



# *Utah Public Service Commission Technical Conference*

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*Provisions of the Energy Independence and  
Security Act of 2007 Applicable to the  
Public Service Commission*

*Dockets 08-999-05 and 08-999-06*

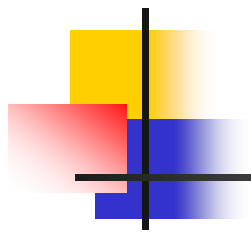
*November 5, 2008*



# Goal of Technical Conference

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- Familiarize parties with the requirements of the Energy Independence and Security Act of 2007 (“EISA”) applicable to the Public Service Commission as a basis for determining next procedural steps.
- Issues:
  - Applicability
  - Requirement to consider, make a determination, and implement if applicable
  - Prior State Actions
  - Procedural Requirements/Path Forward



# PURPA QUIZ



# PURPA Requirements

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- State commissions are required to consider, make a determination, and implement each standard if so determined based upon the purposes of PURPA
- While state commissions are required to consider the new PURPA standards in light of the PURPA goals, state commissions are not required to adopt the standards. PURPA specifies that the state commissions may implement any standard, decline to implement any standard, or adopt different or modified standards from those described in the statute. However, if a state commission declines to implement any standard, it is required to state in writing the reason for its decision and make that statement available to the public.



# Purposes of PURPA

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- Purposes of PURPA
  - Conservation of energy supplied by electric and gas utilities
  - Optimization of the efficiency of use of facilities and resources by electric and gas utilities
  - Equitable rates to electric and gas consumers



# Quick Review of the Energy Independence & Security Act of 2007 (EISA)

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- Signed into law on December 19, 2007 (date of enactment).
- Among other things, requires each state regulatory authority to conduct a “consideration and determination” of several new standards applicable to both electric and gas utilities within a defined time period.
- The Commission has opened two new dockets to address these requirements:
  - See Docket No. **08-999-05** for electric-related standards
  - See Docket No. **08-999-06** for gas-related standards
- The Commission conducted a similar evaluation of standards as required by the Energy Policy Act of 2005
  - See Docket No. **06-999-03**: Consideration of the Amendment of 16 U.S.C. Section 2621 - Consideration and Determination Respecting Certain Ratemaking Standards for Electric Utilities by the Energy Policy Act of 2005.



# Quick Review of the EISA – cont'd

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- The new PURPA federal standards applicable to electric utilities:
  - (16) *"Integrated Resource Planning"*
  - (17) *"Rate Design Modifications to Promote Energy Efficiency Investments"*
  - (16) *"Consideration of Smart Grid Investments"*
  - (17) *"Smart Grid Information"*
- This is not a misprint, the standard numbers are repeated in the statute-
- The new PURPA federal standards applicable to natural gas utilities:
  - (5) *"Energy Efficiency"*
  - (6) *"Rate Design Modifications to Promote Energy Efficiency Investments"*
- EISA also added one non-PURPA Standard:
  - *"Additional Incentives for Recovery, Use, and Prevention of Industrial Waste Energy"*



## New PURPA 111(d) Standard (EISA sec. 532)

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### (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.





## New PURPA 111(d) Standards (EISA sec. 532)

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### *(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.



## New PURPA 111(d) Standards (EISA sec. 532)

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### (17) *RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS - continued*

(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each non-regulated 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 one of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;



## New PURPA 111(d) Standards (EISA sec. 532)

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### (17) *RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENTS - continued*

(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.



## New PURPA 111(d) Standard (EISA sec. 1307)

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### (16) *CONSIDERATION OF SMART GRID INVESTMENTS*

(A) IN GENERAL.— Each State shall consider requiring that, prior to undertaking investments in non-advanced 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.



# New PURPA 111(d) Standard (EISA sec. 1307(A)&(B))

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## (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).



# New PURPA 111(d) Standard (EISA sec. 1307(A)&(B))

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## (17) *SMART GRID INFORMATION*

(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.



# New PURPA 111(d) Standard (EISA sec. 1307(A)&(B))

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## (17) *SMART GRID INFORMATION - continued*

(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.



## Compliance Deadlines

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- ❑ For the two PURPA standards labeled “(16),” “Integrated Resource Planning” and “Consideration of Smart Grid Investments” -- *there is no time limit specified.*
- ❑ This is based on a “plain” interpretation of section 1307(b) of the statute.
- ❑ **While this is likely an error in the statute, we are left with little choice than this interpretation since we cannot infer Congressional intent.**
- ❑ If a state commission fails to comply and does not consider the PURPA standards, then they are to be considered and a determination made in the first rate proceeding three years after the law was enacted (Section 112(c)), i.e., on or after December 19, 2010, for all four standards.





