

PUBLIC SERVICE COMMISSION OF WISCONSIN

Memorandum

November 22, 2013

FOR COMMISSION AGENDA

TO: The Commission

FROM: Robert Norcross, Division Administrator
Carol Stemrich, Assistant Administrator
Jolene Sheil, Director, Focus on Energy

RE: Quadrennial Planning Process II - Scope

5-FE-100

Suggested Minute: The Commission directed the Gas and Energy Division to draft an order in accordance with its discussion.

Background

By Notice dated July 3, 2013, the Commission opened an investigation to evaluate the energy efficiency and renewable resource programs (statewide and utility voluntary programs) and to determine their appropriate goals, priorities, and measurable targets. The Commission opened the Quadrennial Planning Process II docket by its authority under Wis. Stat.

§ 196.374(3)(b)1., which states:

At least every 4 years, after notice and opportunity to be heard, the commission shall, by order, evaluate the energy efficiency and renewable resource programs under sub. (2) (a) 1., (b) 1. and 2., and (c) and ordered programs and set or revise goals, priorities, and measurable targets for the programs. The commission shall give priority to programs that moderate the growth in electric and natural gas demand and usage, facilitate markets and assist market providers to achieve higher levels of energy efficiency, promote energy reliability and adequacy, avoid adverse environmental impacts from the use of energy, and promote rural economic development.

The Commission's decisions in the first Quadrennial Planning Process covered the 2011-2014 period for the statewide energy efficiency and renewable resource program known as

Focus on Energy (Focus). The decisions in this Quadrennial Planning Process II will cover the 2015-2018 period.

In the July 3, 2013, Notice of Investigation (NOI), the Commission sought comments on the appropriate scope of the Quadrennial Planning Process II. Of particular interest were comments regarding which decisions made in the first quadrennial planning process, in addition to the statutorily required decisions, should be revisited, as well as any new issues that should be addressed in the Quadrennial Planning Process II. Decisions made in the first quadrennial planning process are set forth in Attachment A to the NOI. ([PSC REF#: 187137.](#))

The Commission received comments from eight organizations or individuals including: Wisconsin Utilities Association (WUA) ([PSC REF#: 188323](#)); Citizens Utility Board (CUB) ([PSC REF#: 188338](#)); Clean Wisconsin (Clean WI) ([PSC REF#: 188325](#)); RENEW Wisconsin (RENEW) ([PSC REF#: 188341](#)); Industrial Customer Group (ICG) comprised of the Wisconsin Paper Council, Wisconsin Industrial Energy Group, and Wisconsin Manufacturers and Commerce ([PSC REF#: 188340](#)); the current Focus program administrator, Chicago Bridge and Iron (CB&I) ([PSC REF#: 188339](#)); OPower ([PSC REF#: 188337](#)); and David Lawrence with the Wisconsin Rural Water Association ([PSC REF#: 188344](#)).

The issues for potential inclusion in the scope of the Quadrennial Planning Process II fall into five categories: (1) goals and priorities; (2) cost-effectiveness of programs; (3) renewable energy; (4) energy-water nexus; and (5) other.

I. Goals and Priorities

Introduction

2005 Wisconsin Act 141 (Act 141) requires the Commission to set goals and priorities for the statewide energy efficiency and renewable resource programs at least once every four years.

There are seven issues in this category that were either included in comments responding to the NOI, or are topics Commission staff has identified for consideration:

1. Overall energy goal rather than specific goals for kilowatt-hours (kWh), kilowatts (kW), and therms;
2. Balance between Resource Acquisition and Market Transformation;
3. Energy and/or demand emphasis;
4. Relative emphasis of business and residential programs;
5. Funding for the Environmental and Economic Research and Development Program;
6. Focus credit for code changes; and
7. Pilots for behavioral programs.

Each of these issues will be addressed along with a brief description as to why they are deemed important.

