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February 17, 2009

John Shenot, Policy Advisor
Office of the Commissioners
Public Service Commission
P.O. Box 7854
Madison WI 53707-7854

RE: Comments on Advanced Renewable Tariff Development
Docket Number: 5-EI-148

Dear Mr. Shenot:

The Forest County Potawatomi Community ("FCPC" or the "Tribe") respectfully submits the following comments on Advanced Renewable Tariff ("ART") Development in response to the Public Service Commission's January 15, 2009 Notice of Investigation. With these comments, the Tribe would like to help ensure that the mission of the Governor's Task Force on Global Warming (the "Task Force") as well as the ART policy contained in the Task Force's Final Report entitled "Wisconsin's Strategy For Reducing Global Warming" (the "Final Report") are fully implemented. This will help ensure that the Governor's vision for Wisconsin to address global warming locally, while growing our state's economy and creating new jobs, can be met.

The Tribe is very concerned about the potential environmental, economic, and other effects of climate change, and therefore has devoted substantial resources to help develop solutions that are good for the environment and Wisconsin's economy. At the same time, the Tribe is a significant customer of two of Wisconsin's largest utilities, and its members both on the reservation and off constitute a large group of residential electricity users. As a result, the Tribe has a significant interest in keeping electricity affordable.

Because of the Tribe's strong interest in helping the state become a leader in developing global warming solutions and in growing our economy, FCPC was actively involved in the Task Force. In particular, I served as a member of the Task Force, and FCPC was represented on several Task Force work groups, including the electric generation work group. FCPC worked cooperatively with other members of the Task Force to help develop policies to reduce Wisconsin's greenhouse gas emissions in a cost-effective manner that helps to grow Wisconsin's economy.

As the Commission is aware, the Task Force was formed pursuant to Executive Order 191 with a mandate to recommend policies that will reduce greenhouse gas (GHG) emissions in Wisconsin commensurate with the state's responsibility, while fostering economic growth and job creation. Specifically, the missions for the Task Force are:

- Present viable, actionable policy recommendations to *reduce GHG emissions in Wisconsin and make Wisconsin a leader in implementation of global warming solutions.*
- Advise on ongoing opportunities to *address global warming locally, while growing our state's economy, creating new jobs,* and utilizing an appropriate mix of fuels and technologies in Wisconsin's energy and transportation portfolios.
- Identify specific *short- and long-term goals for reductions in GHG emissions in Wisconsin that are, at a minimum, consistent with Wisconsin's proportionate share of reductions* that are needed to occur worldwide to minimize the impacts of global warming.

(Emphasis added).

The ART policy contained in the Task Force's Final Report is a key component of that report's efforts to meet the Task Force's mission. As was identified by the Task Force in its Final Report, if utilities supplied 3% of their sales with small distributed renewable resources by 2025, this would result in reductions of *2.25 million metric tons/yr of CO₂* from Wisconsin sources. Further, the ART policy encourages the development of small renewable energy sources in Wisconsin, thereby allowing the State to address global warming locally, while growing our state's economy and creating jobs.

The Governor further advanced the goal of establishing Wisconsin-based renewable energy production by establishing the Office of Energy Independence pursuant to Executive Order 192. The mission of the Office of Energy Independence parallels that of the Task Force. The Office is tasked with advancing Wisconsin's vision for energy independence by generating 25 percent of our power from renewable resources by 2025; capturing 10 percent of the renewable energy market by 2030; and by becoming a national leader in making alternative energies more affordable and creating new, good-paying jobs in Wisconsin.

The Tribe urges the Commission to consider ART development in light of the missions of the Governor's Task Force and the Office of Energy Independence. The ART policy proposal contained in the Task Force's Final Report was carefully crafted to help meet these goals, especially helping Wisconsin become a leader in global warming solutions, by acting locally and creating economic opportunity and jobs. Accordingly, FCPC urges that the Commission use as a starting point for its ART development the principles that the Task Force found should be included in the state's ART development. The Task Force Final Report provides:

The Advanced Renewable Tariff policy should encompass the following principles:

- A. Tariffs should be set according to specific production costs of a particular generation technology.
- B. The tariffs should include a rate of return comparable to the utilities' allowed return.
- C. The tariffs should be fixed over a period of time that allows for full recovery of capital costs.
- D. Renewable energy credits acquired through these tariffs can be rate-based or sold through a utility's voluntary renewable energy program.