# Compliance Deadlines

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- ❑ For the two PURPA standards labeled “(17)” Commissions have
  - ❑ one year after enactment (*until December 19, 2008*) to begin consideration of the standards or set a hearing date for the consideration, and
  - ❑ up to two years (*until December 19, 2009*) to complete the consideration and make a determination on whether or not to adopt the additional standards



# Prior State Actions for PURPA Standards

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- **Prior state actions are grandfathered if:**
  - 1) the state implemented the standard or comparable standard,
  - 2) the state commission or utility has conducted a proceeding considering implementation of the standard or comparable standard, or
  - 3) the state's legislature voted on implementation of the standard or comparable standard



# Prior State Actions for PURPA Standards

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- If these conditions are met with respect to a standard, the obligation to consider the standard is waived and no new consideration process is required.
- *This grandfathering provision, however, only applies to the standards labeled "(17)" – again due to likely an error in the statute.*



## Prior State Actions (continued)

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- ❑ The two PURPA standards labeled “(16)” have no prior state action waiver since PURPA was amended previously (in 2005) to refer to specific standards and the 2007 statute only amends PURPA for the standards labeled as “(17).”
- ❑ States and non-regulated utility are, therefore, required to consider and make a determination on the standards labeled “(16),” *even if they had previously considered those standards or comparable standards.*
- ❑ If there were prior actions by the Commission, those could be considered when making a decision on whether or not to adopt the standard.



## Prior State Actions (continued)

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- ❑ For the standards labeled “(17),” there was no time limit specified as to when these prior state actions should have occurred for the waiver to apply.
- ❑ It is up to state commissions and non-regulated utilities “to determine whether they substantially conformed to the requirements of the title and the courts will be able to review this determination” (from the PURPA Conference Committee Report).
- ❑ Proceedings begun prior to enactment does not require restarting the entire proceeding (for standards labeled “(17)”).



# PURPA Title III Retail Policies for Natural Gas Utilities

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- ❑ Goals for Retail Policies for Natural Gas Utilities are the same as those for Title I Retail Regulatory Policies for Electric Utilities
- ❑ Prior to EISA there were four standards
  - ❑ Procedures for termination of natural gas service
  - ❑ Advertising
  - ❑ Integrated Resource Planning
  - ❑ Investments in Conservation and Demand Management



## New Natural Gas Standard (EISA sec. 532)

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### (5) *INTEGRATED RESOURCE PLANNING*

Each natural gas utility shall—

- (A) integrate energy efficiency resources into plans and planning processes of the natural gas utility; and
- (B) adopt policies establishing energy efficiency as a priority resource in the plans and planning processes of the natural gas utility.



## New Natural Gas Standard (EISA sec. 532)

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### *(6) Rate Design Modifications to Promote Energy Efficiency Investments*

Each natural gas utility shall—

(A) IN GENERAL- The rates allowed to be charged by a natural gas utility shall align utility incentives with the deployment of cost-effective energy efficiency.





## New Natural Gas Standard (EISA sec. 532)

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### *(6) Rate Design Modifications to Promote Energy Efficiency Investments - continued*

- (B) POLICY OPTIONS- In complying with subparagraph (A), each State regulatory authority and each non-regulated utility shall consider—
- (i) separating fixed-cost revenue recovery from the volume of transportation or sales service provided to the customer;
  - (ii) providing to utilities incentives for the successful management of energy efficiency programs, such as allowing utilities to retain a portion of the cost-reducing benefits accruing from the programs;
  - (iii) promoting 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; and
  - (iv) adopting rate designs that encourage energy efficiency for each customer class.



## Compliance Deadlines

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- For the two PURPA natural gas standards it appears the Commission has
  - up to two years (*until December 19, 2009*) to complete the consideration and make a determination on whether or not to adopt the additional standards.



## EISA Non-PURPA Standard (EISA Section 374)

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- ❑ There is also a “non-PURPA” federal standard in Section 374 of EISA:  
*“Additional Incentives for Recovery, Use, and Prevention of Industrial Waste Energy”*
- ❑ This standard is not an amendment to PURPA.
- ❑ While it has some provisions similar to PURPA, this standard has distinctive requirements written as part of the standard’s statutory language.



## Sec. 374 Non-PURPA Standard (continued)

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- ❑ Standard is intended to encourage “waste energy recovery” projects that generate “net excess power.”
- ❑ This standard does not specify a minimum size of utility over which the standard applies, as does Title I of PURPA.
- ❑ *This means that the standard must be considered by state commissions for all their jurisdictional utilities (i.e., those over which the commission has ratemaking authority) and by all non-regulated utilities.*



## Sec. 374 Non-PURPA Standard (continued)

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- ❑ This standard requires that within six months of receiving a request from a project sponsor, owner, or operator, a state commission or non-regulated electric utility is to provide public notice and conduct a hearing on the standard and, based on the hearing, consider and make a determination on whether or not to implement the standard.
- ❑ Similar to PURPA standards, nothing prohibits a state commission or non-regulated electric utility from deciding that it is not appropriate to implement the standard.



