BEFORE THE

PUBLIC SERVICE COMMISSION OF WISCONSIN

Quadrennial Planning Process 5-GF-191

Renewable Resource Guidelines

**ORDER**

2005 Wisconsin Act 141 (Act 141) requires the Commission to conduct a review of energy efficiency and renewable resource programs at least once every four years. The Commission is required to evaluate energy efficiency and renewable resource programs and determine their appropriate goals, priorities, and measurable targets.

The Commission addressed these issues in docket 5-GF-191, the Quadrennial Planning Process. One decision made in this docket was that the cost-effectiveness of customer-sited renewable resource measures and programs should be determined in the same manner as energy efficiency measures and programs, as this will allow a direct comparison between these valuable resources. However, the Commission recognized that customer-sited renewable resources have specific attributes that are not adequately reflected in the standard cost-effectiveness test, the Total Resource Cost Test. The Commission therefore determined it appropriate for public policy to guide decisions regarding the incorporation of renewable resources in the portfolio of Focus on Energy programs and directed Commission staff to develop proposed criteria to guide these decisions.

At its open meeting of October 20, 2011, the Commission considered and modified the proposed criteria developed by Commission staff. The attached criteria are to be used to guide decisions regarding the incorporation of renewable resource measures in the portfolio of Focus

on Energy programs. The Program Administrator shall work with Commission staff to score non-cost-effective renewable resource measures based on these criteria. The results of this screening, as well as the cost-effectiveness of the programs resulting from the rebids of the Mass Markets and Targeted Markets portfolios, shall be used by the Program Administrator, in collaboration with Commission staff, to propose the non-cost-effective renewable resource measures to include in the Focus on Energy programs and a budget to capture these resources. The proposed measures and budget shall be brought to the Commission for approval before the measures are included in the Focus on Energy programs.

**It is Ordered:**

1. The attached criteria (Attachment A) shall be used to score, based on specific attributes of renewable resources that are not adequately reflected in the standard cost-effectiveness test, non-cost-effective renewable resource measures.
2. The Program Administrator shall work with Commission staff to develop a list of renewable resource measures to include in the Focus on Energy programs, and a corresponding budget to capture these renewable resources. The results of the renewable resource measure scores, as well as results of Focus on Energy Mass Markets and Targeted Markets implementer rebids should be the basis for the proposed measures and budget.
3. Final approval of the non-cost-effective renewable resource measures and the budget allocated to these measures shall be received from the Commission before these measures are included in the Focus on Energy programs.

# Expanded Cost-Effectiveness Evaluation of Focus Renewable Resource Measures

Measure Name: [redacted]