- E. When the fixed term of the tariff ends (capital costs of project have been recovered), the energy from these systems can be acquired through the utility's parallel generation tariff or through a negotiated purchased power agreement.

Each of these key principles serves an important function in helping Wisconsin become a leader in climate change solutions by providing opportunities for the State to address global warming locally, while growing the State's economy and creating new jobs for Wisconsin residents. These principles are also important to advance Wisconsin's vision for energy independence through local renewable resources. For example, establishing tariffs based on the specific production costs of a particular generation technology encourages the development of diverse renewable generating technologies in Wisconsin. Developing tariffs that include a rate of return comparable to the utilities' allowed return, provides an incentive for capital investment in Wisconsin-based small renewable projects, while at the same time avoiding undue profit taking and therefore costs for Wisconsin electric customers.

Providing that the tariffs should be fixed over a period of time that allows for full recovery of capital costs provides certainty of recovery of costs, which removes a major obstacle to small renewable development. This is especially important for local governmental entities and other non-traditional providers that can be important sources of renewable energy, but for whom energy development is not their primary activity. Allowing the RECs created through these tariffs to be rate-based or sold through the utilities' voluntary renewable energy program allows the ARTs to help meet not only the State's renewable portfolio standard (RPS), but also the increasing demand for voluntary purchases of renewable energy by Wisconsin residents. Finally, the provision that when the term of the tariff ends and the capital costs have been recovered, the energy from these systems can be acquired through the utility's parallel generation tariff or under a negotiated PPA helps provide assurance of options and flexibility for the use of the generation after the tariff rate ends.

While the ART policy in the Task Force Final Report kept energy costs in mind, the Task Force recognized the importance of encouraging small renewable in-state energy development even to the extent it increases costs. Indeed, the ART policy in the Final Report provides:

It is recognized that Advanced Renewable Tariffs would likely result in increased costs per unit of electrical output compared to utility-scale renewable projects, but that these costs are justified by the economic and environmental advantages from encouraging distributed small-scale generation.

Thus, the Governor's Task Force anticipated increased costs under the ART policy but found that those costs are justified by the economic benefits to Wisconsin of developing small renewable generation in-state and the environmental advantages associated with small renewable generation.

FCPC strongly believes that it is critical that the Commission adopt advanced renewable tariffs consistent with the above key elements identified by the Task Force. However, the Tribe also understands that the Commission has legitimate concerns about not unduly subsidizing large, established for-profit renewable energy developers at the expense of Wisconsin electric customers. To address this concern, while at the same time encouraging the development of truly in-state small renewable projects (i.e., those located in Wisconsin and owned by entities that are and will be permanently located in-state), the Tribe recommends that the Commission consider developing two sets of tariffs.

One set of tariffs could be developed for entities such as the state, local governments, tribes, and publically-owned treatment works ("local communities"), which are key sources of potential renewable energy and which are permanently located in Wisconsin. These local communities, unlike for-profit entities, cannot receive federal production or investment tax credits or even federal energy grants under

the stimulus package that President Obama is to sign today. Thus, local communities are unlikely to receive any undue subsidies because of ARTs. Moreover, local communities are generally required to share any financial benefits with their residents, members, or users. Thus, for local communities, ARTs should clearly be based on the full cost of the renewable generation facilities, as outlined in the Task Force ART policy, as well as all the system benefits that the renewable energy provides.

In addition, to allow local communities to be fully compensated for the benefits that they provide to the system, the ART should allow them the option of netting the renewable energy they produce against the electricity they use at their various facilities in the State, or at a minimum, within a given utility's territory. This would remove the present dis-incentive for local communities to produce renewable energy beyond the amount they use at the specific facility that houses the small renewable generation.

The Commission could then develop a second set of ARTs that may be somewhat more restricted in terms of payments and participation for situations where the owner of the facility is more likely to be a larger developer, who does need a special tariff rate to successfully develop a project and would generally not share the financial benefits of the tariff with the members of the local community.

Attached to this letter are specific information and comments in response to the issues raised in the Notice of Investigation. Thank you for your consideration of this important matter, and please feel free to contact me or John Clancy at 414-273-3500 if you have any questions or comments regarding this letter or the attached responses to the Notice.

Very truly yours,

FOREST COUNTY POTAWATOMI
COMMUNITY

A handwritten signature in blue ink that reads "Jeff Crawford". The signature is fluid and cursive, with the first name "Jeff" being more prominent than the last name "Crawford".