1. Overall Energy Goal Rather than Specific Goals for kWh, kW and Therms

In a memorandum dated October 7, 2013, Commission staff outlined the concept of an overall energy savings goal rather than specific goals for kWh, kW, and therms. ([DL: 874021](#).) Under this concept, minimum thresholds for kWh and therm savings are established. However, the overall Commission-established goals would be set in British thermal units (Btu), a general measure of energy use, which would allow the Program Administrator to reach the overall goal using any combination of therms and kWh above their minimum thresholds. This new approach would allow the Program Administrator flexibility with program planning in order to deliver programs as cost-effectively as possible.

Comments

CB&I submitted comments in favor of including this issue in the scope. CB&I believes that an overall Btu/Energy savings goal would allow the Program Administrator, in consultation with Commission staff, to adapt quickly and efficiently to market factors and remain as cost-effective as possible with ratepayer dollars. For example, if natural gas prices remain

relatively low, the Program Administrator would have the flexibility to achieve a greater portion of contracted energy savings on the electricity side.

Commission Alternatives

Alternative One: Include a determination of the appropriateness of the establishment of an overall energy goal rather than specific goals for kWh, kW and therms in the scope of Quadrennial Planning Process II.

Alternative Two: Do not include this issue in Quadrennial Planning Process II scope.

2. Balance Between Resource Acquisition and Market Transformation

Energy efficiency programs have been used to accomplish various goals over the last 30 years. In the 1980s when Integrated Resource Planning (IRP) was the norm, energy efficiency programs were used as a resource acquisition tool. Under this approach, energy efficiency is treated as one way to meet projected energy needs, on the same level as coal, natural gas, and other conventional sources of electricity. This approach is designed to encourage utilities to incent customers to use energy more efficiently when they can do so at a lower societal cost than procuring other sources of electricity.¹

With the advent of utility restructuring in the mid-1990s, IRP fell into disfavor and energy efficiency programs began placing greater emphasis on transforming the energy efficiency market.² Market transformation has been defined as “long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of

¹Ettenson, Lara and Noah Long, “*Market Transformation and Resource Acquisition: Challenges and Opportunities in California’s Residential Efficiency Lighting Programs*,” ACEEE, 2010, p. 6-54.

² Hoffman, Marc, “*Introduction to Market Transformation*,” CEE, 2011, p. 9.

energy efficiency measures to the point where ratepayer subsidies are no longer appropriate in that specific market.”³

Examples of market transformation include:

- Residential gas furnaces in Wisconsin between 1982 and 1996. Utility incentives in the mid-to-late 1980s led to a 90 percent market share for energy efficient furnaces even after the incentives were eliminated.
- Energy and water efficient clothes washers between 1989 and 2001. Market acceptance led to ENERGY STAR standards for front-loading and top-loading clothes washers.
- Dishwashers in Wisconsin. Over 90 percent of dishwashers for sale in Wisconsin carry the ENERGY STAR label.

The goals of resource acquisition and market transformation are not mutually exclusive and energy efficiency programs, if well designed and implemented, can achieve both short-term energy savings (resource acquisition) and longer-term market transformation. Market transformation is typically seen as longer-term and the examples above illustrate this point. Most of them were a decade or more in the making. When used for market transformation, efficiency programs can pull more efficient products into market and thereby speed up the process of market acceptance. The Focus program currently uses three tools to achieve both resource acquisition and market transformation goals: (1) incentives; (2) technical assistance; and (3) education and training.

The decision for policy makers is the appropriate balance between short-term achievement and longer-term market effects. In the first Quadrennial Planning process, the Commission determined that:

In addition to short-term quantitative energy savings goals, qualitative targets for long-term market effects over the planning horizon should be established. Program planners should prioritize designs that simultaneously achieve short-term energy savings while targeting longer-term changes.

³ ³Ettenson, Lara and Noah Long, “*Market Transformation and Resource Acquisition: Challenges and Opportunities in California’s Residential Efficiency Lighting Programs*,” ACEEE, 2010, p. 6-52.

Comments

Clean Wisconsin and RENEW commented that the Commission should revisit the balance between short-term goal achievement and longer term market changes. RENEW believes that reexamination should include an investigation of the most effective market transformation programs because it appears Focus has had a stronger emphasis on resource acquisition in recent years.

Commission Alternatives

Alternative One: Include the balance between resource acquisition and market transformation as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include the balance between resource acquisition and market transformation as an issue in the Quadrennial Planning Process II scope.

