

Agenda Report

DATE: November 23, 2009

TO: CITY COUNCIL

FROM: CITY MANAGER

SUBJECT: ADOPTION OF CERTAIN NEW FEDERAL STANDARDS RELATING TO ELECTRIC UTILITIES UNDER THE PUBLIC UTILITIES REGULATORY POLICIES ACT AND THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007 FOR WATER AND POWER DEPARTMENT

RECOMMENDATION:

It is recommended that the City Council, following a public hearing:

1. Finds that the action taken herein is exempt from the California Environmental Quality Act pursuant to state CEQA Guidelines Sections 15061(b)(3) (general rule) and 15308 (actions by regulatory agencies for the protection of the environment); and
2. Determines that the Water and Power Department (PWP) policies, rates and practices that have been initiated and/or are under development are consistent in meeting and adopting three of the four new federal standards amended by the Energy Independence and Security Act of 2007 amendments to the Public Utility Regulatory Policies Act of 1978, and;
3. Determines not to adopt certain aspects of the Smart Grid Information standard (Standard 4) because PWP does not currently offer real-time retail electricity rates or possess the capability of implementing such rates, and directs staff to evaluate the cost-effectiveness and capability of establishing such rates as part of PWP's electric rate and cost of service study and any future smart grid implementation efforts; and
4. Adopt a resolution to Determine Certain New Federal Standards for Electric Utilities under the Public Utilities Regulatory Policies Act of 1978, as Amended by the Energy Independence and Security Act of 2007.

EXECUTIVE SUMMARY:

PWP is requesting that the City Council hold a public hearing to discuss and consider four new federal standards written into the Energy Independence and Security Act of 2007. The Federal Government requires PWP's governing board to consider these standards by December 19, 2009, and determine: 1) to adopt

the standard as drafted, 2) to adopt the standard with modifications, or 3) decline to adopt the standard.

This is an administrative procedure. There is no penalty if the City chooses not to adopt any of the standards.

Staff has considered the four standards and recommends that the City Council determines that PWP's current policies and practices are:

- Consistent with Standards 1-3 and to adopt them as drafted, and
- Partially consistent with Standard 4, but not adopt the Standard at this time, and direct staff to evaluate the cost-effectiveness and feasibility of adopting this standard in future electric rate and cost of service studies and any future smart grid implementation efforts.

BACKGROUND:

The Energy Independence and Security Act of 2007 ("the Act") was signed into law on December 19, 2007. It amended the Public Utility Regulatory Policies Act of 1978 ("PURPA") to require state regulatory commissions and unregulated utilities with annual retail sales in excess of 500 million kWh to conduct assessments and consider whether to adopt four new federal standards. PWP, with annual retail sales of 1,200 million kWh, is therefore subject to the provisions of the Act.

The City Council adopted a similar resolution to consider amended federal standards on July 16, 2007, when the signing of the Energy Policy Act of 2005 also amended the PURPA.

The four standards to consider under the Act include: (1) Integrated Resource Planning, (2) Rate Design Modifications to Promote Energy Efficiency Investments, (3) Consideration of Smart Grid Investments, and (4) Smart Grid Information.

A utility must consider each of these standards and make a determination concerning whether or not it is appropriate to implement the standards. Utilities are not required to adopt the standards, only consider them; however, if a determination is made that a particular standard is not appropriate to implement and is declined, the utility must state, in writing in a public document, the reason for the decision. These Standards are defined by the federal government and do not give the City discretion to adopt a different standard. Therefore, the City Council, in the context of a public hearing, shall make the determination concerning whether or not it is appropriate to implement the Standards provided by the Act. In addition, any determination or action taken by the City Council will not result in any physical or policy changes that would require a CEQA review.

The signing of the Act triggered a December 19, 2009 deadline for a utility to have completed consideration and make a determination on whether or not to adopt the standards.

A notice of public hearing date was set on the November 2, 2009 City Council Agenda. PWP also provided this information to the Municipal Services Committee (MSC) on October 27, 2009 and to the Environmental Advisory Commission on October 27, 2009 although no additional action was requested. The Act amendments are listed in Attachment 1.

