Public Hearing held before the Wind Energy Resource Zone Board, at the West Shore Community College, 3000 North Stiles Road, Scottville, Michigan, on Monday, August 31, 2009, at 11:00 a.m.

BEFORE:

David Walters, Board Chair
Mary Templeton, Board Vice Chair
Julie Baldwin, Secretary
Susan Harley
Robert Ianni
John Miceli
Steve Brock
Tom Vitez
David Bertram
Trevor Lauer

ALSO PRESENT:

Judy Palnau
Thomas Stanton
Christine Battiste
Sally Talberg

REPORTED BY:

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DAVID WALTERS: Morning, everyone. If we could get started. It's 11:00 o'clock, if everyone could take their seat, get started.

Good morning. My name is Dave Walters, I'm the chairman of the Wind Energy Resource Zone Board, and this is our public hearing on our proposed report. Everyone picked up an agenda on the way in, that's what we'll be following. Also, if you're desiring to make public comment, we'd ask that you that fill out the card that was associated; again, that's up on the entrance desk, if you'd like to take the time to fill out the form.

There will be three ways to make comment today; you can either write your comments and attach them to your card, you can come up and verbally make your comments, or if you desire, we can receive comments on the web. The web page will be on the screen as well, and you can make your written comments that way. We are limiting comments today to three minutes. There may be some of you that say, well, gees, we don't have that many comments today, why are you limiting. We also had a

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public hearing last week in the Thumb area, we received about 40, 50 comments at that time, and we were requiring them that they limit their comments to three minutes, so we're going to do that again today.

I'd like to begin by just an introduction of the Wind Board. We do have our officers up here at the table, and then the rest of our board is sitting in the first row. So if we can just, Mary, begin with you, your name and what parties you represent for the board.

MARY TEMPLETON: Good morning. I'm Mary Templeton, I represent the public at large, and I'm the vice-chair of the board.

JULIE BALDWIN: Good morning. My name is Julie Baldwin, and I am representing the Michigan Public Service Commission on the board, and I am the board secretary.

SUSAN HARLEY: I'm Susan Harley, I represent Clean Water Action, the statewide environmental organization, and the alternate to the zoning board.

ROBERT IANNI: Good morning. My name is Bob Ianni, I bring greetings from Attorney General Mike Cox, I am his representative on this board.

JOHN MICELI: Morning. John Miceli with Wolverine Power Supply Cooperative, I represent the alternative energy suppliers.
STEVE BROCK: Morning, everyone. I'm Steve Brock, city manager of Farmington Hills, and I represent the cities and villages.

TOM VITEZ: Tom Vitez, ITC Transmission Company, I represent the transmission companies on the board.

DAVID BERTRAM: David Bertram with Michigan Townships Association, I represent the townships on the board.

DAVID WALTERS: Thank you. We're going to start with a short presentation to try to answer your questions up front, a lot of them hopefully. We did put together a PowerPoint presentation, it will take about 20 minutes, 25 minutes, depending on how quickly we go through this, but it should give everyone a highlight of what the board did and what its purpose and cause is and that sort of thing.

Today, this is the public hearing of the proposed report that we had published. We are the Wind Energy Resource Zone Board, and we must hold at least one public hearing; we are holding two on our proposed report. The purpose of today's meeting is to give everyone an opportunity, including local governments and the public, to comment on our proposed report. The board's role is to listen and to gather comments today.
All input, including written and verbal comments, will be considered by the board as it prepares its final report.

A little background. The board was formed by Public Act 295 of 2008. That Act was called the Clean, Renewable and Energy Efficient Act. The board is established by the Act as eleven members; we have nine represented here today. We're appointed to represent specific sectors, which I'll highlight in just a minute, and the board was appointed by the Public Service Commission, but operates independently of the Commission. The board has met, this is 14 times here, we had a public hearing last week, which meant 15, and our proposed report was issued on June 2nd.

The Act specifically calls for representation of various segments: Public Service Commission Staff is to be represented; the electric utility industry has two representatives, I am one of those, I represent the Michigan Public Power Agency in Lansing; the alternate electric suppliers have a representative; the attorney general's office; renewable energy industry; cities and villages; townships; independent transmission companies; the statewide environmental organization; and public at large.

The board's charge: To study wind energy production potential and land availability in the state.

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I just want to point out here offshore wind is not one of the things that we're looking at, that is being studied by another panel that's been appointed by the governor.

We're to develop a list of regions with the highest wind energy potential, estimate the maximum and minimum wind energy potential for each region, conduct modeling and other studies on existing and proposed wind energy systems, on wind speeds and the viability of wind as a source of commercial energy.

We're to issue a final report to the Public Service Commission after accepting comments from local governments and the public.

Our timeline, as I stated, the Act was passed in October, our board was appointed in early December, and as you can see, it's a relatively short legislative mandate to conduct or to complete our report and hold public hearings, so our final report is to be issued on October 15th, and we're in that public comment period today.