3. Energy and/or Demand Emphasis

The relative emphasis between energy and demand goals has important ramifications for program design and implementation. For example, the types of customers targeted by the programs would be impacted if greater emphasis were placed on kW savings. Programs for schools would likely be reduced as these programs achieve low kW savings since schools are not in session for the majority of the peak season. Additionally, most residential programs achieve relatively lower kW savings as compared to business programs because residents are not typically in their homes during peak hours.

The types of technologies that programs promote would also be affected by a change in the relative emphasis between energy and demand savings. For example, a program focused on peak kW reductions would not actively promote outdoor lighting as these technologies save kWh, but have little effect on kW reductions. In the residential sector, there are few technologies

to target for peak kW savings but many that could reduce kWh use. During the first Quadrennial Planning process the Commission determined that:

The contract between the Statewide Energy Efficiency and Renewable Administration (SEERA) and the Program Administrator is to emphasize energy savings by establishing energy savings goals that are more aggressive than the demand reduction goals. In addition, the performance bonus mechanism should continue to emphasize energy savings.

Comments

Clean WI and ICG indicated that the relative emphasis on energy and/or demand should be part of the Quadrennial Planning Process II scope. Clean WI indicates this issue should be revisited because it is important that an integrated package of Focus and utility energy efficiency, demand/response/distributed resources, and rate design be examined to establish an overall demand reduction target. ICG states the current policy of placing higher emphasis on energy should be revisited because energy and demand savings both defer power plant construction further into the future. Further, ICG believes that placing more emphasis on energy reductions emphasizes emissions reductions and that energy policy should not be used to promote emission reductions for which there are no state or federal mandates.

Commission Alternatives

Alternative One: Include the emphasis between energy and demand as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include the emphasis between energy and demand as an issue in the Quadrennial Planning Process II scope.

4. Relative Emphasis of Business and Residential Programs

During the first Quadrennial Planning process the Commission determined that:

Goals and targets should be allocated between the residential and business programs according to the measured potential in each sector. The Program Administrator is in the best position to decide how to allocate the goals and targets, to produce the most cost-effective programs.

Funding for Focus programs is currently allocated about 60 percent to business customer classes and 40 percent to residential customers to be consistent with the historical proportion of Focus funding from each type of customer. Goals are then set based on past potential studies (2005 and 2009), while also taking into account past program achievement and a review of new opportunities and technologies within each sector.

Comments

CUB requests the second quadrennial planning process revisit the relative emphasis between residential and business annual targets and contract goals stating that this is an issue that has generated significant debate in the past.

Commission Alternatives

Alternative One: Revisit the relative emphasis of business and residential programs in the Quadrennial Planning Process II scope.

Alternative Two: Do not revisit the relative emphasis of business and residential programs in the Quadrennial Planning Process II scope.

5. Funding for the Environmental and Economic Research and Development Program

In the Commission's original decision in the first Quadrennial Planning Process, funding for the Environmental and Economic Research and Development Program (EERD) was set at \$2 million per year. This funding was for research projects that examined some aspect of the environmental and economic impacts of energy production and use. When this issue was revisited in December 2011, the Commission set EERD funding at \$100,000 per year beginning

in 2012 and determined that the focus should be on research that provides benefits to the Focus program design and delivery.

Comments

CUB and Clean WI submitted comments on this issue. CUB stated that since this was an issue that was discussed more than once during the first quadrennial period, it should be revisited. Clean WI stated that since the EERD program was substantially redesigned, it would be timely and prudent to examine how the new program structure is working.

Commission Alternatives

Alternative One: Revisit funding for the EERD program in the Quadrennial Planning Process II scope.

Alternative Two: Do not revisit funding for the EERD program in the Quadrennial Planning Process II scope.

