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Mary L. Cottrell
Secretary, Massachusetts Department of Public Utilities
One South Station
Boston, Ma 02110

Re: Long Term Contracts for Renewable Energy
DPU 08-88; Stakeholder Meeting November 5 2008

TOPICS FOR DISCUSSION

Ansar Energy LLC (“Ansar”) appreciates the opportunity to provide comments on the Green Community Act (the “Act”) provisions for Long Term Contracts for Renewable Energy. Our comments are provided as responses to the questions formulated by the DPU in their published agenda for the Stakeholder meeting on November 5, 2008.

All our responses and comments are in the context of the intent of the Act, whose opening paragraph states: “Whereas, The deferred operation of this act would tend to defeat its purpose, which is to provide forthwith for renewable and alternative energy and energy efficiency in the Commonwealth, therefore it is hereby declared to be an emergency law, necessary for immediate preservation of the public convenience.” Thus in keeping with the intent of the Act we have in our responses and comments tried to propose a path that would expedite the implementation of renewable energy in the Commonwealth in a cost-effective manner, while enhancing electric reliability within the Commonwealth, moderate system peak load requirements and create additional employment in the Commonwealth.

In responding to the various questions posed in the agenda, we recommend that the Commonwealth define an energy and environmental context/framework within which many of these responses are made, actions considered and decisions made. We suggest that appropriate responses to the questions posed can only be made if we properly factor the projected cost of energy over the term of the renewable energy contracts, as well as the environmental costs that have not been explicitly included to date. Specifically we assume and suggest the following:

- Energy costs in the Commonwealth are related to energy costs in the region. Energy costs in the region are affected by energy costs in the nation and that national energy costs are intimately connected to international energy costs. International energy costs are driven by international economic development and growth.
- Energy costs in the future (within the term of long term contracts) will be affected by the expected economic growth of the world at large and by certain large developing countries that are energy poor such as China and India. Just these two countries are expected to add many hundreds of millions of ‘middle class’ consumers driving cheap cars (e.g. the TATA Nano car at less than \$3,000), and using electrical appliances common to the

developed world, thus driving up the worldwide demand and pricing of energy in the future.

- Based on the above we should consider energy pricing escalation at possibly higher than historical rates. Over the last fifteen years or so the average annual escalation of electric pricing and natural gas has been over 5%. Thus, an annual 3% escalation is probably a very optimistic lower bound over a 15 year horizon, while a middle level average annual escalation may be 5%, and a high average escalation could be 7% or even higher per year.
- Environmental costs due to green house gases have traditionally not been factored in the energy pricing forecasts in the US. Thus the renewable energy contracts would have to factor the cost of carbon credits or equivalent as we look to evaluate the cost effectiveness of long term renewable energy contracts. A cap and trade system or a carbon tax scheme would add to the cost of energy from fossil energy sources. Given expected political conditions, carbon costs may vary between a probable low of around \$30/ tonne to a high of over \$100/tonne. For most renewable energy sources the displacement fuel is natural gas. To account for the carbon tax or equivalent, the price of natural gas based electric power could increase by between 10% to over 30%.

We also encourage the Commonwealth to build on the successful experiences of other states, communities and countries, such as the City of Gainesville in Florida, as well as states such as California and New Jersey and even the countries of Spain and Canada to expedite the broad implementation of cost-effective renewable energy in Massachusetts. References to the above examples are provided at the end of this document.

A. Contracting Process (DOER)

1. What process could be used for solicitation and execution of contracts?

As provided by the Act, the utilities should employ a variety of processes including public solicitations, individual negotiations, so as to expeditiously execute the contracts and actually implement projects on the ground. The objective should be to employ whichever processes that result in maximizing real projects in the shortest time possible. Standard contracts may also be considered

2. What contracting methods would be preferable? What combination of products is preferable (REC-only, energy-only, both)? What time frame?

We believe that the rate-payers would be best served by contracts that cover both energy and Renewable Energy Credits (“REC”). The market price for RECs may be volatile over the next few years and having long term contracts for RECs may help stabilize the prices to the advantage of rate payers as well as developers while constraining speculators in RECs. The contracts should be for 15 years at least.

3. What are the preferred pricing options (fixed, escalating, etc)?

Fixed, escalating as well as a combination of some portion fixed and the remaining escalating pricing options should all be considered for renewable energy contracts. Renewable energy contracts which have a higher fixed component should be preferred over options that have a larger escalating component. Thus a pricing option which has fixed component of 80% with

20% escalating per an agreed factor should be preferred over an option that has a 60% fixed component and 40% escalating component. Choice of escalation factors should also be considered. For example, if the escalating portion is to be escalated per a small fixed number such as 2% per year, then this should be preferred over an option that escalates per some energy related index of natural gas or oil.

Historical experience indicates that the administrative costs of managing different scenarios can become high. Thus many countries, states and communities have chosen to use the concept of 'feed in tariffs' to simplify the process and promote the implementation of renewable energy projects. Massachusetts may wish to consider the use of published 'feed in tariffs'.