The team that we established, we did hire two consultants to assist us in our process, the first being the Michigan State University Land Policy Institute, they performed a technical analysis; and Public Sector Consultants was the report writing and management of the comment process. Particular instances: Metro Court Reporters, Inc. 248.426.9530
of land -- the Land Policy Institute already had a, 
developed a wind energy prospecting tool that they used, 
and that was very valuable in our analysis as well. All 
of the consultants were selected through a competitive 
bidding process.

Summary of our proposed report: We 
identified four regions. The first region, West 
Michigan, portions of Allegan County; Region 2 is the 
Upper Northwest Lower Peninsula region that are portions 
of Antrim and Charlevoix Counties; Region 3, the 
Northwest Lower Peninsula region, portions of Benzie, 
Leelanau and Manistee Counties; Region 4 is the Thumb 
Area, which is comprised of all of Huron County and 
portions of Bay, Saginaw, Sanilac and Tuscola Counties. 
We analyzed existing and proposed wind energy systems in 
the report, and we determined that wind energy is a 
viable source of commercial energy generation in the 
State of Michigan. There's the four regions pictorially 
on the Michigan map.

The methodology that we utilized: We 
started with a statewide map, we determined land 
available after application of some initial exclusion 
criteria, which I'll discuss in just a moment, and 
considered several scenarios based on different setbacks 
of roads, water and many other factors. We overlayed a 

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theoretical grid of wind turbines on top of the non-excluded areas, and we calculated the wind energy production potential in each region, we identified the regions with the highest wind energy potential.

Not all the landscape are appropriate for wind turbines development, and we initially excluded several areas from the state map. We excluded Great Lakes shoreline to the setback of one mile. We excluded areas not defined as open space by a survey that was done by the -- say it again. O.K. I'm sorry -- it was a setback study that was done for open space, airport setbacks of, as required by the various different airports, wetlands, lakes and rivers, 120-meter setback, and public road setbacks of 120 meters. And then we also excluded sloped areas of 20 percent or more and all urban areas. The setbacks for structures were addressed later in the analysis.

So applying all these initial setback criteria, we had a map that looked appropriately like this, approximately like this in this one segment of Michigan that you can see an airport, the road exclusion areas, and then various other exclusion areas that were taken out of the analysis through the computer model.

Removing of that initial exclusion criteria took the State of Michigan which is comprised of
about 37 million acres down to 19 million acres of available space after these initial exclusion areas were removed. We then looked at that exclusion area and laid it on top of the wind maps that were utilized. We analyzed various different wind maps. This shows the 50-meter height. We also looked at 100-meter height. And we actually utilized in our final run a hybrid of the two, the 50 meter and the 100 meter.

We established theoretical estimates of wind energy potential on a hypothetical placement of turbines. Using wind speed data, turbine power output and specifications and other factors, the wind energy potential and capacity was calculated for each turbine, and in our final analysis we used the 1.5 megawatt turbine or 1,500 kW turbine.

Selection of regions. We classified the townships into tiers using a statistical method. We based our estimates on the energy. We based estimates of energy production potential by township, and then we selected the townships in the highest tier out of five as the building blocks of the region. You can see the red townships were our starting point. We also included in the region adjacent townships in the second tier and then an additional ring of townships adjacent to those townships to form our regions.
Then within the established regions, we then applied the setback for homes and other structures, we excluded areas within 200 meters of built areas as defined by the National Oceanic and Atmospheric Associated Administration. Beyond that distance, noise from turbines falls below the levels of state guidelines.

These theoretical estimates resulted in an unrealistic number of turbines being placed within the regions. Many social, economic and environmental factors affect the placement of turbines beyond the initial exclusion areas. For each region, the board reduced the theoretical estimates of capacity and energy potential to account for various factors affecting turbine placement.

And this is an important thing to note: If you look at the previous slides and slides that we'll show, we've mapped the exclusion areas very specifically. But those exclusion areas were then reduced by 66 percent in the maximum case and 81 percent in the minimum case. This resulted in substantially lower available land than what was included in the initial exclusion areas. Similar approaches were used in other studies of wind energy potential. These reductions in theoretical estimates were to account for land leases or easements. It's not expected that every portion of those non-excluded areas will be available under a land lease. We also -- it's
also to consider for land fragmentation, the parcels of
land could be small and not conducive to large steel wind
development.

We did not consider local zoning
restriction in this high-level analysis, and competing
land uses; we understood that there would be competing
land uses and that would account for part of this
reduction. And then we also realized that there were
sensitive areas that remained, including some state and
federal lands in the non-excluded areas that would be
accounted for in this reduction and also residential
zoned areas that we did not specifically note.

The result of our study shows a minimum
of turbines between 2,300 and 4,000, and then as I
suggested earlier, the 1.5 megawatts per turbine results
in capacity between 3,400 and 6,100, and then you can see
the estimated energy production potential that results
from those turbines.

Pictorial closeup of the various regions.
And again, I caution, looking at these particular maps in
particular, some individuals have tried to say, well,
look at these shaded areas, and say, well, gees, this is
the area that we can put turbines in and then try to do a
micro analysis based on these maps. That would not
account for the reductions that I talked about earlier.
These gray areas in the maps do show the maximum area, and then again we reduced those from the theoretical maximum using those reduction factors that I talked about earlier.

