



Generating Community-Based Sustainable Energy
www.positivepowerco-op.com

July 28, 2005

Paul Bradley
Vice-President, Generation Development
Ontario Power Authority
175 Bloor Street East
North Tower, Suite 606
Toronto, Ontario M4W 3R8
Submitted via email to: generation.procurement@powerauthority.on.ca

Dear Mr. Bradley:

The Positive Power Co-operative Inc is pleased to provide this submission to you with regard to renewable energy procurement mechanisms.

We have used the questionnaire provided as the basis for our comments. These comments were also combined with other comments from other community based developers in Ontario as part of a joint oral submission made to the OPA panel on July 29th, 2005.

We appreciate the opportunity to comment on the current mechanisms in place for green power procurement. If you have questions or comments on our submission, please do not hesitate to contact me using the coordinates listed in the footer of this document.

Yours truly,

Jennifer Heneberry
General Manager
Positive Power Co-operative Inc.

**Stakeholder Questionnaire
Renewable Generation Development (Renewables)**

1. Please state the name of the company or organization you are representing today.

Positive Power Co-operative Inc.

Positive Power Co-op also contributed to a joint questionnaire that was submitted during the stakeholder process, and the thoughts and opinions expressed below are also reflected in that document.

2. Please provide a brief description of your organization.

Mission: With a commitment to leadership and innovation, Positive Power Co-operative promotes the generation of clean, renewable energy through the development of community-based projects and education.

As a community-based co-operative, our projects rely on investment from members and the public and education about renewable energy is a key part of project development activities.

3.

a. What is your organization's past and present involvement in the development of power generation projects generally?

Positive Power Co-operative is a renewable energy co-operative currently developing two wind energy projects in the Golden Horseshoe region. One is a single turbine project based in the community of Flamborough in the City of Hamilton. The other is a phased multiple turbine project with an initial phase of three turbines along the north shore of Lake Erie, southwest of Dunnville in Haldimand County.

As our organization is currently focussed on wind energy project development, the majority of the comments in this questionnaire refer specifically to wind.

b. What are your organization's future plans for participation in power generation development in Ontario?

We are planning to expand our multiple turbine project in Haldimand County beyond three turbines as soon as it is feasible to do so. We also plan to develop additional large scale community based projects in the future within the Hamilton, Halton and Haldimand areas with different partners. At this time these opportunities have not yet been articulated.

4.

a. What was your organization's or predecessor organization's involvement specifically in the 300 MW Renewable Energy Supply procurement process ("Renewables I Process")? (Please include whether you were involved in submitting a final bid in the process.)

We were not eligible for participation in the 300MW Renewables RFP process, and we did not bid. We submitted comments on the RFP process, specifically commenting on those parts of the process that we identified as being exclusionary to community based projects like ours.

b. If you did not participate in the Renewables I Process, please indicate any impression you may have had regarding the process, or go to question 13.

As indicated in the comments that we submitted to the province during the draft commenting process for RFP I, the requirements and criteria precluded the participation of our organization in the bidding process. The stringent and excessive financial requirements meant that our projects were not eligible for a bid. The co-operative model of wind project development depends on equity investment or financing from the community and often means that organizations begin their project development as non-profit organizations – both of which mean that we could not indicate at the time of bidding who our equity investors are (making us ineligible).

5. If you terminated your involvement in the Renewables I Process, what was your main reason for doing so?

N/A

6. If your bid was disqualified, what was the reason given for doing so?

N/A

7.

a. What was your organization's overall impression of the Renewables I Process?

The Renewables I process favoured developer with access to large amounts of private capital in order to meet the financial requirements, and who utilize traditional equity investment. This effectively meant that only private corporations with very deep pockets were able to participate –Positive Power Co-operative was effectively excluded from the process.

In addition to the financial requirements that were a key part of the process, the sole selection criteria being lowest cost per kilowatt hour of provided electricity also favoured only extremely large projects. Without taking into account the other benefits that smaller, community based developments may provide, this meant that these projects were also not competitive due to their inability to cut costs as wind energy projects 50MW in size can.

b. In your organization's opinion, did Ontario succeed in procuring the generation it required at competitive prices pursuant to the process?