Standard 1: Integrated Resource Planning:

Objective: This Standard requires an electric utility to integrate energy efficiency resources into utility, state and regional plans and adopt policies establishing cost-effective energy efficiency as a priority resource.

The term "Integrated Resource Planning" (IRP) refers to a comprehensive planning process intended to systematically consider appropriate supply and demand resources to meet current and future load requirements within the context of local, state, and federal policy goals and objectives. While IRP has many facets and objectives, this PURPA standard is written to specifically address one aspect of IRP, integrating energy efficiency into utility plans and adopting policies that encourage cost-effective energy efficiency.

PWP's Status: Current policy and practices are consistent with Standard 1. The City Council has directed that cost-effective energy efficiency be the first priority resource used to meet PWP's energy demand load and has established specific load reduction targets for PWP's energy efficiency programs. PWP has incorporated these directives into its IRP process, as reflected in the Council-approved 2009 Power Resource Integrated Resource Plan, adopted by the City Council in March 2009.

Since the grandfathering provision of PURPA was not extended to this standard, the City Council will have to, at least, consider the standard and make a determination, following PURPA's procedural requirements.

Determination: Adopt Standard.

Future Action: None, already implementing.

Standard 2: Rate Design Modifications to Promote Energy Efficiency Investments:

Objective: This Standard states that the rates charged by any electric utility shall align utility incentives with the delivery of cost-effective energy efficiency and promote energy efficiency investments. This Standard has six "policy options"

promote energy efficiency investments. This Standard has six “policy options” intended to guide states and nonregulated utilities when considering the standard. Each of the “policy options” will be discussed in turn.

Policy Option 1: Remove Throughput Incentives and Other Regulatory and Management Disincentives to Energy Efficiency

This policy option, commonly referred to as “decoupling,” involves removing the link between a utility’s electric sales volume (in kWh) and its earnings or net operating margin. Under conventional electric rate designs, a decrease in sales volume results in decreased earnings because fixed costs and profit margins are recovered in a volumetric rate component. Therefore, a decrease in utility sales that results from an energy efficiency program could also mean a decrease in earnings and even the inability to recover some portion of the utility’s fixed costs for providing service – damping the incentive a utility may have to offer or encourage customer participation in such measures to decrease electricity or natural gas use. If the goal is to expand the use and effectiveness of energy efficiency programs, then this goal could be at odds with the utility’s throughput incentive under traditional cost-based regulation. This throughput incentive is discussed in more detail below.

This policy of decoupling profits from energy sales is more relevant to Investor-owned utilities than municipal utilities.

PWP’s Status: Current policy and practices are substantially consistent with Policy Option 1 of Standard 2. A substantial portion of PWP’s revenue requirements are recovered either through fixed charges or formula-based rates that are designed to increase or decrease as necessary to balance revenues with costs in order to maintain stable net operating margins.

Policy Option 2: Provide Incentives for the Successful Management of Energy Efficiency Programs

Some regulatory authorities have adopted incentive mechanisms that provide financial rewards to utilities that meet energy efficiency goals. Such incentives are typically in the form of additional return on equity or shared savings that increase net profits.

PWP’s Status: While this policy is more relevant to Investor-owned utilities than municipal utilities, current policy and practices are generally consistent with Policy Option 2 of Standard 2. While PWP does not provide management bonuses or have shareholders to be rewarded for effective implementation of its energy efficiency programs, the City Council has: (1) directed that cost effective energy efficiency be the first priority resource used to meet energy demand load; (2) established specific load reduction targets for its energy efficiency programs; and (3) authorized financial resources to implement these goals. As these programs are funded from a dedicated formula-based rate, the utility is provided with the necessary financial

resources to invest in energy efficiency without tapping revenues intended for system maintenance and operations.