6. Focus to Receive Credit for Code Changes

Building codes serve as the minimum energy efficiency baseline for estimating the energy saved by some measures that are installed at residential and commercial buildings, particularly those that affect the building shell, heating, ventilation and air conditioning systems and lighting. Focus implementers presently do not work on updating building codes because an increase in code requirements would make it more difficult for Focus implementers to achieve their savings goals. If the Focus program was allowed to claim energy savings from code changes that it has influenced, the disincentive implementers have to assist in changing codes is removed. Efficiency programs in other states have seen this dynamic and have allowed their programs to receive credit (kW, kWh, and therms) for program-led building code changes.

Commission staff identified this issue for possible inclusion in the second Quadrennial Planning

Process in order to investigate how other states' energy regulators allow their programs credit for program-led building code changes and provide the Commission with alternatives to consider in allowing such a credit for Focus.

Commission Alternatives

Alternative One: Include Focus credit for code changes as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include Focus credit for code changes as an issue in the Quadrennial Planning Process II scope.

7. Pilots for Behavioral Programs

Focus's current programs primarily seek to save energy by using financial incentives, as well as technical assistance and training, to encourage customers to purchase energy-efficient products and services. Over the past few years, a growing number of programs in other states have broadened their program portfolio to include behavioral programs that encourage customers to conserve energy through their daily actions. These programs seek to change usage habits by providing customers with information on their energy use and how it compares to similar customers; recommending energy-efficient practices for operating and maintaining existing systems; and setting energy savings goals that customers are rewarded for achieving. During the current quadrennial, We Energies and Wisconsin Public Service Corporation have both implemented behavioral pilot programs in their service territories.

Behavioral programs have demonstrated energy savings potential on an annual basis, but it is less clear whether they can maintain savings over an extended period. Because Focus evaluates energy savings from a life cycle perspective, the Program Administrator is limited in its ability to design pilots and explore behavioral change initiatives.

Comments

CB&I , requests that the Commission consider setting aside a small portion of the annual Focus budget to pursue such pilots, the success of which would be determined based on factors other than life cycle savings.

Commission Alternatives

Alternative One: Include pilots for behavioral programs as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include pilots for behavioral programs as an issue in the Quadrennial Planning Process II scope.

II. Cost-effectiveness of Programs

The following issues were grouped under the category of program cost-effectiveness since decisions on each of these issues impact how the cost-effectiveness of the Focus program is calculated:

1. Cost-effectiveness tests;
2. Avoided costs, including peak and non-peak issues;
3. Discount rate used for energy savings in future years;
4. Carbon value over time; and
5. The determination of measure life-time, degradation, and persistence of savings.

1. Cost-Effectiveness Tests

In the first Quadrennial Planning process, the Commission determined that a modified Total Resource Cost (TRC) test should be used at the measure, program, and portfolio levels. Results of an Expanded TRC test are to continue to be reported at the portfolio level. A Utility/Administrator test at the program level should be conducted to inform program design. Measures that do not pass the modified TRC, but have substantial non-energy benefits, may be considered for program inclusion on a case-by-case basis based on the expanded test.

Comments

ICG believes that this decision should be revisited because the current tests do not look at the impact on non-participating customers.

Commission Alternatives

Alternative One: Revisit the cost effectiveness tests to be used by Focus.

Alternative Two: Do not revisit the cost effectiveness tests to be use by Focus.

2. Avoided Costs, Including Peak and Non-Peak Issues

Focus assesses program benefits in part by quantifying the generation, transmission, and distribution costs utilities avoid through the energy reductions Focus achieves. Three aspects of the avoided cost issue can be considered by the Commission: (a) whether avoided costs should be included in the scope; (b) if included, whether avoided costs of natural gas should be calculated in the same way as avoided costs of electricity; and (c) if included, whether avoided costs during peak and non-peak periods should be calculated separately.

a. In its original decision, the Commission determined that avoided costs shall be based on the most recent three-year historical average of locational marginal pricing (LMP) and avoided capacity costs based on the cost of a new peaking plant. Since this decision was inconsistent with moving to a life cycle framework, the Commission revised its original decision ([PSC REF#: 158228](#)) to require avoided energy costs to be based on long-term electricity price forecasts. Avoided capacity costs remained based on the cost of a new peaking plant. Avoided natural gas costs remained based on base year prices.

