April 19, 2013

Mr. John Quackenbush
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SUBJECT: Response for the "Michigan's Energy Future" Survey

Greetings Mr. Quackenbush,

As the Mayor of The City of Marquette, I welcome and appreciate the MPSC's efforts to gather public input on that will help Governor Snyder secure Michigan's energy future. To that end, I recently attended the public forum conducted at Northern Michigan University, as well as reviewed the survey available via www.michigan.gov/energy. The invitation to provide input has been a consistent positive experience with Governor Snyder, and we are grateful for the chance to share our views. Please consider this correspondence as my follow-up and input to both the public forum and public survey – including my personal commitment to follow-up on any additional information as you may be interested.

Please also note, The City has been in contact with other members of the Governor's cabinet for discrete issues and efforts related to energy that have not fallen within the purview of the MPSC. To that end, we have received outstanding support from Ms. Valerie Brader; Mr. David Nyberg, and Ms. Sara Wycoff, and would like to both recognize their efforts on our behalf, as well as to suggest there are other members of the Administration who may be able to provide additional information independent of the views we herein express. We greatly value their partnership, and consider their presence on Governor Snyder's team to be a great asset to the people of Michigan.

As Governor Snyder noted in his Energy and Environment Address, Energy is the life blood of Michigan's economy, and without a reliable and affordable supply, our economy would simply shut down. He notes, as with any policy issue, that securing Michigan's energy future cannot be achieved in an unbalanced way – and that the strategy for providing energy must address the needs of producers and suppliers; incorporate plans for economic growth and prosperity – as well as protect the environment which directly impacts our quality and way of life. As the Mayor of Marquette, a City situated in Michigan's Upper Peninsula, the need to protect this balance resonates deeply, and I wholeheartedly concur with the Governor's views.

To be clear, addressing the challenges associated with each criteria of this statement – the business of providing reliable energy capacity within the U.P. at affordable rates; anticipated or planned economic growth; and requiring the cleanest possible technologies, including alternate solutions/opportunities which may become available over the next 30 years – in a manner that addresses the needs both for regulatory agility and market economics is recognized as no small feat! To that end, I offer the following comments on each topic, I.E., the U.P. Electric Industry Market; U.P. economic growth; and challenges I perceive in maintaining balance using existing/anticipated solutions with other issues government and industry currently face.

The Upper Peninsula Energy Market

A logical place to begin discussion is perhaps best provided by the MPSC itself, as described within the *Staff Report On Electric Industry Market Power in Michigan's Upper Peninsula Prepared by the Staff of the Michigan Public Service Commission June 5, 2001* mandated by Act 141, PA 200, Customer Choice and Electricity Reliability Act, MCL 460.10f(6) available via (http://www.dleg.state.mi.us/mpsc/electric/restruct/reports.htm. The introduction specifically states:

"The Michigan Legislature began the process of restructuring the State's electric industry with the enactment of 2000 PA 141. An important policy goal of Act 141 is to introduce competition into the electric industry by offering Michigan ratepayers the opportunity to choose to purchase electric generation services from a competitive electric service provider. One purpose of the legislation was to promote reliable power at reasonable rates. The goal of promoting reasonable rates will not be realized, however, if one or a few suppliers can exercise market power and cause prices to increase unnecessarily. Act 141 requires the Commission to analyze and submit a report on the potential for market power in Michigan's Upper Peninsula (U.P.). This report fulfills that requirement."

The legislation required the study to be completed only as a pre-requisite for approving subsequent provisions of the Act, and resulted in a conclusion that the U.P. is a highly concentrated market with most capacity under the control of a single generating company. It noted that transmission is constrained at various times throughout the year, which consequently limits the ability of transmission providers to alleviate potential market power that may be exercised by service providers. In effect, few U.P. generation suppliers dominated by a single generator with the potential ability to wield market control, with limited transmission interconnectivity into and across U.P. areas.

At that time, the American Transmission Company (ATC) had just been formed, and staff noted that substantial additional effort would be required to assess the effectiveness of their grid expansion plans; pricing and redispatch practices, and ultimately the market power they would wield as the almost exclusive non-Municipal grid provider in the U.P.