Policy Option 3: Include the Impact of Energy Efficiency as a Goal of Retail Rate Design

State commissions and utilities may consider energy efficiency as a goal of retail rate design, while balancing that goal with other objectives. Most states have general regulatory goals or objectives that they consider during the ratemaking process. These include quality of utility service, public safety, reliability, just and reasonable rates, efficient utility operation, and economical and fair regulation. State commissions may consider adding the encouragement of cost-effective energy efficiency programs as a regulatory goal, if it has not already been considered or adopted. Nonregulated utilities could consider making energy efficiency a goal as well.

PWP's Status: Current policy and practices are consistent with Policy Option 3 of Standard 2. The City Council has established a clear policy goal that cost effective energy efficiency be the first priority resource used to meet energy demand load, and has established specific load reduction targets for PWP's energy efficiency programs. As these programs are funded from a dedicated formula-based rate, the utility is provided with the necessary financial resources to invest in energy efficiency without tapping revenues for system maintenance and operations. New ten-year energy efficiency targets will be proposed for adoption by early 2010 based on a forthcoming energy efficiency potential study.

Policy Option 4: Adopt Rate Designs That Encourage Energy Efficiency for Each Customer Class

Consideration of each customer class and the impact that rate design has on encouraging energy efficiency is the goal of this policy option. Not all customer classes may respond in the same manner to energy efficiency programs, so different programs may have to be developed for each customer class. Also, there may be opportunities to obtain cost-effective energy efficiency from programs aimed at previously overlooked customer classes.

PWP's Status: Current policy and practices are generally consistent with Policy Option 4 of Standard 2. PWP's existing rates were designed to balance many considerations, including establishing fair and non-discriminatory rates, minimizing the impact of rates on consumers, providing a proper pricing signal through rates, and adopting understandable rates that encourage proper usage of electricity. These cost-of-service based rates do not have any disincentives to energy efficiency, such as declining block rates for any of its rate customer classes. Rate design options, such as inclining block rates that encourage customers to use energy efficiently will be considered as part of the forthcoming electric cost of service and rate proposal study.

Policy Option 5: Allow For the Timely Recovery of Energy Efficiency Related Costs

This policy option is aimed at ensuring that energy efficiency program costs are fully recovered from electric rates to encourage utility participation, cooperation, and support of energy efficiency programs. Conversely, untimely or uncertain cost recovery may discourage a regulated utility's cooperation. Regulatory authorities may want to consider conditioning cost recovery on economical and verifiable implementation of energy efficiency programs, to encourage cost minimization and program results.

PWP's Status: Current policy and practices are consistent with Policy Option 5 of Standard 2. PWP uses a formula-based Public Benefit Charge ("PBC") rate to provide full and direct funding for current energy efficiency programs. The PBC rate is charged to all customers, regardless of whether they are full-service or direct-access customers. Funds collected through the PBC charge are accounted for in a separate fund that is limited to customer programs such as solar and energy efficiency incentives, low income assistance, and may be used for research and development projects. These funds are not mingled with or transferred to other operating budget funds for other purposes.

Policy Option 6: Offer Home Energy Audits, Demand Response and Other Programs

This standard discusses specific types or categories of demand-side management programs that are intended to educate or inform customers of program opportunities or about their own energy use. These include home energy audits and publicizing the financial and environmental benefits of and educating customers about incentives and loans for energy efficiency improvements. Demand response programs can include both energy efficiency and load control programs that reduce peak system demand.

PWP's Status: Current policy and practices are generally consistent with Policy Option 6 of Standard 2. PWP has and will continue its current policy of offering energy audit programs to its customers. PWP anticipates establishing appropriate price signals or values for demand reduction as part of the forthcoming electric cost of service and rate proposal study. Additionally, PWP intends to design and develop cost effective demand response programs as part of its smart grid implementation program.

Determination: Adopt Standard.

Future Action: The following items will be evaluated and considered at the next electric cost of service and rate proposal study:

- 1) Consider energy efficiency as one of the goals of rate design;

- 2) Consider rate options, such as inclining block rates for each customer class, that would encourage customers to conserve;
- 3) Consider other demand response programs such as Residential Time-Of-Use rates and Critical Peak Pricing.