Somewhat. The concept of competitive pricing in a market economy that artificially caps the consumer price of electricity at a value far below the true commodity price, and far below the true cost of electricity as provided by the current electricity sources in use, is flawed. It means that a competitive price as part of this process must also be artificially low. This in turn means that the process favours only large scale projects to the point of excluding community based projects that cannot experience the same economies of scale that larger projects can.

c. Did it meet the government's goals for Renewables procurement?

If all the projects that were awarded bids can successfully commission their projects, then yes, the goals of RFP I were met.

8.

a. What is your organization's overall impression of the Renewables II and III Processes currently in process?

The financial security and equity requirements are effectively the same with the Renewables II and III processes, as is the lowest cost criteria for awarding contracts. This again means that both of Positive Power Co-op's projects are excluded from participating. Our feelings remain the same.

b. Please provide your organization's opinion, if any, on the changes from the Renewables I Process.

The slight changes in how the lowest cost criteria is applied in RFP III could potentially allow smaller wind projects to participate at the higher cost per kWh. However, the requirements for proponents to submit a listing of equity investors before the contract is awarded is one that continues to exclude the Positive Power Co-operative. Many co-operatives undertake a community investment offering to raise part of their equity, and this part of the RFP requirements implies that the investment process must be complete and a listing of all the investors to be provided to the OPA. This is an onerous requirement. Usually, in order to initiate such an offering, some indication of a power purchase arrangement must be in place to offer some type of risk assurance for investors.

9. What were the significant items that your organization believes could be improved in a future process in each of the four major categories below?

a. The process itself

Some indication that lowest cost of energy provided is not the sole criteria – this would open the doors for smaller non-traditional business models to participate more equitably.

b. The business and financial structure of the buyer / seller arrangement, including financial requirements

The requirements for security bonds and full listings of equity investors preclude us from participating. A more flexible approach that recognizes the reduced risk with smaller projects that are not providing baseload electricity would more easily allow us to participate.

c. Legal issues with respect to the contract form

None at this time.

d. Technical issues / requirements

None at this time.

10. What changes to any of the four major categories could have resulted in a win-win for both the buyer and the seller? Please provide as much detail as possible.

a. The process itself

The use of a Standard Offer Contract (SOC) mechanism (especially for smaller projects) would have resulted in a more diverse set of projects, both in terms of proponents and project scope. SOC's would have allowed projects of varying sizes and from a number of different renewable energy technologies to participate in the procurement and ensure an equitable process. SOC's are also scalable to allow projects of varying size and output to participate. Since the SOC mechanism involves consultation with both industry stakeholders and political representatives to set the price, it will ensure that a fair price per kWh is set while ensuring the widest possible participation in the process and thus avoiding the perception of tokenism for small projects.

b. The business and financial structure of the buyer / seller arrangement, including financial requirements

No comment at this point, refer to question 21.

c. Legal issues with respect to the contract form

N/A

d. Technical issues / requirements

One of the key components of a successful SOC's mechanism is the guarantee of interconnection, and the spirit behind these interconnection requirements is a streamlined and efficient process that processes the request within 90 days. Removal of excessive redtape and extensive study requirements with lengthy turnaround times would make this a less onerous process for all proponents in the current system.

SOC's participation can also be limited to those projects that have already achieved or made significant progress towards important project milestones, like the environmental assessment, initial interconnection assessment, municipal approvals and data collection. This is similar to how the RFP process is currently structured.

11.

a. What items of risk did the Renewables I Contract allocate to the buyer or seller that would have been more efficient to allocate to the other party?

N/A

b. How would your pricing have changed if the risk was allocated differently?

N/A

12. In preparing your bid for the Renewables I procurement process:

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- a. **How much time in person-hours did your organization devote to preparing a response to the RFP?**
N/A
- b. **What was your approximate cost of preparing your bid?**
N/A
- c. **How does this compare to other similar processes in which your organization has participated?**
N/A

13.