Jeff Crawford

FOREST COUNTY POTAWATOMI COMMUNITY RESPONSES TO
PUBLIC SERVICE COMMISSION OF WISCONSIN NOTICE OF INVESTIGATION
REGARDING ADVANCED RENEWABLE TARIFFS
DOCKET # 5-EI-148

The following are specific responses by the Forest County Potawatomi Community (FCPC) to the Commission's January 15, 2009 Notice of Investigation.

ART Experience to date in Wisconsin and Elsewhere.

- 1. Wisconsin Utilities for whom the Commission has previously approved an experimental ART are asked to respond to Questions 1.a. through 1.e.**

Since this question was addressed primarily to utilities, FCPC has no specific response.

- 2. Research and Experience Outside Wisconsin.**

FCPC has reviewed a web site by Wind Works with material regarding the implementation of ART policy in Europe that may be helpful to the Commission. See, e.g., <http://www.wind-works.org/FeedLaws/USA/Model/ModelAdvancedRenewableTariffLegislation.html>.

Costs of Producing Electricity from Renewable Resources

- 3. What might it cost the typical customer of a Wisconsin electric utility to construct/install a new renewable energy system using each of the following technologies? What might the typical customer's lifetime operation and maintenance costs be? Please be explicit about sources of data, assumptions, and how costs might vary based on system size, location, or other variables. (Solar Photovoltaics, Wind, Landfill Gas, Biogas, Biomass, Hydro, other.)**

Like many other communities in Wisconsin, FCPC is examining its own potential to produce renewable energy. However, at this time FCPC does not have specific information regarding the costs of developing resources using the various renewable energy technologies identified by the Commission.

FCPC is hopeful that others can provide the Commission with specific information regarding the costs to construct/install the various types of renewable energy facilities identified by the Commission. FCPC notes that, in reviewing the information from others, it is important for the Commission to make sure that it is considering the "all-in" costs of building and operating the facilities. These costs should include not only the capital costs for the generation facility, but also the costs of licensing and permitting, for access and right-of-way needs, for land owner compensation (including the opportunity costs for the use of land and facilities, even if they are already owned by the developer of the renewable energy site), as well as the full life-cycle operating and maintenance costs. It is critical to consider all these costs so that the Commission can develop ARTs that are consistent with the Task Force ART policy, which calls for ART participants to receive financial returns consistent with those provided to utilities.

In addition to the above, the ART should account for all the added value for the electric system that is created through the implementation of small distributed renewable energy generation. Without considering these benefits, it is likely that ARTs will considerably under value this important asset. These system benefits generally include the avoided need for both transmission and distribution, since distribution of renewable energy is typically produced very close or directly adjacent to where it is used. Accordingly, the price under an ART should include avoided transmission and distribution costs.

Moreover, it is important to note that there are additional benefits from locating small renewable generation toward the end of remote rural low-voltage distribution circuits. Such generation offsets capacity and losses through the production-transmission-distribution supply chain. Accordingly, the price under an ART should likely include a “basis energy differential” or “locational marginal costs differential.” An energy differential would increase the compensation provided under the tariff based on the avoided line losses associated with the small renewable generation facility. The local marginal cost differential could be based on existing locational marginal prices that are set forth by the Midwest Independent System Operator.

As noted in FCPC’s cover letter, one way of accounting for the benefits described in the two preceding paragraphs would be for the ARTs to allow local communities that develop small renewable generation the option of netting the renewable energy they produce against the electricity used at their various facilities in the State, or at a minimum, within a utility’s territory. This netting for local communities that develop small renewable generation is appropriate in light of the significant benefits that such generation provides for the electrical system. It also would help to address the significant disadvantage that local communities face since they are prevented from receiving federal production and investment tax credits, as well as federal energy grants under the recently passed stimulus package. Moreover, without netting, there is unfortunately an incentive for the local communities to limit the size of any small renewable generation to the amount of electricity that the community uses at the building where the generation unit is sited. This existing incentive can cause local communities to produce less renewable energy than they otherwise would.

Finally, since it is possible that the Commission will not receive sufficient information regarding costs of small renewable generation projects as a result of this Notice of Investigation, FCPC suggests that the Commission also strongly consider requesting that the utilities publicly report in this docket the full cost (e.g. siting, development, capital, licensing and operations and maintenance) and performance (e.g. capacity, energy, availability and environmental benefits) of each type of renewable resource that they have in their portfolio. Likewise, the Commission should consider requesting similar data from the utilities regarding their renewable energy plans, including the anticipated costs for future renewable resources that they are pursuing to meet their RPS requirements and their voluntary renewable energy sales.