It noted that as a matter of mitigating the market power of local suppliers, the best strategy (at the time) was to promote grid expansion. Staff recommended that a market power mitigation plan be filed by December, 31, 2003, as well as a number of additional recommendations specific to monitoring and oversight of transmission expansion based upon a 10-year plan ending approximately January 1, 2012. The conclusions of the report recommended subsequent analysis and continued diligence that do not appear to have been undertaken in the twelve years since the initial effort was published – or if so, are not readily publicly available.

It therefore seems reasonable to ask, what has happened in the U.P. marketplace in the last twelve years?

The report identifies the single largest source of power as coal-fired steam generation. It further noted that WEPCO, a Wisconsin company, owned and operated the Presque Isle Power Plant (PIPP), with nine-coal fired units generating 617MW of power – representing nearly half of the U.P.'s generating capability. A quick review of the latest information available from WEPCO (now a partner with Wolverine Power regarding operation of the plant) in February, 2013 shows that the PIPP is operating with five coal-fired steam units, with a maximum generating capacity of 365-431 MW, depending upon the quality of the coal used – a 30-40% reduction of capacity from 2001.

It noted further that a single company, Cliffs Natural Resources, consumed 248MW – or 40% of available capacity in 2001, as used by the Empire and Tilden mines. The mines remain in similar operation today, now consuming 58-68% of available PIPP capacity.

Given the electrical consumption profile today is the same as it was in 2001 (I.E., no population growth, no economic growth, no demand growth – which we know to be understated), it seems reasonable to consider what happened to the consumers potentially off-set by this 186-252MW change in capacity – I.E., are they better served by other generating assets? Did the grid expansions anticipated in 2001 occur? Did the economy change and eliminate the need for the capacity?

Appendix A of the report provides an overview of other generating sources available in the U.P. It reports generation capacity for twelve utility owned units, for all types of generation, at that time, as 1315MW. Using the same profile today, the generation capacity is approximately 210-280MW LESS than 2001. The story is similar for listed non-utility owned units serving dedicated customers.

Consumer demand does not appear to have been offset by increases in generation.

Total utility-owned transmission capacity reported in 2001 is listed to have been approximately 285MW of capacity, most of which had been recently transferred to ATC. In reviewing ATC's 10-year Review and Summary Report (http://www.atc10yearplan.com/summary-report/introduction/), it appears there has been little to no expansion of transmission capacity in the U.P. since 2001.

Specifically, this appears to confirm MPSC uncertainty regarding projects under consideration that ATC might have "inherited" at the time of it's formation, as well as the report itself, which states that an initial review and planning for the region did not occur until as late as 2005 – FOUR YEARS after assumption of operational assets.

ATC specifically reported:

> "There are a number of transmission system performance issues in Zone 2 including limited ability to import or export power, generator instability, overloaded lines and equipment, low system voltages and chronic limitations to transmission service. Primary drivers of these issues include a mismatch of load to generation in the Upper Peninsula and aging facilities in poor or obsolete condition. In the analysis of Zone 2, we identified low voltages, high voltages, transmission facility overloads and transmission service limitations. In addition, other studies occurring in parallel with this Assessment, including Northern Area Studies performed by ATC and MISO, have identified several voltage and thermal limitations. The most severe limitations occur during off-peak periods."

It is therefore reasonable to assume that consumer demand has not been offset by increases or improvements in transmission capacity. It should be noted that MISO has authorized emergency ATC reliability upgrades in the Southern U.P. that are anticipated to in part alleviate some of the stated concerns, with incremental availability scheduled over the next five years – but does not fully address CAPACITY requirements.

In short, The U.P. energy market in 2013 is marked by 22% less generation capability, and drastically less reliable transmission capability. The economic impacts have been thoroughly demonstrated. Generating capacity has become even more concentrated than identified in 2001, with fewer aging assets becoming increasingly isolated from fragile limited regional transmission connections. Consumer rates are greatly increasing, and U.P. customers pay some of the highest rates in the county. Horizontal market operations are becoming increasingly more sensitive to failures, and environmental events, as evidenced by the May 10, 2011 massive power outage in the Central Upper Peninsula. With the PIPP down for maintenance on several units, a weather event downed the only two ATC transmission lines into the UPPCO area, leaving only the City of Marquette generating and grid assets available – with a capability to serve only one tenth of regional demand.