Standard 3: Consideration of Smart Grid Investments:

Objective: This standard requires the following:

- A. That utilities consider investment in qualified smart grid technology prior to undertaking investments in traditional grid technologies, taking into account such factors as total costs, cost-effectiveness, improved reliability, security, system performance, and societal benefit;
- B. That each regulatory authority consider authorizing electric utilities to recover the costs associated with any qualified smart grid system from its ratepayers; and
- C. That each regulatory authority consider authorizing electric utilities to recover the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system.

PWP's Status: Policy and practices consistent with Standard 3 have been initiated and/or are under development. PWP is currently developing a smart grid implementation plan and presented an overview of the plan to the MSC on July 28, 2009. The report included some of the benefits, risks and uncertainties of undertaking an investment in smart grid technology and costs to implement a smart grid upgrade to the current electric system.

PWP has been evaluating its own current infrastructure on smart grid investment at local and regional levels with the Southern California Public Power Authority to ensure that any investments in smart grid technology would increase the interoperability and reliability of PWP's power system and be in the best interest of Pasadena's ratepayers. All of the smart grid analysis to be conducted by PWP have and will continue to include the six factors listed above, as well as any recovery of rates and obsolete meter equipment, if applicable. Final results from the analysis, as well as any investments made in a smart grid system will need to be approved by the City Council.

Determination: Adopt Standard.

Future Action:

- Future Smart Grid capital investments and master plan
- Recovery plan of rates and obsolete meter equipment after smart grid investments

Standard 4: Smart Grid Information:

Objective: This Standard requires each electric utility to provide each electricity purchaser with access to the following smart grid information, in writing or electronically:

- A. Prices
- B. Usage
- C. Intervals and Projections
- D. Sources (including greenhouse gas emissions)

PWP's Status: Policy and practices consistent with Standard 4 have been initiated and/or are under development. PWP does not directly provide all of the smart grid information listed above. Relevant and available information are included in PWP's utility bills, published in the electric rate ordinance, PWP's website, and/or third party websites.

A) Time-based Electricity Prices in Wholesale Markets and Retail Rates.

The marginal hourly and real-time wholesale prices applicable to PWP's loads are determined by the California Independent System Operator (CAISO) and published on their public website.

PWP's retail rate ordinance includes "time of use" rate schedules that are mandatory for some customers and are otherwise offered as an option, subject to time of use (TOU) meter availability and meter installation at the customer's expense. Current PWP customers on the time of use rate schedule include all large commercial, some small and medium commercial, as well as some residential. PWP anticipates evaluating potential "critical peak pricing" rates as part of the forthcoming electric cost of service and rate design study.

PWP does not currently offer real-time retail electricity rates or possess the capability implementing such rates. These will be evaluated as part of PWP's ongoing electric rate making and Smart Grid implementation efforts.

B) Usage. PWP provides customers with monthly kWh usage information on their monthly invoice. Historical kWh usage data is available to customers upon their request. Furthermore, PWP has entered into a contract with Positive Energy Services, Inc. to provide detailed "home energy reports" to approximately one-half of its residential customers on a bi-monthly basis.

C) Intervals and Projections. The CAISO determines and publishes hourly updates on applicable hourly prices and regional electricity usage, and also posts daily updates of day-ahead hourly prices and projected regional electric usage. PWP does not repost these data or post PWP-specific usage information as it is not significantly relevant to the regional pricing applicable to PWP.

D) Sources. Every quarter PWP electric customers receive a Power Content Label showing the projected fuel source mix for PWP's power supply for that quarter. The information provided on the Power Content Label is a comparison of the projected PWP power mix for each calendar year versus the actual California power mix for the prior calendar year. The actual annual power mix is reported in a similar manner once each year.