This utility information could be very helpful in establishing ART where the Commission lacks specific information regarding the costs of a particular type of small renewable generation. However, as described above, the buy-back rate in the ART should be adjusted upward based upon the transmission, distribution and other benefits that result from the siting of small renewable generation.

4. How much energy (in kWh) will be produced over the useful life of a typical customer-owned renewable energy system in Wisconsin using each of the following technologies (from Q3 list)? Please be explicit about sources of data, assumptions, and how production might vary based on system size, location, or other variables.

Small renewable energy production capacity is a function of the surrounding conditions. If the area is heavily forested with a good supply of wood derived fuels, biomass energy production could be significant. Biomass boilers up to 500,000 pph with 75 MW electric net output are possible. Hill top wind production can be from 75 kW to 2.75 MW depending on wind conditions. Hydroelectric production from low-head, run-of-river dams already in existence or newly constructed can run from 50 kW to 2.5 MW. The key to good public policy on sizing of generating units is the source of fuel, location, environmental and logistics issues, and investment capital or other funding available. With the right incentives, small rural generation sources can be economic.

In addition to the above information, it would likely be helpful for Commission to request each of the utilities to provide the information they have regarding the energy expected to be produced from each of the above technologies.

5. What should the goals and objectives of an ART policy be?

5a. Primary purpose.

As noted in FCPC's cover letter, the Governor has provided clear goals for the State. Through his Executive Orders for the Task Force and the Office of Energy Independence, the Governor has made clear that Wisconsin should become a leader in the implementation of global warming solutions by addressing global warming locally, while growing the State's economy, creating new jobs, and making the State energy independent through localized renewable energy. Accordingly, the primary purpose of an ART policy should be to meet these goals. In particular, the ARTs should result in very significant amounts of new small in-state renewable energy generation. The renewable energy from these facilities should become a very significant portion of the renewable energy used to meet the RPS as well as voluntary renewable energy sales.

5b. Short- and Long-term goals.

For the reasons outlined in FCPC's response to 5a, the success of an ART policy should primarily be measured by the level of participation (i.e. the amount of small renewable generation that occurs under the ARTs). In the short term, this can be measured by the number of projects that seek to participate under the tariffs. In the longer term, this can be measured by the aggregate amount of renewable energy that is produced by small generation participating in the tariffs.

5c. Which utilities should have ARTs.

Because of the importance of providing incentives for small renewable generation throughout Wisconsin, FCPC recommends that the Commission develop ARTs for all electric utilities regulated by the Commission.

5d. Role of small customer-owned renewables in helping utilities meet the RPS.

Small, customer-owned renewables should play an important role in helping to meet the RPS obligations of utilities as well as their efforts to reduce greenhouse gases. As noted by the Task Force, even to the extent that ARTs may result in increased costs per unit of electrical output compared to utility scale renewable projects, these costs are justified by the economic and environmental advantages from encouraging in-state distributed small-scale generation. Moreover, when all of the costs of renewable energy development and operation are considered, it is likely that small renewable generation is relatively cost effective compared to utility-scale projects. In addition, even to the extent that small scale projects may cost somewhat more than utility scale projects, they provide additional important advantages beyond those listed by the Task Force. These include the relative ease and quickness of siting small renewable projects, as well as the transmission distribution and other benefits of these projects.

5e. Role of small customer-owned renewables in helping utilities reduce GHG.

Please see response to 5d.

6. What are desirable and appropriate design structures?

As discussed above, the ART payment levels should be structured consistent with the key principles outlined in the Task Force's Final Report. These principles were carefully selected after consideration of both their costs and benefits. Most importantly, the tariffs should provide for full recovery of all capital costs (including siting, land and other costs) and all projected operation and maintenance costs, with a rate of return comparable to utilities, so that small renewable energy providers, and especially local communities, can face similar incentives to develop renewable energy as utilities. The electric generation work group determined that other financial incentives such as tax credits and those from Focus on Energy should not be considered in setting ARTs since they are not always available or applicable and can change over time. In addition, as noted above, the compensation under ARTs should also include the transmission, distribution and other benefits of the small renewable generation.