It is reasonable to conclude the goals of reliability; affordability, growth, and cleaner technology are not well served in the U.P. marketplace of 2013.

Upper Peninsula Economic Growth

For most areas in the U.P., high levels of unemployment in the region, recent plant closings, layoffs, delays in investment projects, and low levels of business start ups are clear benchmarks of economic distress. That being said, there have been several recent calls to action to accelerate the pace of change and direction of the regional economy. Governor Snyder, through his Regional Reinvention initiative, has sought to harmonize various facets of economic development through better integration of workforce improvement, economic development, regional planning, and transportation plans and organizations. Even as this strategy addresses the need for robust transportation infrastructure through participation of road commissions and authorities, the advocacy for energy infrastructure is only represented as part of the bundled role of the MEDC – through the kind auspices of one of the readers addressed here!

As the Governor stated, without reliable energy, our economy would shut down. In contemplating growth, several recent efforts sponsored by the MEDC identify strategies for Higher Education, Education and Workforce, Business Growth & Development, Natural Resources, Tourism & Seasonal Residents, Infrastructure, and Health Care, each with attendant needs for increased energy availability. From a provisioning perspective, the important consideration becomes how much is needed; when is it needed; and where is it needed? With the highly concentrated and constrained energy market within the U.P., these questions require different consideration – and the effectiveness of solutions considerably different impact.

In regards to how much is needed, there are few reliable behavioral models that provide easy answers. A basic consideration should include a review of how well the anticipated growth scenarios addressed by electrical producers and suppliers match up with the MEDC and other regional reinvention groups or gubernatorial initiatives. For the purposes of simplifying the discussion, the evaluation could further consider only growth strategies that consume a lot of power – I.E., natural resources versus tourism/seasonal residents. Just a quick look to compare how much growth in demand is anticipated by providers of energy, versus how much growth in demand is anticipated by organizations "creating" the demand – to the extent plans are known or otherwise measurable.

Current publicly available 10-year plans demonstrate growth in local U.P. generator capacity is anticipated to be less than 20MW, which is consistent with the MPSC recommendation favoring greater diversity through expanded transmission interconnectivity.

As the majority transmission service provider in the U.P. ATC states for the next 10-years:

> "Small increases expected in population, employment – Population in Zone 2 is projected to grow about 0.2 percent annually between now and 2021, and employment is expected to grow about 1.0 percent each year in the same time period. Marquette County, Mich., is projected to realize the largest increase in employment, while Houghton County is projected to have the highest growth rate. Electricity usage growing – Zone 2 typically experiences peak electric demand during the winter months. Ore mining and paper mills are the largest electricity users in the zone. Electric load is projected to increase by 0.35 percent annually through 2021. Also, locally generated electricity is declining in the area with smaller, coal-fired generators most at risk. This includes generation owned by industry, municipalities and utilities."

The U.S. Commerce/Bureau of Economic Statistics lists the most current employment information available for Marquette County as having approximately 31,000 people aged 16 or older in the current workforce. Using ATC estimates, this would result in employment growth of approximately 310 new jobs per year – or around 3,000 new jobs over the next 8-10 years. A quick check of recent employment activity in Marquette County demonstrates the Kennecott Eagle Mine requiring 500+ 2-3 year construction related jobs, with another 230+ sustained employment positions; the Duke LifePoint acquisition in Marquette has resulted in a commitment to add 100 new doctors plus – 20 of which arrived during the first year – and $300M in guaranteed new construction and service provision over the next 10 years; continued expansion of retail corridors in Marquette Township representing an annual growth rate of approximately 300 jobs.