4. What additional issues should be considered that are not on the agenda?

Potential to contribute to investment and industrial growth in the Commonwealth on a long term sustained basis should be factored into the discussion. The Act provides an historic opportunity for the Commonwealth of Massachusetts to develop not only clean renewable energy at an affordable price, but also set up the industry infrastructure, including a spectrum of green jobs in Massachusetts for long term sustained growth of the solar industry. Thus long term renewable resources located in the Commonwealth and sourcing equipment and labor from within the Commonwealth should be encouraged as a matter of policy. The Commonwealth's energy policy and the distribution companies contracting approach, methodology and implementation should be such that developers, investors, suppliers and contractors have a high degree of confidence that they should commit and invest in projects, factories/plants, personnel and training such that their investments and commitments are forthcoming and reasonably profitable on a ongoing basis. One of the major reasons that feed in tariffs have been so successful in many countries and communities is because they gave all the stakeholders predictability over an extended period. Massachusetts should try to avoid the 'off again, on again' experience that renewables faced nationwide due to uncertain federal policies related to the investment and production tax credit policies.

B. DPU Review and Approval of Timetable and Methods for Solicitation and Execution of Contracts

1. What criteria should DPU use to review and approve a distribution company's proposed timetable and method of solicitation, and execution of contracts?

DPU should use the criteria of 'expeditious implementation' to review and approve a distribution company's proposed timetable of solicitation and execution of contracts. DPU may consider a suggested 'not to exceed time line' for a distribution company to solicit and execute long term renewable energy contracts. PV solar project long term contracts can be negotiated and executed within a month.

2. Should DPU review and approve the timetable and method for solicitation and execution of contracts prior to a distribution company's solicitation or, alternately, at that time that at distribution company submits its executed contracts for DPU review and approval?

DPU may wish to establish a guideline of ‘not to exceed’ schedule for the distribution company to implement a solicitation and execute contracts. However the distribution company should be encouraged to propose and implement accelerated schedules for implementation and be rewarded for expedited implementation schedules. The reward could be in the form of no further review of the remuneration to the distribution companies of the 4% adder discussed under item D below. Disincentives for delays in implementation should also be considered such as reduced adders for extended implementation schedules.

C. Cost-Effectiveness and Additional Criteria

1. What criteria should DPU use in determining whether a contract is cost-effective to Massachusetts electric ratepayers over the term of the contract? For example, should DPU only consider those benefits associated with use of a resource’s electricity and REC output? Alternately, should DPU also consider other factors, such as extent to which a contract facilitates the financing of renewable energy generation within the Commonwealth?

DPU should establish cost baselines for various power types and scenarios so as to have a basis of comparison. Consultants such as Navigant, KEMA or equivalent should be able to provide these baseline scenarios in fairly short order. We suggest and note the following:

- Establish 15 to 20 year price projections for power that would be displaced by wind. Wind is typically available in non peak hours.
- Establish 15 to 20 year price projection for power that would be displaced by PV solar. This is typically peak power.
- The above pricing projections should look at a range of escalation factors and a mid range escalation may be used as a baseline.
- Adjustments to each of the above scenarios should be made to reflect expected carbon tax or cap and trade impacts.
- A credit should be allocated to those renewable contracts that use generation located within Massachusetts and add to system reliability by not depending on interstate transmission. A suitable avoided cost of transmission could be used to adjust the valuation of alternatives.
- A further credit should be allocated to those renewable contracts that use generation located close to load centers to further add to electric system reliability. A suitable avoided cost of distribution substations could be used to adjust the valuation of alternatives.
- Net present values could be calculated for each of the above and compared to rank various alternatives.
- Given the possible complexities, possible delays in implementation, and to reduce transaction costs, various communities and countries have adopted the concept of ‘feed in tariffs’ to promote renewable energy. Massachusetts may wish to consider the use of ‘feed in tariffs’, adjusted for the voltage level at which the energy is supplied, and use the collective experience of Germany, Spain, Ontario Canada and the City of Gainesville, Florida as a basis. Alternately Massachusetts may choose to establish technology specific Alternative Compliance Payments (ACPs). The ACP can serve as the basis to establish a cost effective price for a renewable resource. For example, New Jersey has a solar SACP of \$711/mwh, decreasing by about 2.5% each year. (Ref:

<http://www.njcleanenergy.com/files/file/RPS%20Rule%20for%20Solar%20Grid%20Supply.pdf>)

- Having noted the above, solar power is expected to require a social premium to allow it to grow to a certain scale when it can become competitive with other alternatives. New Jersey regulations recognize that about a 2% increase in the general tariff is a worthwhile premium for solar. Germany has to date accepted about a 5% increase in the general tariff to promote solar energy. Germany's solar target is significantly greater than NJ's solar energy target of 2.12 % by 2021.
2. Is there a difference between the criteria DPU should use in determining whether a contract is (1) cost-effective over its term, and (2) a cost-effective mechanism for procuring renewable energy on a long-term basis? If so, what criteria should DPU use in determining whether a contract is a cost-effective mechanism for procuring renewable energy on a long-term basis?

