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Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101

Initial Comments: Petition of Xcel Energy for approval of an amendment to the HERC Power Purchase Agreement No. 002/M 17-532

Dear Mr. Wolf:

The “HERC” is a large garbage incinerator operating in Minneapolis.

The air permit for this facility expired on May 14, 2003.¹ The operators have been unable to secure approval of an up-to-date permit. Xcel Energy should not purchase electricity from a facility with an expired permit. It is inexcusable that a major polluter continues to operate with a permit expired nearly fifteen years.

There has been a great deal of community opposition to the proposed expansion/continued operation of this facility, which discharges large amounts of health-damaging air pollutants into an “environmental justice” community.

Garbage incinerators, viewed as power plants, are of low thermal efficiency (about one-half that of a coal unit) and burn very dirty “fuels.” Consequently, garbage burners are very dirty electricity sources, in terms of both climate forcing emissions and health-damaging regulated air pollutants. As such, continued purchase of these dirty electrons is contrary to declared Minnesota public policy, and Xcel’s claims to be an environmentally clean and responsible utility.

The Department of Commerce has identified numerous concerns with the Petition as presented.

Commerce says, at page 2, August 2nd:

The Commission’s September 9, 2010 Order Determining Ownership of Renewable Energy Credits for Power Purchase Agreements Made Pursuant to State Wind and Biomass Statutes and the Federal Public Utility Regulatory Act (2010 Order) [Docket No. E002/M-08-440] determined that “avoided cost rates for capacity and energy sold

1 <https://www.pca.state.mn.us/sites/default/files/05300400-003-aqpermit.pdf>

under contracts entered into pursuant to [Public Utility Regulatory Policies Act] PURPA do not convey renewable energy credits to the purchaser of the energy.” Thus, it cannot be said that the HERC PPA was “made by the utility to satisfy the wind and biomass mandates contained in sections 216B.169, 216B.2423, and 216B.2424, and to satisfy the renewable energy objectives and standards set forth in section 216B.1691.” Therefore, based upon the 2010 Order the Department concludes that Minnesota Statutes § 216B.1645 does not apply to the Petition.

This emphasizes that there are no regulatory or public policy reasons to favor garbage burner electrons, or to justify subjecting Xcel’s ratepayers to above-market costs.

It appears that HERC is a “qualifying facility” in the PURPA sense, as such it can be argued that Xcel has an obligation to take power for seven more years, or perhaps longer per PURPA. The issue is the pricing of energy and capacity.

It is unfortunate that PPA pricing is regarded as “trade secret” information. I see no justification for this and it deprives ratepayers of the ability to understand the rate implications of PPAs. The commission should strive for greater transparency in this aspect of its work.

HERC and Xcel seem to agree that “fair market value” is “not a defined term.” “Avoided cost” is also becoming more difficult to define.

It is unclear why Xcel wishes to aggregate energy and capacity payments into one price. Given that dirty burner “renewable” power is claimed to be “baseload, as opposed to the different characteristics of cleaner “renewable” power such as wind and solar, it would seem that these should remain disaggregated.

Commerce has provided some useful cost estimates, page 5, August 2nd:

For comparison, the Department calculated the equivalent, “all-in” cost per MWh of the HERC PPA for years 2007 to 2016 using FERC Form 1 data reported by Xcel. The resulting costs per MWh were converted into real (2016) dollars using a 2 percent inflation rate. The result of these calculations was a cost range of \$58.54 per MWh to \$79.30 per MWh with an average cost of \$68.25 per MWh.

Thus, the Department reviewed historical MISO market prices at the Minnesota hub for 2007 to 2016, converted to real 2016 dollars using a 2 percent inflation rate. 2 The result was a cost range of \$ 20.54 per MWh to \$62.05 per MWh with an average cost of \$ 34.50 per MWh. However, most recently (the last 5 years) prices have been much lower, averaging \$27.43 per MWh. Xcel’s forecast of MISO market prices, taken from the Company’s Petition in Docket No. E002/M-17-531 is comparable to the recent history and is illustrated in Figure 1 below. Figure 1 shows that the negotiated price is far above the market value. [Figure 1 redacted].

So it appears that Commerce is estimating HERC power to cost \$68 Mwh vs. MISO (system) power costing \$34 over the same time period and “much less” recently.

If, per statute, we use recent prices for “least cost renewables” the difference would be even more striking.

We should note that Xcel itself is the operator of garbage burners and knows this power to be among the most costly on its system. So perhaps Xcel has a conflict of interest in proposing inflated HERC power purchases. Nonetheless, Xcel ratepayers should not be required to subsidize dirty and undesirable sources.