- a. **In what other procurement processes have you participated?**
None.

b. **Would you regard any of these processes as a model for Ontario?**

Positive Power Co-operative has no first hand experience with participating in a Standard Offer Contract model. However, the success of such programs in several European countries (Denmark, Germany, Czech Republic) and US states (Minnesota, Oregon) have been widely demonstrated.

c. **If so, what aspects of the process should be adopted in Ontario?**

The Standard Offer Contract model as proposed by the Ontario Sustainable Energy Association is the model that should be adopted in Ontario for use in rapid renewable energy technology development. Further, this model has value in being used for projects of all sizes, but in particular, for encouraging smaller projects being developed by co-operatives, First Nations groups and farmers.

14.

a. **What is your organization's opinion on an option to bid for contracts of varying terms (i.e., 15, 20, 25 years, etc.)?**

Positive Power Co-operative has no opinion other than to indicate that the offering of different contract terms should be the choice of the proponent in discussion with the OPA. Varying contract terms should not be solely dictated by or decided on by the OPA.

b. **How would your pricing change under different scenarios?**

SOC pricing would not change under different contract terms – we are currently advocating for a standard contract length of 20 years. However, most SOC's are structured to provide variable pricing based on the technology used – e.g. solar project costs/kWh are determined differently than wind project costs/kWh. In the case of wind specifically, the pricing structure of the project also changes over time based on the specific yield of the particular turbines, coupled with the wind regime - and these prices and intervals would be determined before the procurement is initiated. All projects would be paid the same price per kWh at the outset of the project life. For optimal projects (those with many turbines placed in excellent wind areas), the contract rate would go down after a set time frame (after 5 or 10 years) and for less windy or for smaller projects, the higher price would stay in effect for a longer time period (for 15 years or the entire 20 year contract term).

15.

a. **Would your organization be interested in a choice of either allocating the environmental attributes (i.e., NOX, SOX, GHG, etc.) to the OPA or retaining them within your organization?**

Yes.

b. **If given the choice, how would your pricing differ between transferring the attributes and retaining them (i.e., difference in price in \$/MWh)?**

We have not determined what a reasonable price of the green attributes for our current projects are or even if it is feasible for the price of the "green attributes" be the same from project to project. However,

a logical method for determining the price might be as simple as to say that the price for the green attributes is the difference between the SOC price awarded and the average spot market price at the time of signing the contract. We are aware that a mechanism such as this does not fully take into account the global issues around determining the price of green attributes, especially when discussed within the context of a national or international emissions trading framework. At this time, we will simply indicate that having the choice is welcome, and the Positive Power Co-op would like to participate in further consultations or discussions in helping to determine appropriate pricing for green attributes.

16. How should the OPA evaluate the non-electricity products and intangible benefits, including environmental attributes?

It is important for procurement processes to reflect that there are a number of benefits to green generation, especially with those smaller projects that help encourage distributed generation and have local economic benefits. These benefits are in addition to the environmental benefits in having a larger amount of the province's electricity supplied by green, non-polluting power sources.

One of the key ways to evaluate the environmental benefits of green generation in a tangible way is to determine a cost for the detrimental health effects caused by coal-fired generation. The Ontario Medical Association has compiled data that indicates what the cost to Ontario's health system is due to poor air quality. It should be possible to determine how much of that cost is directly attributable to the operation of Ontario's coal-fired plants, and determine an equivalent cost per kWh. Once this cost has been determined, it can be stated that renewable energy generation (wind, solar, biomass, landfill gas) is free of these health effects, and therefore experiences a cost savings equivalent to the cost/kWh of the detrimental environmental effects that are a part of coal-fired generation. It is also necessary to begin viewing electricity generation from a "cradle to grave" perspective as opposed to simply the cost of delivering the commodity. The health effects associated with coal-fired electricity generation, the costs associated with the upkeep and refurbishment of the nuclear plants, the refinement of nuclear fuel and the storage of nuclear waste, are all costs that need to be quantified. Once these detriments are quantified in a cost/kWh, the true benefits and costs of renewable energy technology will be more apparent.

17.

a. Should existing transmission restrictions limit projects in those restricted areas?

No. In fact, this is a perfect example of why smaller scale community power models should be encouraged wherever possible with appropriate and enabling procurement mechanisms. In many cases, smaller scale projects can more easily fit into the existing distribution network infrastructure without the need for excessive and expensive upgrades, or the construction of new transmission lines. This is the case with both Positive Power Co-operative projects.

b. If not, how should interconnection / transmission upgrades / impacts be paid for and by whom?

