

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,))
to establish the MICHIGAN RENEWABLES) Case No. U-12915
ENERGY PROGRAM)

**NORTH AMERICAN WIND ENERGY'S REPLY TO
DETROIT EDSION'S PETITION FOR REHEARING
AND CLARIFICATION**

NOW COMES North American Wind Energy, L.L.C., who responds to The Detroit Edison Company's Petition for Rehearing and Clarification pursuant to R460.17403(2) of the Commission's Rules of Practice and Procedure. On June 17, 2004, The Detroit Edison Company ("Edison") filed its Petition for Rehearing and Clarification, citing that the Michigan Public Service Commission's May 18, 2004 Opinion and Order ("Order") was unclear.

INTRODUCTION

At the May 18, 2004 meeting of the Michigan Public Service Commission ("Commission") in Lansing, Michigan, the Commission ordered that the Staff's Michigan Renewables Energy Program 2003 report be approved and that the Staff file its Michigan Renewables Energy Program 2004 report by November 30, 2004. The Commission, in keeping with the findings in Case No. U-13843, ordered all remaining regulated utilities with more than 250,000 customers in Michigan "to issue requests for proposals for renewable energy programs, in accordance with the Staff's recommendations by August 16, 2004".

Edison indicated that their interpretation of the Order was to issue "investigatory requests for proposals ("RFP's")" and further that it was not

necessary for Edison to make any purchase(s) of renewable energy resources or “green power turnkey operations” or anything else that is proposed in response to the RFPs. (Petition Page 2). Edison was apparently confused by the quoted phrase in the previous paragraph, namely, “to issue requests for proposals for renewable energy *programs*” (Opinion and Order, Page 11). The question before the Commission is whether Edison is to issue RFPs to study renewable energy “programs” and the energy costs associated with those programs (as it is proposing), or whether Detroit Edison is to send out RFPs to purchase renewable energy to supply a renewable energy program of its design?

DISCUSSION

North American believes that Detroit Edison should design its own renewable energy program following the general principles, which are enumerated in the Record Evidence in Case No. U-13808. Thereafter, Edison should issue RFPs to purchase green power from Michigan suppliers pursuant to Edison’s own program. North American believes that this was the intent of the Order.

This is a reasonable interpretation given that it has been four (4) years since The Michigan Legislature directed the Commission, in Public Act 141 of 2000, to establish a Michigan renewable energy program. The Commission has slowly and methodically developed a stakeholder process to develop a framework for implementing these programs to Michigan residents and businesses. In the most recent Commission Order issued on May 18, 2004, the process has finally evolved to the point where the Commission is directing Edison to solicit proposals for renewable energy by Fall 2004, and at regular intervals thereafter, pursuant to the Staff’s recommendations, (which studied renewable programs across the country). The Staff’s recommendations which are the foundation of the May 18, 2004 Order are not unclear; they are action

items for Detroit Edison to finally begin implementing a renewable energy program.

A. The Commission Ordered Edison to Implement a Renewable Energy Program Not Study Options.

Detroit Edison has had four (4) years to “investigate” renewable energy options and program designs. It does not need to further delay a Michigan Renewable Energy Program by repeating this process all over again with additional “Study RFPs”. Through its experience with Act 2, through its own renewable energy subsidiary which operates nation-wide, and from the Record Evidence in Case No. U-13808, Edison already knows what is required to formulate a successful program meeting the Michigan Legislature’s mandate and the Commission’s Order. Whether Edison markets to its own jurisdictional customers, or hires an agent to undertake the marketing for them, is inconsequential as this element is ministerial in nature. The following key components of a successful Renewable Energy Program should be considered by Edison in the implementation of its plan.

B. The Edison Program Must Provide Power Purchase Agreements That Allow Renewable Project Developers To Finance Their Facilities.

For renewable energy projects to be constructed, developers need a firm commitment that can be taken to a bank for financing. The commitment, in the form of a power purchase agreement, should have the following elements:

1. A twenty year term as the power purchase agreement duration for wind projects; and
2. An assured payment stream of an ascertainable amount is required. In other words, a fixed rate with a small annual escalator over twenty

years to match maintenance, property tax, and payroll cost changes;
and

3. If a “regulatory-out” clause exists in a power purchase agreement, a payment recovery methodology demonstrating that Edison will have full recovery over the term of the power purchase agreement of the payments that are above its top incremental cost in the Power Supply Cost Recovery process. When a “regulatory-out” clause exists, the amount of the payment in excess of the top incremental cost portion of the payment for green power *could* be characterized a green power capacity payments. If treated in this fashion, the Green Power Capacity portion of the payment could receive Act 81 of 1987 treatment; and
4. A re-opener clause which allows the renewable project through its contract term to make a transition into a newly formulated renewable program as the programs will like change over this duration; and
5. Energy charges and green surcharges should be paid by the Utility on an “as delivered basis” primarily, so as to eliminate the likelihood of imbalances charges; and
6. 18 CFR 292.304(f) low load conditions should be shared by all QFs on a prorata basis (using their contract capacity compared to the total of all QFs); and
7. If Edison is to have a third party market its renewable energy program, Edison should either (i) sign the power purchase agreements with renewable energy projects, or (ii) find a method to guarantee that all the duties under the power purchase agreements will be fulfilled if they are to signed by the third party. Otherwise it is likely that the power purchase agreements will not be acceptable to financial institutions.

C. Edison Should Have Full Recovery Of Its Cost to Implement And Operate The Renewable Program And Not Be At A Competitive Disadvantage For Having Done So.

Edison should be guaranteed recovery of the implementation and operational costs (whether the program is implemented by Edison or a third party) and not be left at a competitive disadvantage with alternate energy suppliers for having created a renewable energy program for its customers. Consumers Energy addressed this same issue in its June 30, 2004 Application filed in U-13843:

“Fourth, Consumers Energy must be guaranteed recovery of the costs of acquiring power, the cost of developing and implementing the RRP, and any ancillary costs which cannot be known with certainty at this time.

Fifth, cost recovery must occur in a manner that does not negatively affect Consumers Energy’s competitive position. The program should not raise Consumers’ cost of providing generation services, as Consumers Energy must compete in the market for generation services with alternative suppliers that may not have the same public-interest obligations. Any program subsidies from customers should be provided either by voluntary participants in the program or through nonbypassable charges assessed on both bundled and Retail Open Access customers.” (Application, Page 2)

Edison has the same issues and requires the same solutions.

D. Policy Considerations for Renewable Energy: Interconnection, Metering and Operational Rules That Recognize The Scale And Unique Operating Features Of Renewable Energy And Alternative Energy Technologies

Renewable Energy power production facilities are smaller scale technologies. They are part of an evolution underway in the power industry of smaller sized power generation facilities that are beginning to rival utility scale central station power plants because of improved efficiencies, lower capital costs, reliability benefits and the affects these new technologies have on reducing emissions. These power production facilities have been challenged by the

relative cost per kW of grid interconnection as well as the cost per kWh of operating when compared to larger scale power plants. The reason for these disproportionate costs is not just “economies of scale” but also result from outdated policy and operating rules that create an unlevelled playing field for small-scale power production.

Imbalances

Imbalances are created by such outdated policy and operating rules. The following imbalance example is not unique to METC, not created by Edison, but the current rules operate in this manner. In the METC system, deliveries are required to be in one Megawatt blocks per hour. Consider the impact on a 1,500 kW biomass project delivering to the 138 kV transmission system for delivery to Edison. The renewable energy supplier must supply either 1 MW or 2 MW. If 1,500 kW are supplied each hour and a 2MW reservation is made, then METC will cover the short fall (created by their rule), by providing the 500 kW shortfall on behalf of the renewable project at 110% of their top incremental cost (“TIC”) for which the renewable energy supplier must pay METC. METC, as it turns out, for purposes of imbalances can measure the shortfall and bill on the kWh basis each hour, but will schedule only on the MW basis.

On the other hand, if the biomass project delivered 1,500 kW an hour, it could schedule 1 MW and then would receive 90% of METC’s TIC cost for the 500 kW over delivery. In this case, the biomass project receives a revenue shortfall.

Imbalances in high incremental cost periods could result in significantly reduced revenues to the renewable project. If the generator can only schedule in MW’s but is billed for imbalance energy in kW’s there is an inequity favoring utility scale generation.

The experience with Delivery Scheduling and Balancing Service require generators using the transmission system for redelivery to a utility to schedule in whole MW quantities and to accurately forecast power production hourly throughout the day. These scheduling and balancing rules do not recognize the size limitations, or in some cases the intermittency of power production due to the harvesting of renewable fuel sources. **Renewable power production facilities generating and serving load within the state of Michigan should be allowed to schedule energy in whole kW's as opposed to whole MW's and balancing rules should be modified from hourly measurements to daily, weekly or monthly balancing requirements.** These rules should apply to all interconnection voltage for Edison's renewable energy program, including transmission since the transmission system operator is currently billing these generators for imbalance energy in kWh.

Interconnection.