## Sec. 374 Non-PURPA Standard (continued)

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- The general language of the standard to be considered is stated in subsection (b):

“(b) STANDARD FOR SALES OF EXCESS POWER.—For purposes of this section, the standard referred to in subsection (a) shall provide that an owner or operator of a waste energy recovery project identified on the Registry that generates net excess power shall be eligible to benefit from at least 1 of the options described in subsection (c) for disposal of the net excess power in accordance with the rate conditions and limitations described in subsection (d).”



## Sec. 374 Non-PURPA Standard (continued)

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- Four alternatives for the sale of power from an eligible waste energy recovery project (subpart (c)):
  - 1) Sale of net excess power to utility
  - 2) Transport by utility for direct sale to third party
  - 3) Transport over private transmission lines
  - 4) Agreed on alternatives



## Sec. 374 Non-PURPA Standard (continued)

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- There are four main parts to subsection (d) that outline the standard's rate criteria and options for the sale of power:
  - part (1) defines three terms: (A) per unit distribution costs, (B) per unit distribution margin, and (C) per unit transmission costs.
  - part (2) specifies that these rate definitions are to be used for the sale of power for options (1) and (2) of subpart (c), and for the rate applications described in part (3) of subpart (d).
  - part (3) specifies two rate applications:
    - (A) rates applicable to sale of net excess power and
    - (B) rates applicable to transport by utility for direct sale to third parties
  - part (4) specifies limitations.



# Equations from Section 374(d)(1)(A) and (B)

$$\text{Per Unit Distribution Cost (kWh)} = \frac{\text{Depreciated Book Value of Dist. System}}{\text{Utility Sales}}$$

$$\text{Per Unit Distribution Margin (for regulated utilities)} = \frac{\text{Per-Unit Gross Pretax Profit}}{\text{Rate-of-Return on Distribution Assets}} \times \text{Per Unit Distribution Cost}$$

$$\text{Per Unit Distribution Margin (for nonregulated utilities)} = \frac{\text{Per-Unit Contribution to Net Revenues}}{\frac{\text{Net Revenue Payment or Contribution}}{\text{Gross Revenues of the utility}}} \times \text{Per Unit Distribution Cost}$$

(this quotient, expressed as a percentage, is not to be less than 10%)



## Sec. 374 Non-PURPA Standard (continued)

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### (3) APPLICABLE RATES.—

#### (A) RATES APPLICABLE TO SALE OF NET EXCESS POWER.—

(i) IN GENERAL.—Sales made by a project owner or operator of a facility under the option described in subsection (c)(1) shall be paid for on a per kilowatt hour basis that shall equal the full undiscounted retail rate paid to the utility for power purchased by the facility minus per unit distribution costs, that applies to the type of utility purchasing the power.

(ii) VOLTAGES EXCEEDING 25 KILOVOLTS.—If the net excess power is made available for purchase at voltages that must be transformed to or from voltages exceeding 25 kilovolts to be available for resale by the utility, the purchase price shall further be reduced by per unit transmission costs.



## Sec. 374 Non-PURPA Standard (continued)

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(3) APPLICABLE RATES.—

(B) RATES APPLICABLE TO TRANSPORT BY UTILITY FOR DIRECT SALE TO THIRD PARTIES-

- (i) IN GENERAL- Transportation by utilities of power on behalf of the owner or operator of a project under the option described in subsection (c)(2) shall incur a transportation rate that shall equal the per unit distribution costs and per unit distribution margin, that applies to the type of utility transporting the power.
- (ii) VOLTAGES EXCEEDING 25 KILOVOLTS- If the net excess power is made available for transportation at voltages that must be transformed to or from voltages exceeding 25 kilovolts to be transported to the designated third-party purchasers, the transport rate shall further be increased by per unit transmission costs.
- (iii) STATES WITH COMPETITIVE RETAIL MARKETS FOR ELECTRICITY- In a State with a competitive retail market for electricity, the applicable transportation rate for similar transportation shall be applied in lieu of any rate calculated under this paragraph.