Taking into account the comments above, we understand that very large projects, or a lot of development in areas that are currently underserved represents a problem. With much of the best wind regime in Ontario located in areas with a low concentration of transmission lines, this problem is not likely to resolve itself. A solution that demands that proponents take on the sole financial responsibility of upgrading or installing new lines will ensure that only very large scale projects that can more efficiently absorb the costs related to transmission will be able to be built. We understand that the situation is complicated by the overall economics related to the electricity system and transmission system.

The recent report written by the Ontario Sustainable Energy Association and provided to the Ministry of Energy provides a number of options and recommendations related to transmission and distribution of electricity, including dealing with upgrades to the infrastructure. We concur with their recommendations.

18. Should there be one process for all renewable projects, or multiple processes with different parameters for different technologies, sizes, etc.?

The Standard Offer Contract system does allow for different technologies to be used, with different prices set based on the particulars for the technology in question. It can also be used with a number of different size projects – the way that SOCs are structured (with a drop in price per kWh at set points in the contract term for the best projects).

19. Should renewable projects with the ability to be dispatched be included in the same process with other renewable projects, or should there be a separate process for these, or should they be included with non-renewable generation development?

We have no opinion on this issue at the current time.

20. Please comment on the following potential processes each as an alternative to a competitive price bid on a fixed set of project specifications:

a. OPA sets pricing criteria, and proponents bid what plant specifications (completion timing, plant characteristics, risk tolerance) can be offered at the set pricing criteria

We have no experience with this. It is also not the way that we prefer to design our projects or plan the development process.

b. Standing offer procurement, based on the average results of a previous process, or other criteria. How would you propose the OPA establish standard offer criteria?

The Ontario Sustainable Energy Association has been working with the Ministry of Energy to define appropriate criteria for developing Standard Offer Contracts for wind, solar and biomass. We support their model for SOCs, and the high points of said model are below, taken from (<http://www.ontario-sea.org/ARTs/ARTsList.html>) :

- Contracts (tariffs) open to all players
- Contracts for 20 years
- Cost of renewable tariffs (contracts) spread across entire rate base
- Different tariffs or Standard Offer Contracts for different technologies
- Tariffs or Standard Offer Contracts for wind, solar PV, low-impact hydro, & biomass
- Specific tariffs (prices) determined by transparent process that includes technology participants, technical advisers, & political staff
- Tariffs (prices) sufficient to drive development (to avoid tokenism)
- No Caps or limits (to avoid speculation)
- Allocation of contracts by first come, first served
- Allocation of contracts to those with site control (to avoid speculation)
- Approval or rejection of interconnection request within 90 days
- Initial tariff (price) equal for all players within each technology band
- Tariff (price) reduced after a period of time sufficient for capital recovery (high price first 5-10 years, lower price thereafter to adjust for profitability)
- Reduced tariff in years after capital recovery (years 6-20 or 11-20) but sufficient for reasonable rate of return
- Three tiers or tranches for wind energy: low, medium, and high wind
- Wind tariffs for first 10 years fixed for all tranches
- Wind tariffs for remaining 10 years dependent upon relative productivity in units of annual specific yield (kWh/m²/yr) averaged over 8 years after high and low years removed
 - Low wind = <600 kWh/m²/yr
 - High wind = >800 kWh/m²/yr
 - Medium wind = 600-800 kWh/m²/yr
- Capacity factor not used except as reference only (to avoid gaming)

c. Sole source negotiations. When is it appropriate for the OPA to enter into sole source negotiations and what controls should be in place to ensure the process results in a fair transaction for ratepayers?

We have no opinion on this issue at the current time, except to indicate that it seems unlikely that making a practice of sole source negotiations instead of a standardized open and accessible mechanism does not lead to less bureaucracy and red tape.

21. How should the OPA set pre-qualification criteria for its procurement processes?

a. How should the OPA evaluate developers' experience and qualifications in order to ensure proponents have the ability to deliver on their bids?

Pre-qualification is more effective if tied to the achievement of significant milestones instead of being restricted to those developers that can demonstrate prior experience with project development. Using the achievement

b. When is it appropriate to restrict projects to more experienced developers versus allowing any developers to participate?