Comments

CUB believes avoided costs should be included in the scope of the Quadrennial Planning process since the Commission revisited its original decision. ICG believes this issue should be

included in the scope because it desires that the methodology, assumptions and data inputs used to determine avoided costs be vetted with stakeholders.

Commission Alternatives

Alternative One: Include avoided costs as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include avoided costs as an issue in the Quadrennial Planning Process II scope.

Should the Commission decide to include avoided costs in the Quadrennial Planning Process II scope, it may also want to consider the issues of natural gas cost forecasting and reflecting the disparate benefits of peak and non-peak energy savings in avoided costs and Focus incentives.

b. While the Commission has decided to calculate electricity avoided costs based on long-term price forecasts, natural gas costs are estimated based on present-day production and transmission costs. The Evaluation Work Group (EWG) has identified this difference as worthy of further attention. EWG members believe including this issue in the scope could allow for a more systematic investigation of whether it would be appropriate to calculate both electric and natural gas costs using consistent methods. Further investigation at this time would also allow the Commission to assess how Focus' calculation methods could be informed by recent Commission decisions related to the calculation and forecasting of natural gas costs.

Commission Alternatives

Alternative One: Include forecasting of natural gas avoided costs as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include forecasting of natural gas avoided costs as an issue in the Quadrennial Planning Process II scope.

c. Although on-peak kWh savings provides greater benefits than off-peak savings, the avoided costs established by the Commission use an average avoided cost. Consistent with these avoided costs, Focus incentive levels presently do not reflect the different values of on-peak and off-peak savings. Because all kWh are treated equally, Focus implementers and trade allies do not specifically target measures or projects that produce higher relative levels of peak kWh savings, nor are customers incented to look for such projects. By reflecting different avoided costs for on-peak and off-peak savings, Focus can send better price signals to the energy efficiency marketplace. Commission staff identified this issue for potential inclusion in the Quadrennial Planning Process II. Inclusion of this issue in the scope would allow an investigation and determination of the appropriate parameters needed to reflect the different values of on- and off-peak kWh. Such parameters could include defining on-peak and off-peak hours, appropriate range of incentive levels, transition issues and the effect such a change could have on measures incented and program cost-effectiveness.

Commission Alternatives

Alternative One: Include the reflection of the different values of on-peak versus off-peak energy savings in Focus incentives as an issue in the Quadrennial Planning Process II scope.

Alternative Two: Do not include the reflection of the different values of on-peak versus off-peak energy savings in Focus incentives in the Quadrennial Planning Process II scope.

3. Discount Rate Used for Energy Savings

In its original decision, the Commission determined that a real discount rate of 2 percent should be used for the benefit/cost modeling of energy efficiency programs.

Comments

WUA and ICG believe a reexamination of the discount rate should take place. While WUA does not elaborate on its opinion, ICG states that the current 2 percent rate is unrealistic because industrial customers have an implicitly higher discount rate for energy efficiency.

Commission Alternatives

Alternative One: Re-examine the current discount rate.

Alternative Two: Do not re-examine the current discount rate.

4. Carbon Value Over Time

In its original decision, the Commission determined that a levelized carbon value of \$30 per ton should be used in the benefit/cost modeling of energy efficiency programs.

Comments

WUA and ICG believe the value of carbon should be revisited. WUA does not state a reason, but ICG believes it should be revisited because there are no existing laws regarding carbon monetization.

Commission Alternatives

Alternative One: Revisit the current levelized value of carbon.

Alternative Two: Do not revisit the current levelized value of carbon.

5. The determination of measure life-time, degradation, and persistence of savings

In its original decision to set program savings goals on a life cycle basis, the Commission determined that the existing effective life and decay rate approach shall be used to document life

cycle savings and accelerated savings shall be incorporated when feasible. To date, program staff have focused on implementing the existing life cycle calculation approach, which multiplies the annual savings of each measure by its estimated median lifetime.

The EWG was to consider alternatives to the current approach and recommend modifications.

The EWG has not recommended any modifications to date, but does intend to revisit appropriate methods and data sources for assigning decay rates for future evaluations.

Comments

RENEW was the only organization offering comments on this issue saying that measure lifetimes and persistence of savings should be re-evaluated and open for stakeholder review and input.

