SOURCES

THE STANDARD UNDER CONSIDERATION IS:

(4) *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.

TVPPA Recommendation on Standard 4:

Because TVPPA Members are not presently engaged in the business of generation of electrical power and energy, Distributors do not rely upon fuel sources for the generation of electrical power. Consequently, as to TVPPA Members, it is inappropriate to adopt the standard and accordingly, it should not be adopted as applicable to Distributors of TVA power.

As to the application of the Standard to TVA, unlike many utilities TVA already has a diverse source of fuels that are used in the generation of electrical power and energy at the wide variety of its plants. TVA's generation fuel sources include, among other things, hydroelectric power, coal, nuclear, pump storage facilities, and gas, along with solar, wind and other renewable resources. TVA has been a pioneer in the development and improvement of many of these sources of electrical power and energy generation, and had the foresight to develop a variety of fuel sources even many years before the Energy Policy Act of 2005 required utilities to develop such plans.

TVPPA commends TVA for its prior efforts and continued vigilance to achieve diversity in the range of fuels used by it, and in both the development and encouragement of others to use renewable energy resources. TVPPA also encourages TVA to continue as it has in the past with its objective to maintain a balanced fleet of generation facilities that utilize both a variety of sources of fuel as well as renewable resources, and to do so in the manner that is most cost-effective to provide reliable electrical service to the TVA region at the lowest possible rate.

For the foregoing reasons, Standard 4, while laudable, has long been a practice of TVA and is not necessary to be adopted as a mechanism to facilitate TVA's use of a diverse range of fuels and technologies.

STANDARD 5
FOSSIL FUEL GENERATION EFFICIENCY

THE STANDARD UNDER CONSIDERATION IS:

(5) *Fossil fuel generation efficiency.* Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.

TVPPA Recommendation on Standard 5:

Neither TVPPA nor its members have generation plants that use fossil fuels inasmuch as the Distributors of TVA power presently purchase all of their wholesale power requirements from TVA. Consequently, TVPPA recommends that TVA not adopt Standard 5 with respect to TVPPA Members' operation of their distribution systems, as it is not necessary to accomplish the objectives of the Energy Policy Act of 2005 with regard to TVA and TVPPA Members. As to TVA, it has been the observation of TVPPA and its members that TVA has diligently pursued periodic upgrades through the routine maintenance to its fossil fuel plants using state-of-the-art replacements and maintenance to both minimize and control environmental emissions as well as improve the efficiency of its fossil fuel plants.

TVPPA urges TVA to continue its ongoing plans as those are periodically reviewed and updated for improvements in fossil fuel generation efficiency. TVPPA urges TVA to continue with its self-evaluation for overall use of the most efficient use of fuels and output in its fleet of plants that rely upon fossil fuels as a source of heat for the generation of electrical power and energy; and to do so in a manner that is cost beneficial to the ratepayers so as to achieve the lowest possible rates consistent with providing reliable electrical power and energy to the ratepayers of the TVA region. In addition, TVA is urged to develop and periodically re-evaluate an internal matrix of its plants, a schedule for the continued maintenance and improvement of its fleet of fossil fuel generation plants on a cost-beneficial basis; and TVA should annually submit

a version of the matrix and plans to enhance fossil fuel generation efficiency progress reports to TVPPA and the Distributors with TVA's then most-current results and plans.

Because TVA has had an ongoing program with regard to increasing the fossil fuel efficiency of its generation plants, it is not necessary to adopt the Standard as to itself.

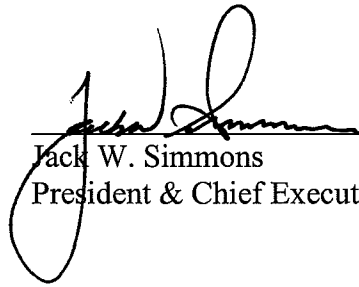
CONCLUSION

For the foregoing reasons as to each particular Standard, TVPPA urges the TVA Board to take actions on each of the Standards consistent with the recommendations of TVPPA as stated herein.

Respectfully submitted,

TENNESSEE VALLEY PUBLIC POWER ASSOCIATION, INC.

By:



Jack W. Simmons
President & Chief Executive Officer