## Sec. 374 Non-PURPA Standard (continued)

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### (4) LIMITATIONS-

- (A) IN GENERAL- Any rate established for sale or transportation under this section shall--
- (i) be modified over time with changes in the underlying costs or rates of the electric utility; and
  - (ii) reflect the same time-sensitivity and billing periods as are established in the retail sales or transportation rates offered by the utility.
- (B) LIMITATION- No utility shall be required to purchase or transport a quantity of net excess power under this section that exceeds the available capacity of the wires, meter, or other equipment of the electric utility serving the site unless the owner or operator of the project agrees to pay necessary and reasonable upgrade costs.



## Sec. 374 Non-PURPA Standard (continued)

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- ❑ Section 372 of the EISA contains details on the “Registry” of facilities and related tasks for EPA’s Administrator
- ❑ This includes a requirement for the EPA Administrator to conduct an “ongoing survey” of all major industrial and commercial “combustion sources” in the U.S. and where they are located
- ❑ Within nine months of enactment (September 19, 2008) the Administrator is to publish rules for the criteria of sites to be included in the Registry



## Sec. 374 Non-PURPA Standard (continued)

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- ❑ To be included on the Registry, a project has to be “economically feasible by virtue of offering a payback of invested costs not later than 5 years after the date of first full project operation (including incentives offered under this part)” (section 372(b)(2)(A))
- ❑ However, if the project is developed or used “for the primary purpose of making sales of excess electric power” it cannot qualify for the Registry



## Sec. 374 Non-PURPA Standard (continued)

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- The Secretary of Energy is to provide technical support at the request of the owner or operator of a facility on the Registry and offer partial funding of up to one-half the total cost of feasibility studies to determine if the facility would have a payback period of five years or less (§372(c)).
- One year after enactment (December 19, 2008), the EPA Administrator is to establish the “Registry of Recoverable Waste Energy Sources” and specify the location of the facilities, based on the criteria established by the statute and the Administrator’s implementing rulemaking (§372(d)(1)(A)).



## Sec. 374 Non-PURPA Standard (continued)

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- ❑ The Administrator is to update the Registry “on a regular basis” and make the Registry available to the public on EPA’s website (§372(d)(1)(B)).
- ❑ Any “State, electric utility, or other interested person may contest the listing of any source or site by submitting a petition to the Administrator” (§372(d)(1)(C)).





## Sec. 374 Non-PURPA Standard (continued)

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- ❑ Consideration of the standard must be made after public notice and hearing and the determination must be in writing, based on evidence presented, and be available to the public (subpart (e)(1)) -- this is nearly identical to PURPA section 111(b)(1).
- ❑ Subpart (e)(2) allows the EPA Administrator to intervene in a proceeding to calculate energy and emissions possibly saved by using one or more of the four options for the sale of power described in subpart (c), calculate the costs and benefits to ratepayers and utilities, and advocate for waste energy recovery opportunities.
- ❑ Consolidation is permitted (subpart (e)(3)(B)) of multiple projects that are simultaneously seeking consideration in a proceeding with the same utility as long as full attention is paid to the individual circumstances and merits and an individual judgment is reached with respect to each project.



## Sec. 374 -- Differences from PURPA

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- Subpart (f)(2)(C) does not obligate a state authority or utility directly, but does require the EPA Administrator to submit to Congress an annual report with “a description of the lost opportunities for waste-heat recovery” from projects adversely affected by non-implementation of the standard.
- The Administrator in its report must specifically identify the utilities and the quantity of energy and emissions savings potential that was lost.
- Subpart (f)(2)(D) provides that if a state commission or non-regulated electric utility declines to implement the standard, a project sponsor may submit a new project petition at any time two years after the date on which the state commission or non-regulated utility declined to implement the standard.



## Sec. 374 -- Differences from PURPA

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- ❑ There is no specified deadline to begin consideration of the standard or to make a decision.
- ❑ The standard states (374(a)(1)) that “not later than 180 days after the receipt” by a state commission or non-regulated electric utility “of a request from a project sponsor or owner or operator”
- ❑ -- in other words, the six month clock for the standard’s consideration and for when a determination must be made begins when a request is received, not for a period of time after the statute’s date of enactment and with separate deadlines for consideration and determination, as with the PURPA standards.



## Sec. 374 -- Differences from PURPA

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- Separate consideration and determinations are needed for each project, unless, multiple projects are consolidated using the provision that allows simultaneous consideration in a proceeding with the same utility (section 374(e)(3)(B)).



## Sec. 374 -- Differences from PURPA

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- ❑ The stated three purposes of the PURPA Title I (PURPA section 101) are not present in this standard, and there is no reference to another basis for a decision.
- ❑ There is no grandfathering provision -- projects are considered on a project-by-project basis or multiple projects are consolidated for hearing, but with each project receiving a separate evaluation and determination.
- ❑ Project sponsors can resubmit a petition for a project after two years after the date a state commission or non-regulated utility declined to implement the standard.

# Next Procedural Steps