PWP has voluntarily reported its greenhouse gas emissions since 2006 using the California Climate Action Registry protocol. In the future, PWP will provide this information consistent with protocols developed by the California Air Resources Board pursuant to requirements established in Assembly Bill 32 approved and signed by the Governor in 2006.

Determination: Decline to adopt the Standard.

Future Action:

- Implement publication of real-time retail electricity rates if such a rate structure is adopted in the future.

FISCAL IMPACT:

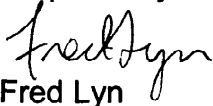
Adoption of the resolution will not have any fiscal impact upon the City nor the electric rates. Further evaluation to adopt and implement the Smart Grid policies and performing the next electric cost of service study and rate design consideration will require additional staff time and additional expenses will be incurred.

Respectfully submitted,



Michael J. Beck
City Manager

Prepared by:



Fred Lyn
Legislative and Regulatory Affairs Manager
Water and Power Department

Approved by:



Phyllis E. Currie
General Manager
Water and Power Department

**Energy Independence and Security Act of 2007
Amendments to PURPA Standards**

Section 532 PURPA 111(d) Standards.

(16) INTEGRATED RESOURCE PLANNING. Each electric utility shall —

- (A) integrate energy efficiency resources into utility, state, and regional plans; and
- (B) adopt policies establishing cost-effective energy efficiency as a priority resource.

(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS.

(A) **IN GENERAL.**— The rates allowed to be charged by any electric utility shall—

- (i) align utility incentives with the delivery of cost-effective energy efficiency; and
- (ii) promote energy efficiency investments.

(B) **POLICY OPTIONS.**—In complying with subparagraph (A), each state regulatory authority and each nonregulated utility shall consider—

- (i) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;
- (ii) providing utility incentives for the successful management of energy efficiency programs;
- (iii) including the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;
- (iv) adopting rate designs that encourage energy efficiency for each customer class;
- (v) allowing timely recovery of energy efficiency-related costs; and
- (vi) offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing federal and state incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.

Section 1307 PURPA 111(d) Standards.

(16) CONSIDERATION OF SMART GRID INVESTMENTS.

(A) **IN GENERAL.**— Each state shall consider requiring that, prior to undertaking investments in nonadvanced grid technologies, an electric utility of the state demonstrate to the state that the electric utility considered an investment in a qualified smart grid system based on appropriate factors, including—

- (i) total costs;
- (ii) cost-effectiveness;
- (iii) improved reliability;
- (iv) security;
- (v) system performance; and
- (vi) societal benefit.

**Energy Independence and Security Act of 2007
Amendments to PURPA Standards**

(B) **RATE RECOVERY.** — Each state shall consider authorizing each electric utility of the state to recover from ratepayers 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 of the electric utility for the deployment of the qualified smart grid system.

(C) **OBSOLETE EQUIPMENT.** — Each state shall consider authorizing any electric utility or other party of the state to deploy a qualified smart grid system to recover in a timely manner the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system, based on the remaining depreciable life of the obsolete equipment.

(17) SMART GRID INFORMATION.

(A) **STANDARD.**—All electricity purchasers shall be provided direct access, in written or electronic machine-readable form as appropriate, to information from their electricity provider as provided in subparagraph (B).

(B) **INFORMATION.**—Information provided under this section, to the extent practicable, shall include:

(i) **PRICES.**—Purchasers and other interested persons shall be provided with information on—

(I) time-based electricity prices in the wholesale electricity market; and

(II) time-based electricity retail prices or rates that are available to the purchasers.

(ii) **USAGE.**—Purchasers shall be provided with the number of electricity units, expressed in kwh, purchased by them.

(iii) **INTERVALS AND PROJECTIONS.**—Updates of information on prices and usage shall be offered on not less than a daily basis, shall include hourly price and use information, where available, and shall include a day-ahead projection of such price information to the extent available.

(iv) **SOURCES.**—Purchasers and other interested persons shall be provided annually with written 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.