The actual growth rate Marquette is currently experiencing is therefore extrapolated as closer to 500 jobs per annum – without addressing specific plans of any other business sector or growth area. Further, this growth is being experience in industries with large reliable power needs; I.E., mills and mines; high-tech medical technologies; and large-scale retail "big-box" facilities.

Given a (low) estimate of power required for Eagle mining operations – approximately 10MW; peak reliable power requirements for hospital/research facilities – approximately 3.5MW; and energy consumption of a typical "big box" facility (Ex.: Best Buy) – 1 MW, additional requirements – these employment trends would indicate approximate energy growth of 10-15MW power requirements/annum. It is unclear from ATC statements how much of this demand they anticipate capturing, given the availability of local generators and municipal grids. However, assuming 300MW transmission capacity (a

slight increase from the MPSC estimate of 2001), an annual .35% increase equates to roughly 1MW/annum through 2021.

It appears that ATC is underestimating both long-term employment and load growth in the Marquette County area.

When contemplating additional growth strategies/areas, such as manufacturing; higher education, and information industries, understatements in growth requirements quickly become more disconcerting. Within the last 24 months, the Marquette area has experienced start-up factories for bio-mass fuel production; has received visits from five corporate/governmental site selection teams associated with approximately 200MW (400 MW redundancy) of aggregated data center consumption potential; and initiated approximately $100M worth of new development in retail/office facilities in the City of Marquette alone.

As the Mayor of Marquette, I am therefore both exhilarated by the pace and interest of development underway – and equally horrified by the potential limitations that may be imposed as a consequence of unmet capacity needs. I remain very concerned that little, if any, efforts appear to be underway to reconcile the plans for economic growth between the energy industry, and the organizations planning future demand across all business sectors and projects.

Clean Technology/Alternative Sources

The Governor has noted several issues that address clean energy needs, including changing consumer habits to promote greater energy efficiency; working with the MISO to address implementation of the EPA MACT rules for emission control, as well as region-wide energy provisioning; expedited coordination with state organizations to mitigate environmental impacts associated with expanded capabilities; and investment in alternative fuel technologies – including wind power, solar power, biomass, hydropower, and other types of biofuels, as necessary components of the Michigan 3.0 energy strategy. To date, the Governor's team has provided outstanding leadership in promoting adoption of this strategy in the U.P., and there are several observable results that demonstrate the potential value of this approach. Several municipal generators have successfully transformed coal-fired generating units to utilize locally produced biomass fuels. State and private organizations have approached local municipalities with pilot wind power demonstration projects and pilots. The Governor has noted the need to connect Michigan's peninsulas, both electrically and economically, which would also imply a means to include the U.P. in Michigan's natural gas energy plans. While the actual energy output of all of these initiates results in less than 5MW of total capacity today, the potential for use of these technologies to serve significant portions of future demand have been well demonstrated – and it would be my personal hope to see adoption expanded with greatest possible speed.

Additional Concerns

- I believe the MPSC would be well served to consider undertaking an update to the 2001 Staff Report on the Electric Industry Market Power in Michigan's Upper Peninsula. Although no longer statutorily required by PA 141 of 2000, at a minimum I believe this should be undertaken to address several recommendations subject to the 10-year predictions made in the report.

- I believe the MPSC should specifically evaluate the potential market power ATC wields as the almost sole transmission provider in the U.P. As such, the ability of ATC to manipulate local markets can be undertaken not just through rate increases or dispatch methodologies as they apply to current markets; but also through the location of planned transmission routes, and their proximity to potential economic growth locations. As the sole provider of energy "super highways", the ability to manipulate "last mile" connectivity costs has a clearly demonstrated potential to substantially increase the costs of connecting to the transmission grid – thereby creating large disincentives to companies that might otherwise locate in the U.P. and contribute to economic growth.

- I believe the MEDC should re-evaluate their choice in using ATC as their advocate for U.P. energy planning. There are a number of other transmission providers and generators serving Michigan, and recent disputes amongst MISO Transmission Owners, particularly between ATC, ITC, and Xcel over control of Multi-Value Projects such as those anticipated by connecting Michigan's two peninsulas, clearly place ATC in a position to gain advantage over other companies in the MISO planning process, as well as to potentially skew or otherwise bias MEDC economic growth estimates.