Please see response to question 1 above for evaluation and comparison of cost-effectiveness. By comparing the net present value (NPV) of various alternatives the cost effectiveness of the various alternatives may be compared. The values of the renewables can be compared to fossil alternatives by increasing the cost of fossil fuel based energy by an appropriate carbon tax. The fossil fuel based energy, adjusted for the projected carbon tax, should then be escalated over the expected term of the long term contracts. However under current and expected conditions for a few years a social premium is required to encourage solar power and enable it to become competitive with other alternatives in the reasonable future. This approach has been taken in California, New Jersey and other states with solar specific RPS as well as in Germany and Spain - the two leading countries in the implementation of solar and renewable energy projects.

3. What should DPU use in determining whether a resource: (1) provides enhanced electricity reliability within the Commonwealth; (2) contributes to moderating system peak load requirements; and (3) where feasible, creates additional employment in the Commonwealth?

(1) DPU can determine whether a renewable resource contributes to electric system reliability within the Commonwealth by:

- Determining its location relative to transmission and distribution requirements. If the resource is located in the Commonwealth and does not require interstate transmission, then it should be credited for enhanced electric reliability within the Commonwealth. Some wind and most of the PV solar resources would fall in this category.
- If the resource is located within the Commonwealth and is connected at the distribution level, close to load centers, then this resource should be given additional credit for providing enhanced electricity reliability within the Commonwealth. Most PV solar resources would fall in this category.
- Historically it has been difficult to assign and agree on values for increased reliability for a given system. Thus from a practical implementation perspective it may be desirable to consult with industry experts via a public hearing process and simply assign certain electrical system capacities to be obtained from within the Commonwealth and have a certain capacity percentage be connected at the

distribution level. This allocation can be reviewed on a periodic basis. We note that according to a US DOE sponsored report released in August 2006, titled 'National Electric Transmission Congestion Study', the Boston area was identified as an "area of concern". Thus local distributed generating resource such as solar power at the distribution level should be given appropriate additional credit for addressing the transmission congestion concern.

- (2) DPU can determine whether a renewable resource contributes to moderating system peak load by examining the expected generation profile of the resource and comparing that to the system load profile. PV solar generates power closely coincident to the electric system peak load requirements and should be credited appropriately for this contribution.
 - (3) DPU can determine whether a renewable resource contributes to creating additional employment in the Commonwealth by determining:
 - Location of resource. If within the state then the resource contributes to additional employment within the Commonwealth.
 - Percentage of sourcing from companies within the Commonwealth. PV solar projects can purchase most of their equipment from companies within the Commonwealth. The PV plants can also be designed and constructed by companies within the Commonwealth.
 - Location of owner/developer. A Commonwealth based owner/developer is likely to use white collar professionals from within the Commonwealth in comparison to out of state companies.
 - Building on the Commonwealth's past practice with the Commonwealth Solar program, resources that contribute to greater employment within the Commonwealth should be given an appropriate price advantage.
4. What would qualify as an unreasonable burden on a distribution company's balance sheet and how would a distribution company demonstrate this burden?

We are unable to visualize a situation where the requirements of the Act could impose an unreasonable burden on a distribution company's balance sheet. The Act provides for complete cost recovery by the distribution companies of the cost of long term contracts. In fact the Act provides an additional 4% remuneration for the distribution companies to implement long term renewable contracts. Thus the renewable long term contracts enhance the distribution companies' balance sheets. Further the Act provides that the long term contracts not exceed 3% of the distribution company's retail energy sales. Given the aforementioned we suggest that in the context of the Act the issue of 'unreasonable burden' on the distribution company's balance sheet is not applicable.

D. Remuneration of Distribution Companies

1. Would remuneration be an automatic result of approval of such contracts, or are further findings by DPU required?

Given that the intent of the Act is to expeditiously implement renewable energy projects, we suggest that:

- The remuneration should be automatic if the Distribution Companies submit renewable energy contracts to the DPU for review and approval before June, 2009 or within 60 days after June 30, 2009.
- The remuneration should require additional DPU findings for renewable contracts submitted to the DPU for review and approval between September, 2009 and December, 2009.
- The remuneration should be open for further DPU findings and possible downward adjustment for all renewable contracts submitted for review and approval after January, 2010.

2. How should this remuneration be accounted for in cost-effectiveness calculations?

We suggest that the 4% adder not be factored in any cost-effectiveness calculations and be considered as good will reward for the distribution companies to encourage the implementation of renewable resources by independent developers in an expeditious manner.

E. References

1. California and comparison with alternate approaches, including Spain:
<http://www.energy.ca.gov/2008publications/CEC-300-2008-009/CEC-300-2008-009-D.PDF>
2. Germany: www.solarelectricpower.org/docs/Germany%20summary%20report.pdf
3. Ontario, Canada: <http://www.powerauthority.on.ca/SOP/>
4. Gainesville, Florida:
http://www.gainesville.com/article/20081013/NEWS/810140283/1002?Title=GRU_unveils_new_solar_incentives__
5. New Jersey:
<http://www.njcleanenergy.com/files/file/RPS%20Rule%20for%20Solar%20Grid%20Supply.pdf>

We would be pleased to provide you with any further information you request.

Regards

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Cc: Rob Sydney, General Counsel Department of Energy Resources