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASADENA TO DETERMINE WHETHER TO ADOPT NEW FEDERAL STANDARDS FOR ELECTRIC UTILITIES UNDER THE PUBLIC UTILITIES REGULATORY POLICIES ACT OF 1978, AS AMENDED BY THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

WHEREAS, the Public Utilities Regulatory Policies Act of 1978 ("PURPA"), as amended by the Energy Independence and Security Act of 2007 ("EISA 2007"), requires municipal electric utilities with total retail sales of 500 million kilowatt-hours during any calendar year to formally consider and determine whether to adopt four new electric utility standards relating to Integrated Resource Planning, Rate Design Modifications to Promote Energy Efficiency Investments, Consideration of Smart Grid Investments, and Smart Grid Information. (the "Standards");

WHEREAS, the City of Pasadena operates an electric utility, the Pasadena Water and Power Department ("PWP"), which exceeds annual retail sales of 500 million kilowatt-hours and accordingly must comply with PURPA, as amended by EISA 2007; and

WHEREAS, the legislation requires the City Council, as the regulatory authority in charge of PWP, to consider whether to adopt the Standards after notice and public hearing and determine in writing whether or not to implement the Standards; and

WHEREAS, public notice was given on November 2, 2009, and the City Council held a public hearing on November 23, 2009; and

WHEREAS, the City Council has duly considered the Standards based upon the evidence and information received from staff and the public at the hearing held November 23, 2009, and being fully advised in the premises, and in order to be in full compliance with the requirements of the legislation;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Pasadena as follows:

1. The City Council hereby finds that PWP currently implements the **“Integrated Resources Planning”** standard by incorporating cost effective energy efficiency as the first priority resource used to meet its energy demand load and the establishment of specific load reduction targets for PWP’s energy efficiency programs, as well as the City Council-approved *2009 Power Resource Integrated Resource Plan*, adopted by the City Council in March 2009. The City Council hereby finds and determines that PWP presently meets this EISA 2007 standard and will adopt this standard.

2. The City Council hereby finds that PWP currently implements the **“Rate Design Modifications to Promote Energy Efficiency Investments”** standard where current policy and practices are generally consistent in meeting the six rate design “policy options” of 1) Removing throughput incentives, 2) Incentives for the Successful Management of Energy Efficiency Programs, 3) Including the impact of energy efficiency as a goal of retail rate design, 4) Adopting rate designs that encourage energy efficiency for each customer class, 5) Allowing timely recovery of energy efficiency related costs, and 6) Offering home energy

audits, demand response and other programs. The City Council hereby finds and determines that PWP presently meets this EISA 2007 standard and will adopt this standard.

3. The City Council hereby finds that PWP currently implements the **"Consideration of Smart Grid Investments"** standard by considering the six smart grid factors on any future investments made toward a smart grid system, including 1) Total Costs, 2) Cost Effectiveness, 3) Improved Reliability, 4) Security, 5) System Performance and 6) Societal Benefit, as well as any recovery of rates and obsolete meter equipment, if applicable. The City Council hereby finds and determines that PWP presently meets this EISA 2007 standard and will adopt this standard.

4. The City Council hereby finds that PWP currently implements several components of the **"Smart Grid Information"** standard by offering customers monthly and historical usage information and information on its electric sources, including GHG emissions. However, full implementation of this standard to include time-based wholesale and retail electricity prices, as well as real time prices related to electric use information has been determined not applicable to PWP and its customers at this time because of the inability to implementing such rates due to the lack of a smart grid system in Pasadena. The City Council hereby finds and determines that PWP presently partially complies with this EISA 2007 standard, but will not adopt this standard. The City Council hereby directs

PWP to evaluate the cost-effectiveness and capability of establishing such rates as part of PWP's electric rate and cost of service study and any future smart grid implementation efforts.

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Adopted at the regular meeting of the City Council of the City of Pasadena on the _____ day of _____, 2009, by the following vote:

AYES:


NOES:

ABSENT:

ABSTAIN:

Mark Jomsky, CMC
City Clerk

APPROVED AS TO FORM:


Scott D. Rasmussen
Assistant City Attorney