Commission Alternatives

Alternative One: Reexamine the current approach to determining measure lifetime, degradation, and persistence of savings.

Alternative Two: Do not reexamine the current approach to determining measure lifetime, degradation, and persistence of savings.

III. Renewable Energy

There are two issues related to renewable energy that stakeholder groups believe should be revisited:

1. Appropriate goals and funding for renewable resource programs; and
2. Renewable resource program cost-effectiveness.

1. Appropriate Goals and Funding for Renewable Resource Programs

Wisconsin Stat. § 196.374(3)(b)1. requires the Commission to set or revise goals, priorities, and measurable targets for the Focus energy efficiency and renewable resource programs. Budget

levels are an indication of program priorities. In its original decision in the first Quadrennial Planning process, the Commission determined that it was reasonable for Commission staff to work with SEERA to set the budget allocation for renewable resource programs, business programs, and residential programs. Subsequently, in an Order dated April 26, 2012, the Commission established a maximum budget for renewable programs for 2013 and 2014 at \$10 million. This Order established further criteria for the funding of renewable resource projects. For 2013 and 2014, the renewable resource incentives were required to be allocated 75 percent to Group 1 technologies and 25 percent to Group 2 technologies. Additionally, the \$10 million incentive funding level is contingent upon maintaining a Focus on Energy program portfolio benefit-to-cost ratio of at least 2.3 and a reduction in energy savings of the portfolio of programs due to the inclusion of renewable measures of no more than 7.5 percent. ([PSC REF#: 163778.](#))

This issue was revisited again in an Order dated September 26, 2013. ([PSC REF#: 191060.](#)) The Commission made several determinations, including confirming that the 75-25 split between Group 1 and Group 2 should be maintained on an annual basis. Because this criterion would not be met in 2013, incentives for Group 2 technologies were suspended for the remainder of 2013.

Comments

While the Commission is required to review the goals and priorities of the energy efficiency and renewable resource programs, of particular interest to RENEW and CB&I is the appropriate allocation of funds and spending limits for renewable resources. RENEW points out that less than \$4 million will be spent in 2013 and indicates that the current guidelines are too complex. CB&I believes that the current structure makes planning difficult given the

unpredictable pace of renewable energy project construction, particularly of Group 1 technologies.

Commission Alternatives

Alternative One: Reexamine the relative priority of and guidelines for renewable resources.

Alternative Two: Do not reexamine the relative priority of and guidelines for renewable resources.

2. Renewable Resource Program Cost-Effectiveness

In the first Quadrennial Plan, the Commission determined that the cost-effectiveness of customer-sited renewable resource measures and programs shall be determined in the same manner as energy efficiency measures and programs. The Commission further determined that public policy should dictate the extent to which renewable resource measures that are not cost-effective should be included in the portfolio of programs in order to meet public policy objectives. Commission staff was asked to develop criteria, for Commission approval, to guide decisions about whether to incorporate additional renewable resource measures that do not pass the modified TRC test into the Focus portfolio of statewide programs.

Comments

RENEW, CUB, and Clean WI believe the Commission should reexamine how to evaluate the cost-effectiveness of renewable energy. RENEW believes that the current methodology does not reflect public policy goals, including broader societal and environmental benefits. CUB believes this issue should be reexamined because it has generated significant debate, and the Commission has revisited it several times during the first quadrennial period. Clean WI believes this issue should be revisited because renewables have benefits in addition to energy savings.

Commission Alternatives

Alternative One: Reexamine how to evaluate the cost-effectiveness of renewable resource programs.

Alternative Two: Do not reexamine how to evaluate the cost-effectiveness of renewable resource programs.

IV. Energy/Water Nexus

The production of electricity requires great amounts of water for cooling and scrubbing pollutants from plants. Securing, treating and distributing water requires an enormous amount of energy, resulting in many water efficiency measures saving energy as well. Several Focus programs offer incentives on energy efficiency measures that also save water. To better understand and inform this symbiotic relationship between water and energy, referred to as the “energy-water nexus,” Focus program implementers have been documenting water savings on relevant projects, and Commission staff in the energy and water areas have been working to determine estimates of the energy savings directly associated with those water savings. These staff have also been working together to target Focus programs, such as Express Energy Efficiency, into communities that have water savings goals to meet. However, efforts to date have been piecemeal and Act 141 does not address the issue.