We have no comment on this at the current time.

c. What stage of Environmental Assessment, interconnection assessment or Permitting should a project have at the time of pre-qualification and at the time of bidding?

By the time of final selection:

- Environmental Assessment: Notice of Commencement filed.
- Interconnection Assessment: Initial project information filed with body overseeing interconnection
- Municipal Permitting: Process does not require the same amount of time as the other requirements and therefore should not be a primary milestone for procurement mechanisms. However, some indication that the development will not be denied outright due to official plan or zoning bylaws that are currently in place, either via communication from the municipality, or reference to the existing material.
- Wind resource assessment: complete or measurement of data has begun and can indicate the general viability of the project.
- Land rights: For developers that do not own the land proposed for development, a signed option-lease or option-easement agreement must be in place and on file.

During the pre-qualification process, proponents would have to demonstrate that they had made progress towards these goals through appropriate (but in some cases, informal) documentation. Examples could include, but are not limited to: signed and dated letters from interconnection or environmental assessment consultants indicating any initial scoping of the project that had been done and/or that a work schedule and cost had been obtained.

One additional requirement would be to have a signed option-lease or option-easement agreement in place at the time of pre-qualification to ensure that the project as proposed can go forward.

22. When and how should the OPA require security or collateral during the various stages of a bidding process?

The OPA should develop a tiered system that takes into account the relative contribution of the project's proposed output to the overall electricity supply. Community-based projects do not and will not provide baseload electricity for Ontario, and it is not necessary to require the same levels of financial security and collateral as larger projects that make a more significant contribution to the total supply. There needs to be flexibility in how procurement mechanisms recognize this and treat generators accordingly.

23.

a. What projects and technologies should qualify for future renewable generation procurement processes?

Wind energy, solar (both photovoltaic and hot water heating), biogas, biomass, geothermal, small-scale hydro.

b. What projects should not?

Nuclear power, even though it does not produce GHG or smog contributors, is not a renewable energy source and should not be included.

c. Should, for example, qualification for Class 43.1 be a test?

From the perspective of determining which types of technologies are eligible, yes, this is acceptable. However, within the community power movement, especially with those groups structured as co-operatives, there has been much debate about whether or not Class 43.1 can be utilized as an effective method of financing projects, and consensus has not yet been reached. Our single turbine project is not eligible under CRCE guidelines, and although our multiple turbine project may be eligible, we have not been able to determine whether or not the type of financing required for CRCE/Class 43.1 is beneficial to this project. As a result, using Class 43.1 as the sole method to determine if a project is eligible would not be acceptable.

24.

a. How long should the OPA continue entering into contracts for renewable projects?

Renewable energy procurement should not be viewed as an end-goal to be met and not exceeded or a finite process with an end date. Therefore, the OPA should enter into contracts with renewable energy developers as long as:

- Additional total generation capacity is required by the province of Ontario
- Bringing more renewable generation online allows less green electricity generation to be taken offline (i.e. replaced by renewable energy generation)

Furthermore, additional generation should be brought online with a full recognition of the role of conservation of electricity. New generation (regardless of source) should not be brought online solely as a way to allow Ontario citizens, businesses and industry to increase their consumption of electricity or otherwise increase the size of their ecological footprint.

b. Should the support be different for different technologies?

The Standard Offer Contract (SOC) mechanism allows for a differences in price that take into account the unique attributes of the different technologies. The support would be the same in that the overall principles and mechanism would be the same, but with differences in price and the sliding scale that address the uniqueness of each technology.

25. Should non-renewable distributed generation be allowed to compete with Renewables due to the system benefits distributed generation provides?

Renewable energy procurement should be reserved for renewable sources of electricity, regardless of whether or not the project contributes to a more distributed energy system.

The benefits provided by distributed generation from non-renewable sources are not a substitute for those provided by distributed renewable generation. If all of the costs (including externalities like health costs, transmission and distribution costs) associated with both renewable and non-renewable generation can be quantified with a cost per kWh, then "competition" between both types of generation can be considered as taking place on a level playing field.

26. What other overall comments or ideas would you like to be considered for a future process?