Generator Interconnection rules are a serious concern both at FERC and the MPSC as they have in the past highlighted incumbent utilities use of interconnection to their system as a roadblock to small-scale power production. The Joint Filing of Interconnection Procedures by the Michigan Electric Utility group (May 11, 2004 Case No. U-14088) filed in response to the September 11, 2003 Order No. U-13745 is an immense step forward in streamlining and standardizing this process.

Although the interconnection rules are reasonable, the informal dispute resolution process allowed by the Commission's orders implementing PURPA should be available for review of interconnection issues for Edison's renewable energy program.

Net Metering.

In the MREP November 18, 2003 Report, the MPSC staff highlighted the importance of Net Metering rules and programs for all Michigan Electric Utilities in order to encourage the development and use of small-scale power production. In the Commission's Order in Case No. U-12915 issued on May 18, 2004, the Commission directed the Staff to include in the November 2004 MREP report a proposal for statewide implementation of net metering in Michigan. If consensus cannot be reached as part of the MREP collaborative member process, the Commission directed the staff to put forth a proposal of its design. "The proposal should at minimum allow net metering for all residential and small commercial customers, for systems powered by renewable energy" (Page 5 May 18, 2004 Order in Case U-12915). Detroit Edison should therefore prepare its renewable energy program to include Net Metering. Net Metering is a critical feature of advancing the use of renewable energy systems and small-scale alternate energy production technologies. Net Metering allows intermittent resources to be used without the expensive additional requirement of battery storage systems since the use may not match production of power. Net Metering reduces the installation cost of renewable energy systems since it eliminates the need for a second meter. Finally, Net Metering is an administratively simple and cost effective solution to eliminating one of the largest roadblocks to the development of new emission reduction energy production technologies. Net metering should be part of Edison's renewable energy program.

E. Edison Needs To Structure A Process To Allocate Renewable Energy Supply Agreements To Multiple Technologies (Wind, Biomass, Biogas, Solar)

Edison's renewable energy program should be designed to allocate renewable energy supply agreements to different energy technologies. This will generate the benefits of fuel and technology diversity and the reduced risk the

supply portfolio will have from projects that have different upfront capital costs, operational costs and environmental benefits. Each of these technologies has different environmental and economic attributes and the aggregate life cycle costs and operational risk will be lower by expanding the technology platform

For the allocation of capacity, pure price bidding in Edison's Renewable Energy Program will not achieve fuel/technology diversity. Different technologies have different construction costs. Generally, the harder it is to collect the fuel, the more expensive it is to build the project. Wind projects may cost between \$1,000 to \$1,500/kW to construct, while landfill gas generation may cost between \$850 and \$1,100. Although you can't measure these technologies by their capital cost alone since each technology has different capacity/availability factors, fuel risk, maintenance costs, emissions benefits, soil and water benefits, etc. The problem is clarified when the capacity factor of wind, generally 25% net in Michigan, is compared to landfill gas with a 90% capacity factor.

Imagine the result in a pure price bidding environment where a landfill gas facility, which is already interconnected to the grid (and the plant is operational with all systems and staff in place), bids against a new wind facility. Using pure price bidding, without bidding "bins" or allocating amount of capacity to each type of fuel, developers of wind projects will be awarded an energy purchase agreement only after higher capacity factor/lower capital cost renewable energy projects have been awarded a capacity allocation.

The same result will occur with pure price bidding, where a developer who has no real basis for making a bid (or no real project) can win with a low bid, while a developer ready to start construction has to wait until the next round (if there is a next round), or be left to purchase the would-be developers winning contract in order to save its investment and complete its project.

For Edison's Renewable Program, pure price bidding needs to be tempered by using bins, and weighted by allocating energy purchase agreements on other project attributes and benefits.

F. How Much Renewable Energy Should Edison Purchase?

Although renewable fuel supplies are the limiting factor, the European system, as described by Dr. Guter in his record testimony in U-13808 is to allow everything that is renewable to be constructed that can be built within a target price set by the government. In that case, Dr. Guter testified:

“Q. What procedures have some European countries adopted to assure that renewable energy programs reach the goals you have listed above?

A. Many European countries employ a “Feed-In Table” which defines the price for electricity. In Germany, for instance, the price for wind energy in the Feed-In Table is currently about 0.08 Euro, or approximately \$.09 to \$.10 U.S. The energy purchaser is obligated by law to receive the power from renewable energy plants at the rate shown in the Feed-In Table.

Q. What does this European model illustrate for a renewable energy program for Detroit Edison?

A. It shows a high level of commitment to a renewable energy program. The energy purchaser is committed to purchase electric energy from any renewable project, which is willing to supply energy for the Feed-In Table or target price.