The NOI asked for comments on the following water efficiency issues:

Should water efficiency measures, and their associated energy savings, be incorporated into the Focus on Energy program and addressed in this docket? If yes, which issues should be addressed? Potential issues include:

- a. How should water savings be incorporated into the Focus on Energy program evaluation?

- b. What mechanisms can be used to measure and document energy and peak demand savings attributable to water efficiency improvements or water loss reductions?
 - i. Direct energy savings from water efficiency measures or water loss reductions; and
 - ii. Savings attributable to reductions in energy used to produce water.

- c. What mechanisms can be used to measure and document water savings resulting from energy efficiency improvements?
 - i. Direct water savings associated with energy efficiency measures; and
 - ii. Savings attributable to reductions in water used to produce energy.

Comments

WUA, CUB, Clean WI, and ICG all expressed concerns that spending Focus funds on water conservation initiatives would be outside the scope of Act 141. David Lawrence with the Wisconsin Rural Water Association stated that Focus could assist water and wastewater utilities to improve efficiencies and reduce water and energy consumption by: (1) developing educational programs and materials; and (2) offering incentives for utilities to conduct water audits, leak detection and repair programs.

Commission staff believe that the water-energy nexus can be addressed in multiple ways within Focus on Energy's existing energy savings portfolio. First, protocols could be developed and approved to estimate the energy savings from fewer gallons of water supplied and/or gallons of wastewater treated that result from customers installing measures that reduce water use. These upstream and downstream energy savings are often small for individual measures, but can be substantial when all water saving measures are included. Second, Focus can offer assistance and targeted incentives to help Wisconsin's wastewater treatment plants address resource recovery in addition to its traditional treatment and disposal functions. For example, wastewater

resource recovery often starts with anaerobic treatment methods, which produce renewable biogas, can reduce energy use, and can enable the plant to become energy independent.

Commission Alternatives

Alternative One: Determine that the energy-water nexus should be part of the Quadrennial Planning process II scope.

Alternative Two: Determine that the energy-water nexus should not be part of the Quadrennial Planning process II scope.

V. Other Issues

There were four issues mentioned by stakeholders that do not fall into the above four categories:

1. Examine effective rate impact mitigation strategies that could be achieved in the planning period;
2. Conduct a new energy efficiency potential study that includes opportunities from behavioral programs;
3. Examine the role of Focus in positioning Wisconsin to cost-effectively meet federal carbon standards; and
4. Review all previous decisions in the first Quadrennial Planning Process to determine if they remain appropriate.

1. Examine Effective Rate Impact Mitigation Strategies that Could Be Achieved in the Planning Period

In the prior quadrennial planning process, the Commission considered the issue of rate impacts from the Focus program. Commission staff reviewed previously conducted studies that quantified the rate impacts of energy efficiency programs. Commission staff also conducted its own study to identify potential rate and bill impacts of energy efficiency on Wisconsin electric customers. After reviewing the results of these analyses, the Commission determined that:

Adopting conservative funding is a significant means of controlling any rate impacts that may be associated with the statewide energy efficiency and renewable resource programs. The Commission will also consider rate pressures on a case-by-case basis when it opens a docketed rate proceeding for each utility.

Upon request, the Commission will consider capitalizing a utility's contribution to the statewide programs to mitigate potential rate impacts.

Comments

Clean WI believes that this second quadrennial process provides a timely opportunity to examine effective rate impact mitigation strategies that could be implemented in the planning period.

Commission Alternatives

Alternative One: Examine rate impact mitigation strategies as part of the Quadrennial Planning process II.

Alternative Two: Do not examine rate impact mitigation strategies as part of the Quadrennial Planning Process II.