Hennepin County, August 14, page 3, asserts that “The Department [of Commerce] fails to consider that HERC is an important community resource....” Others consider the HERC an extremely detrimental facility. For example, those who have to smell the smells and breathe the emissions. The HERC, a type of facility subject to upsets and explosions, is located directly next to a sports stadium frequently populated with tens of thousands of people.

Hennepin County, August 14, page 3, page claims the HERC is a facility “converting 365,000 tons of municipal solid waste (MSW) annually into electricity and steam” Of course, chemical reactions such as combustion do not convert matter into energy; only nuclear reactions do that. Everything that goes into the HERC comes out. Presuming that those running the HERC have at least a high school grasp of chemistry and thermodynamics—possibly they even know something about power engineering--it seems appropriate to characterize the claim as not just an error but a lie.

According to the last published date from the MPCA emissions inventory program, year 2015, the HERC reported emissions 84,000 pounds of carbon monoxide, 15 pounds of lead, 980,000 pounds of “Nox,” 20,000 pounds of sulfur dioxide, and 44,000 pounds of “PM-10” particulate matter. Carbon dioxide (equivalent) emissions were reported as 320 million pounds but likely much higher. Of course, a great deal of harmful ash was also generated. Does this sound like the garbage was “converted” into heat and electricity?²

Hennepin County also claims, August 14, “Hennepin County is also a major retail customer of Xcel Energy purchasing the approximate equivalent of half of the energy produced at HERC for Hennepin County buildings at a rate approximately twice that of the negotiated rate in the PPA.”

This may be so but has no relevance to the issues in this docket.

More interesting are the claims and observations of Hennepin County and Commerce regarding the broader implications of the HERC.

Hennepin County claims, August 14, “HERC is located in the heart of Xcel’s highest load density area. This strategic location greatly reduces transmission losses

Commerce responds, Sept. 11, page 3

² <https://www.pca.state.mn.us/air/point-source-air-emissions-data>

First, at the system level and at the time this offer has been made to Xcel , Minnesota typically has trapped energy and capacity that is, more energy and capacity than can be exported by current transmission network. This fact means that extending the life of the HERC Power Plant might create transmission costs because more energy and capacity will be required to exit Minnesota. The more power that must be export ed from Minnesota, the more is the need for transmission to carry that power.

Xcel repeatedly argued that the Company has no need to replace lost resources until major units shut down, which would be around the end of the HERC PPA extension period. In summary, there are no avoided transmission infrastructure costs attributable to the HERC PPA. In fact, extending the HERC PPA might create transmission costs.

The fourth argument was that HERC is a baseload unit and “must be compared to resources with similar operating characteristics in similar strategic locations.” As discussed above, the LMP [Locational Marginal Pricing] data discussed in this record, when reviewed in detail, demonstrate trapped energy in Minnesota. Trapped energy is an indicator of Minnesota and neighboring states having too much baseload capacity. Because baseload units must produce energy during most hours of the year--on peak and off peak--the existence of trapped energy means the value of that energy is often relatively low. The negative LMPs that appear in Minnesota each month indicate that, in addition to the paying the cost of energy, Xcel would have to pay for the privilege of running the HERC Power Plant. Therefore, the fact that the HERC Power Plant is a baseload unit is a liability rather than an asset based on facts that currently exist, at the time this resource is being offered to Xcel.

Conclusions

The world has changed since the HERC garbage burner was build and the PPA negotiated.

There are much better ways of managing garbage, such as “Zero Waste” and “recycling.”

There are much cleaner and cheaper sources of “renewable” energy, such as wind and solar.

Particularly striking is the inflexibility of the HERC burner as a power plant. Because it is primarily a garbage burner it must run even when there is no need for its electric and thermal outputs.

In the Notice of Public Comment the Commission identified these items:

– If a PPA extension is not approved or otherwise in effect by December 31, 2017, what terms and conditions should govern HERC (Hennepin County Energy Recovery Center) sales to Xcel Energy as of January 1, 2018 until there is a PPA extension in place?

The Commission should order an interim lowering of energy and capacity rates.

– If the Commission were to ask Xcel Energy and HERC to further negotiate the rates and terms of the PPA extension or to go to arbitration, what specific issues and outcomes should the Commission require be addressed in such negotiations or arbitration?

Since the continued operation of the HERC is not in the public interest, the Commission should seek to create disincentives for continued operation.

– Are there other project-related issues or concerns?

The Commission should carefully consider the health and environmental consequences of decisions in this matter.

So far in this docket only a few of the key issues have been addressed.

Respectfully submitted,

[signed]

Alan Muller