Q. Aren't renewable energy programs always viewed as expensive?

A. Many times, especially when the environmental benefits are not considered. These benefits are quantifiable in many ways. I have not proposed a value in this case.

In the short haul, when compared to a short-term energy purchase alternative, they always appear to be more expensive. This is usually the argument from retail rate paying companies that view the world in the short term, quarter by quarter. In MPSC Case No.

U-8871, certain of the ratepayer groups were advocating that a “natural gas proxy” plant be used to determine the avoided cost for Qualifying Facilities. They suggested this because it appeared in the short-run as the cheapest next unit to construct. Had this myopic view of the energy environment been accepted, the energy component costs today would be considerably higher for all customers. Over the long haul, it is possible that renewable energy projects built now will be less expensive than conventional fueled alternatives.

Q. What are the essential elements of the Detroit Edison renewable energy program that you are proposing to accomplish the goals enumerated above?

A. Detroit Edison should establish a program, which establishes a base price for both capacity and energy, with an annual escalator. For our wind projects, I have calculated a rate of \$.06 per kWh for 2004 which covers both capacity and energy. This would be the Feed-In Table or target price. Geographically, Detroit Edison should purchase Windpower and Biomass from locations in the lower-peninsula, but Landfill Gas, etc. should be acquired only from their service territory. The term for the power purchase agreements should be for up to twenty years. To have a program which meets the goals listed above (besides provide energy over the long term) all renewably fueled projects should be able to bid in against the set target price and obtain a power purchase agreement.

Q. For the small renewable projects which would more efficiently use a net metering approach, what would the Feed-In Table price be?

A. For smaller renewable projects, the same Feed-In Table price should be used for the amount of kWh which are generated above what is consumed at the generator’s site. Without equal treatment, the smaller renewable projects are not as likely to be constructed as they have no advantage of economies of scale. There should be no limit on the amount of renewable energy delivered from these smaller net metered sites, either.” (TR15, P3167, L14)

G. An Estimate Of Renewable Resources Available Is All That Is Required For Edison To Issue An RFP.

Questions have arisen about the amount of renewable resource that is available in the State of Michigan and the need to fund a study to

determine those precise amounts. The first Edison RFP if broad enough in scope should provide an answer sufficient to modify North American's estimate of renewable fuel resources available:

Wood.....0
(no more fuel is available in lower peninsula; more in the UP)

Hyro.....10 MW (older facilities)
(no new plants will likely be built)

Landfill Gas.....40 MW
(mostly expansion of existing sites; but a number of 800-1600 kW sites)

Biomass.....50 MW
(mostly smaller, several larger aggregators; but same size and price as landfill gas; this is the newest market just developing)

Wind.....400 MW

Solar..... 1MW

Edison should make its own reasonable determination of the amount and types of projects to establish its RFP. The RFP should have bins to match their estimate.

CONCLUSION

Dr. Guter testified in Case No. U-13808:

“As a general statement, the goal of a Detroit Edison renewable energy program would be to produce a primary source of energy, electricity, without using other primary sources of energy to do so. Saving primary sources of energy is the goal. Saving the primary sources of energy for use at a later time in other applications, other than to produce another source of primary energy, will have the effect of:

- i. improving our air quality by reducing the emission levels from power plants; and

ii reducing dependence on fossil fuels, especially those that are imported, enhancing the economy of the United States and the state of Michigan; and

iii. allowing oil to be used to make products like chemicals, plastics, etc; and

iv. reducing the demand for fossil fuels will lead to prices for the primary sources of energy that are lower than they would otherwise be.” (TR15,P3166,L38) (emphasis added).

Edison should be ordered to design its own Renewable Energy Program and execute energy purchase agreements with renewable energy suppliers under the timetable established by the Commission pursuant to the Michigan Legislature’s Mandate.

Respectfully Submitted,

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to establish the MICHIGAN RENEWABLES	)	Case No. U-12915
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PROOF OF SERVICE

STATE OF MICHIGAN	)	
	) ss	
COUNTY OF INGHAM	)	

Bette Marvin, being first duly sworn, deposes and says that she served a copy of North American Wind Energy, LLC's Reply to Detroit Edison Company's Petition for Rehearing and Clarification of the Commission's May 18, 2004 Order to establish the Michigan Renewables Energy Program to all the parties on the attached service list via U.S. First Class Mail, on July 7, 2004.

Bette Marvin

Subscribed and sworn to before me this
7th day of July, 2004.

Cheryl L. Graham
Notary Public in Gratiot County acting in Ingham County, MI
My Commission expires: June 25, 2007

MPSC Case Nos. U-12915 and U-13843

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