2. Conduct a New Energy Efficiency Potential Study that Includes Opportunities from Behavioral Programs

As input to the first Quadrennial Planning process, the Commission contracted with the Energy Center of Wisconsin to conduct an energy efficiency and renewable resource potential study. The results were used to inform decisions on questions posed in the first quadrennial review. Act 141 requires that a potential study be conducted should the Commission request additional funding for the statewide energy efficiency and renewable resource programs. This requirement is no longer relevant since the Commission cannot request an increase in funding. In addition, Cadmus, the Focus program evaluator, is conducting a market baseline study which will provide more specific information for program planning and design than a potential study.

Comments

OPower believes the Commission should conduct a new energy efficiency study as part of the planning process, the purpose of which is to reassess the size of energy efficiency

resources in Wisconsin and to identify major opportunities for energy savings including opportunities from behavioral programs. Behavioral programs were not addressed in the last potential study.

Commission Alternatives

Alternative One: A new energy efficiency potential study that includes opportunities from behavioral programs should be included in the scope of the Quadrennial Planning Process II.

Alternative Two: A new energy efficiency potential study that includes opportunities from behavioral programs should not be included in the scope of the Quadrennial Planning Process II.

3. Role of Focus in Positioning Wisconsin to Cost-Effectively Meet Federal Carbon Standards

Clean WI requests that the Commission address this new issue in the Quadrennial Planning Process II. Clean WI states that it would benefit state agencies to consider as early as possible how they might position the state to implement and comply with the standards set under Section 111(d) of the Clean Air Act. Specifically, the Commission could consider:

1. Whether Wisconsin should take the position that demand-side energy efficiency should be an allowable compliance mechanism.
2. Assuming DSM will be an allowable compliance mechanism, consider to what extent Focus could be used by Wisconsin utilities for compliance (how might the carbon attributes be assigned or obtained).
3. Consider whether there are any changes to Focus that might position it to better be used as a compliance mechanism.

Commission Alternatives

Alternative One: Examining how Focus could be used to cost-effectively meet federal carbon standards should be included in scope of the Quadrennial Planning Process II.

Alternative Two: Examining how Focus could be used to cost-effectively meet federal carbon standards should not be included in the scope of the Quadrennial Planning Process II.

4. Review All Previous Decisions in the First Quadrennial Planning Process to Determine If They Remain Appropriate

The Commission may wish to include issues that were not addressed by the parties. The decisions from the first Quadrennial Planning process are included in Attachment A to the NOI.

[\(PSC REF#: 187137.\)](#)

Comments

WUA submitted commented that all previous decisions should be revisited, but specifically mentioned the following issues: the discount rate used for energy savings in future years; the value of \$30 per ton for carbon; and long-term electricity planning.

Commission Alternatives

Alternative One: Revisit all decisions from the first Quadrennial Planning process.

Alternative Two: It is not necessary to revisit any decisions from the first Quadrennial Planning process that have not been previously addressed in this memorandum.

Alternative Three: Identify specific issues from Attachment A to the NOI for inclusion in the Quadrennial Planning Process II that are in addition to those already identified above by the Commission for inclusion.

RDN:CAS:JS:cmk:DL: 00893014

Key Background Materials:

[Notice of Investigation and Request for Comments signed and served 7-3-13 - PSC REF#: 187137](#)

[WUA comments on Quad Scope - PSC REF#: 188323](#)

[Clean Wisconsin's Response to Request for Comments - PSC REF#: 188325](#)

[Opower comments on Quadrennial Planning Process II - PSC REF#: 188337](#)

[ICG Comments on Quadrennial Process II - PSC REF#: 188340](#)

[RENEW Wisconsin Comments - PSC REF#: 188341](#)

[Public Comment by David Lawrence - PSC REF#: 188344](#)

[CUB Comments in Response to the July 2, 2013 Notice of Investigation - PSC REF#: 188338](#)

[Comments of CB&I, as Focus on Energy Program Administrator - PSC REF#: 188339](#)

[Order \(signed & mld 1/13/12\) Callisto concurring & dissenting in part - Nowak concurring - PSC REF#: 158228](#)
[Order \(signed & mld 4/26/12\) - PSC REF#: 163778](#)
[Order \(signed & served 9/26/13\) Callisto Dissent - PSC REF#: 191060](#)