7. Other Policy Questions

Properly designed ARTs can have a very positive impact on Wisconsin jobs, reducing fossil fuel imports and agriculture. This is because the development of in-state small renewables will necessarily require the employment of workers in Wisconsin for construction, operation, and maintenance of the facilities. It will also allow Wisconsin to maximize the use of its own wind, agricultural biomass, forestry biomass, solar and other renewable resources, thereby reducing our dependence on imported fossil fuels. This is an especially important consideration as electric hybrid and all-electric motor vehicle options grow in the future. ARTs can have a very positive impact on Wisconsin agriculture, by providing economically beneficial opportunities to develop facilities that productively use agricultural waste, which today is often creating significant water pollution and other problems, to produce low-carbon energy. In addition, ARTs can have a very positive economic impact on, and help to protect and expand, Wisconsin's more than 8 million acres of forested land, which can be an important resource for biomass energy production. All this is very important in today's economy where Wisconsin faces significant concerns with slowing economic activity and a need to reduce fossil fuel imports.

ART design Issues

8. Overall Tariff Structure

As noted above, the pricing of energy under ARTs should take into account Locational Marginal Pricing, to account for system benefits based on the location of the small renewable resource. However, in general, it is probably preferable to have pricing for any particular location be fixed over time to remove pricing risks that many small renewable energy developers may not be as well suited to address. This should allow greater participation by those with small renewable energy opportunities.

9. Program Size limitations

To the extent that any price differential between small-scale generation and utility-scale generation are not anticipated to cause significant cost impacts for Wisconsin rate-payers, the Commission should likely avoid overall size limitations on ART offerings. However, with respect to specific technologies that may be substantially more expensive than others, such as solar photovoltaic, it likely may make sense to place some limitations on participation levels to keep costs reasonable. To the extent there are program size limits, it likely makes sense to provide greater access to ARTs to local communities, which are generally required to share the financial benefits of the tariffs with their residents, members and users and are important to ensuring that Wisconsin can meet the Governor's goal of energy independence.

10. Covered Renewable Energy Technologies

The Commission should likely require ARTs for at least the types of technologies identified in question 3, since they are all demonstrated technologies and since Wisconsin and especially its local communities have significant access to the renewable resources that can be used in these technologies.

11. Individual Project Size Limitations

Economies of scale produces economies of scale: Bigger sources of power generation typically have lower costs of capacity and energy. This long-held utility rule of thumb is generally true. However, the key difference between big and small projects is that the big projects can get funding. Large scale wind farms are fundable due to investor interest. Small scale wind, biomass and hydro are not fundable today without grant monies, tax incentives, renewable energy credits and netting of power generation sources to electric loads of the same entity. The smaller the project, the more incentives are needed to get the project developed. The increasing economic “help” for small projects is not linear. Smaller projects need proportionally more incentives than larger projects that may be able to stand on their own with only marginal incentives. The key policy question is “free ridership.” Should the State incentive large projects that may not need it or need relatively small incentives? Or, should the State incent smaller projects that likely will not be developed without the incentives? In the Tribe’s view, all projects should receive a sliding scale of incentives with more incentives provided for small projects and less for larger projects.

12. Contractual Duration

As indicated above, a key principle of the Task Force Final Report is that the tariff should be fixed over a period of time that allows for a full recovery of all capital costs. The time frame for recovery therefore should likely be based on the expected life of the facility and the time period that would allow for full cost recovery plus a utility return, while still resulting in a reasonable cost for the energy purchased.

13. Cost Recovery

ART costs (i.e. the costs arising from the administration of the ART) should likely be recovered from all customers regardless of whether the energy is used to meet the RPS or included as part of voluntary sales. This is because of the State’s strong policy interest in promoting local renewable energy, which benefits all entities in Wisconsin regardless of whether they purchase voluntary renewable energy.

14. Renewable/Environmental Attributes

Because of the importance of developing small in-state renewable energy generation regardless of whether it is used to meet the RPS or not, it may be beneficial to provide an option for small generators to either sell or keep the RECs. However, participants should obviously be paid an appropriate amount less if they retain the RECs. Also, to avoid potential situations where utilities have difficulties meeting their RPS requirements because they cannot obtain the RECs from small generation under ARTs, it may be appropriate to have a mechanism that allows utilities to require that the community adjust ARTs to require that the RECs be sold with the energy to the utility.

15. Basis for Setting Tariff Price

Many of the questions in Section 15 have been addressed above. In general, FCPC notes that the pricing structure should follow the principles set forth in the Task Force Final Report. This would generally call for neither a price increase over time based on inflation (except potentially for operating and maintenance costs) nor a decrease in price over time. In addition, the price should reflect the full array of benefits that a small generation project provides for the

system, including capacity benefits. It should also allow for a return on investment comparable to the utilities' allowed return.