| Non-Monetized Benefits not Included in Simple TRC | SCORE | -2 | -1 | 0 | +1 | +2 |
|---|---|---|---|---|---|---|
| Measure's Focus cost-effectiveness is good | | Measure's cost effectiveness is <0.2 | Measure's cost effectiveness is between 0.2 and 0.29 | Measure's cost effectiveness is btween 0.3 and 0.49 | Measure's cost effectiveness is between 0.5 and 0.7 | Measure's cost effectiveness is >0.7 |
| Technology Risk: Technology's installation, operation & performance issues are known, product certifications exist | | Tech is unknown, has few or no installations in WI that have undergone Focus M&V | Tech has installations in WI but M&V shows performance and energy savings are unreliable | Tech's issues are known but it is unknown if they can be resolved near term via more product development | Tech has energy savings reliability issues and is showing gradual improvement | Tech is well understood with few performance or energy savings reliability issues. |
| Technology Maturity: The technology is not undergoing rapid upgrades that affect cost or performance. | | Tech is very early stage, undergoing many changes, with no commercial installations. | Tech has one or two commercial installs, but has many improvments needed. | Tech is mature, many installations and few improvements planned. | Tech is undergoing small but steady improvements in performance | Tech is making large performance improvements every few years. |
| Supply-side market for technology is mature (plenty of sellers & choices) & seller/installer certifications exist | | No certified sellers serving WI, few product choices | Five or fewer sellers serving WI, no certifications exist | More than five sellers & products in WI but weak or no certifications | More than five sellers & products in WI with draft certifications | More than five sellers & products in WI with national certifications |
| Customer Payback: Measure's simple payback is within one measure lifetime (value of energy savings compared to the customer's after-tax investment). | | Payback is greater than 2 measure lifetimes | Payback is between 1.5 and 2 measure lifetimes | Payback is between one and 1.5 measure lifetimes | Payback is between 15 years and one measure lifetime | Payback is between 2 and 15 years. |
| Additional Customer Maintenance: Costs to Owner not included in normal payback calculation | | Over measure life, non-fuel O&M costs can be >=80% value of energy produced/saved | Over measure life, non-fuel O&M costs are between 50-79% of the value of energy produced/saved | Over measure life, non-fuel O&M costs are 30-49% of the value of energy produced/saved | Over measure life, non-fuel O&M costs are 11-29% of the value of energy produced/saved | Over measure life, non-fuel O&M costs are <10% of the value of energy produced/saved |
| Federal Tax Credit Returned to WI | | N/A | N/A | No tax credits are available | For the customer segment, between 0-49% of tax credits return to WI entities | 50-100% of federal tax credit returns to WI-based entities in the customer segment |

WHO pool incentives?

**Attachment A**

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|---|---|---|---|---|---|---|
| Measure produces or can cost-effectively be designed to produce primarily on-peak kWh (on-peak hours = 8 am to 9 pm M-F, about 40% of all hours) |  | Unknown what percent of energy is produced on-peak, measure can't be dispatched, storage is not cost effective | Measure produces between <30% of its energy on-peak, can't be dispatched and fuel or energy storage is not cost effective | Measure produces between 30% and 44% of its energy on-peak but may improve via fuel or energy storage | Measure produces between 45% and 59% of its energy on-peak | Measure produces >= 60% of its energy on-peak |
| Support Jobs after system installation such as fuel collection & processing in WI. O&M jobs should be excluded from consideration since conventional resources also have large O&M components |  | N/A | N/A | Has no job impacts above conventional resources. | Support of jobs is limited. (For example, biogas CHP systems require more O&M and fuel handling than the "zero" category, but not enough for the +2 category.) | Biomass thermal and CHP would be prime candidates for their biomass harvest, transport and process jobs. |
| Increased Diversity of Energy Supply |  | N/A | N/A | Increases supply diversity but in increments too small to be meaningful <100 kW or <10,000 therms/yr | Increases supply diversity in increments between 100 kW and 300 kW or between 10,000 therms/yr and 100,000 therms/yr | Increases supply diversity in increments > 300 kW or >100,000 therms/yr |
| Uses waste stream as a fuel |  | N/A | NA | N/A | Energy production is an easy disposal or mass reduction method (i.e black liquor boilers & waste biomass | Energy production makes wastestream more valuable for other uses or solves important waste management issues (i.e. biogas) |
| Helps meet energy shortfalls/emergencies |  | N/A | N/A | Helps meet energy shortfalls but in increments too small to be meaningful <100 kW or <10,000 therms/yr (i.e. solar, small wind) | Helps meet energy shortfalls in increments between 100 kW and 300 kW or between 10,000 therms/yr and 100,000 therms/yr | Helps meet energy shortfalls in increments > 300 kW or >100,000 therms/yr |
| Creates renewable byproducts other than energy (i.e. biogas systems produce fertilizer, soil amendments and bedding) |  | Creates toxic byproducts that must be handled specially and disposed of properly | Byproducts that must be handled specially and disposed of properly | Byproducts can be safely landfilled or land spread | Value of byproducts is up to 10% of the value of energy produced | Value of byproducts is up to >10% of the value of energy produced |
| **TOTAL SCORE FOR NON-MONETARY BENEFITS** | **0** | | | | | |