- I believe the MISO Northern Study process, as reported through Technical Review Group Materials dated March 4, 2013, has resulted in "Best Fit" options for WI/MI that offers greatly less capacity than anticipated by current experience and MEDC growth plans. Further, I believe the proposed alignment of the "Best Fit" topology favors continued ATC U.P. market dominance, as well as significantly increases "last mile" costs to the disadvantage of anticipated growth areas in Marquette and Houghton Counties.

- I believe the MISO Northern Study results, as previously stated, could further result in placing the costs of any reliability/capacity improvements EXCLUSIVELY on Michigan rate payers, as opposed to being more broadly shared throughout MISO as the Governors intentions have been previously forwarded.

Summary

As I previously stated, the Governor's views and energy priorities resonate deeply in Marquette. He clearly understands the challenges and impacts of energy availability in the U.P., and his views as stated in his November, 2012 Special Message on Energy and the Environment illustrate:

> "Michigan's electrical "superhighways" – its transmission system – are a tale of two peninsulas. In the Lower Peninsula, the reliability of our electrical superhighway is excellent. It's a tremendous asset, and we need to make sure our businesses and citizens understand the value of reliability. But in the Upper Peninsula, it's very different. There, we have nearly 12 "yellow alerts" a year – meaning that all it takes is for one more thing to go wrong and everybody's power could be out for days.
>
> What does that mean for daily life? Whether it is a business engaged in just-in-time manufacturing, a data center providing computing services, a hospital with sensitive equipment, or a homeowner with insulin in the fridge, reliability is vital and valuable. You can't grow economically, or even hold your own, if the power isn't there reliably. This has to change, and change in a way that is protective of our environment and of our wallets.
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> The first step is to get enough backup transmission in place so that we can end all yellow alerts. The Midwest Interconnection System Operator (MISO), which runs our region's electrical highway system, recently fast-tracked approval of some lines that will address this reliability problem. Our state agencies have already pledged to help speed up site selection and construction of those projects in an environmentally sensitive way.
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> The next step is making sure we have a major generating source in the UP, so we aren't entirely dependent on long transmission lines for power. Two utilities are leading the way on this front. I am thrilled to announce that this week, Wolverine Electric Cooperative and We Energies finalized a new venture that will install hundreds of millions of dollars of new pollution prevention equipment and keep the Presque Isle Power Plant in Marquette operating. Because of this deal, Michigan has a key building block in place to ensure the reliability and power supply we need. We will also retain a key contributor to the U.P.'s tax base and 170 Michigan jobs. Moreover, We Energies' customers in Michigan and Wisconsin who were facing increases in costs to solve this problem will pay less, not more, to fix this problem. Wolverine Power Cooperative and We Energies deserve to be commended for bringing this deal to fruition. In particular, Wolverine is increasing its commitment to Michigan's economic future, and it is making the right decision.

Those steps get us to where we need to be today. But they won't get us to where we need to be for Michigan 3.0 – a future that includes new data centers, new mining operations, new industries, and above all, more and better jobs. For that, we need to do something about the high power prices that Michiganders in the UP and northern Lower Peninsula pay. We need to make sure that new sources of power – whether they are natural gas, wind, or biomass – have a superhighway that can get their power to the places that need it."

I harbor concerns that issues raised in the MPSC 2001 Staff Report have only been reinforced by more severe concentrations of market power, both vertically and horizontally. I harbor deep concerns that the planned pace of electrical provision by the energy industry are out of sync and incongruent with the potential pace of economic growth identified by many government organizations and state-sponsored interests. I harbor specific concerns about the findings of the MISO Northern Study, and the potential consequences for long-term economic growth in the U.P., as well as the costs that may be potentially borne by Michigan rate payers. It remains my sincere hope that my concerns are misplaced, and that upon subsequent MPSC review, that my views be happily declared unfounded.

Offered with my deepest respects,

Johnny DePetro

Johnny DePetro, Mayor
City of Marquette

C: Mr. Steve Bakkal, Director, Michigan Energy Office