Region 2 pictorially and the townships associated; Region 3; Region 4, the largest, the Thumb Area. Then we also graphically noted the various outputs by region, and again, these are available on our website, the entire presentation this morning is available on our website, so if you want to look at these in more depth, you can get on our website and find that, and I believe our website will be listed just a minute.

The estimated energy production in each region in megawatt hours.

Our committee was also tasked with looking at the various turbine systems already in place. There's five systems currently operating in Michigan. The primary output is in the Thumb Area with the Michigan Wind I, Huron County, and the Harvest Wind, Huron County, comprising the majority of our current capacity. Current capacity of 130 megawatts of installed capacity in the state, and almost all was placed into service during 2008.

Our proposed commercial wind systems, that are in the current queue, and there's some formal
applications currently under review in the transmission
siting process, 24 proposed projects with nearly 2,700
megawatts of capacity. Again, these are in the siting,
initial siting stages, and it does not mean that these
projects will be constructed, but we did analyze the
application process currently under way as part of our
analysis.

Again, our analysis was a high-level
statewide assessment of areas with the highest winds
energy potential. It focuses on commercial scale wind,
not small wind that might be associated with a
residential output. It does not analyze specific sites
or zoning requirements, and it does not account for
community acceptance. Development may occur outside or
inside our identified regions. And this is the first
step in a forward-looking planning process for both wind
energy and transmission systems.

The next steps; our board will review the
comments on the proposed report and the online comments
received and those received during our two public
hearings. The board will issue our final report on
October 15. Transmission companies then study the system
needs and submit a report to the board by November 30.
Our board dissolves on January 13.

After our board dissolves, the Michigan
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Public Service Commission will designate one or more wind energy zones based on requirements and law. It will consider our final report, the transmission studies, and additional input it receives. The Public Service Commission will also conduct its own public hearings and issue a report regarding setbacks and other requirements related to wind energy.

The Public Service Commission may issue expedited certificate for transmission line to deliver power from wind zones if certain requirements are met. The Public Service Commission will issue a decision within 180 days instead of its normal one year. Affected municipalities and land owners will have a right to intervene in that process as well. Same due process rights as other Michigan Public Service Commission cases will be followed.

For more information, our website is www.michigan.gov/windboard. Our presentations, all the presentations that were given to the board, as well as our meeting minutes and a copy of our proposed reports is on that website, and as well as there's a form to submit online comments.

Comments today can be provided in writing or verbally, and it could also be submitted online, or they can mailed to the Public Service Commission, and

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comments must be received by September 8th.

We're going to now go to the public comment. Again, we will limit those comments to three minutes. We have a little slide presentation that will be presented as you speak, it will give you a red indication when almost three minutes are completed to help you, and then I will cut you off after three minutes. I would encourage you, if your limits are exceeded, we still desire your comments, and please submit any written comments beyond what you say verbally today via our website or write them down on your card today.

So with that, I do have some cards here, I'll be calling people to come up. Please come up to the mic, state your name. If you do represent a particular company or an area, please identify that as well. And we would like to know specifically where you live and what township or county, and if you could identify that as well, we'd appreciate it.

TOM STANTON: If anyone in the audience has cards that have not been turned in yet and you'd like to turn them in, just raise your hand, I'll come and pick them up and we'll get them into the queue.

DAVID WALTERS: The first person to talk today would be Tom Karas; and if I state your name wrong,
please, Tom, correct me.

TOM KARAS: I've been called much worse, trust me on that. Tom Karas, I live up in Interlochen in Green Lake Township, and if I go fast, I'll be able to do this in three minutes. Can we start right now? Perfect.

To the board, I'd like to thank you for your dedication to creating an obviously well-researched and documented product to help guide wind development in the State of Michigan. As someone who's been working in public education of wind over the past few months, I can definitely report that you have been well read and have sparked many lively conversations. The report gave me a frame of reference during my presentations and policy work in Northwest Michigan. Overall, the resulting conversations have been good for everyone to be engaged in. Exercising the opportunity to engage in lively debate when using accepted science and well-reasoned thought is the foundation of moving our state, counties and townships forward. However, debate that's peppered with exaggeration, hearsay and invective does little but delay the eventual conclusion about sustainable use of resources.

I believe the work of this committee may become a new measuring stick for a reasonable, comprehensive approach for how best to utilize the
resource available to us, a resource that truly does have the power to put this state back on the road to economic recovery, not only re-establishing manufacturing jobs, but in allowing us to potentially export clean energy to other states instead of sending our dollars out of state for fossil fuels.

That being said, I do have a specific comment concerning the potential public policies that were not included as factors that could affect wind development. This comes from a list of items found on page 11 of the PDF that were acknowledged as having a potential effect on the amount of growth of wind energy but were not figured into the development equation. I hope the work of the revision committee for this report is already running another set of numbers in relation to the development of distributed wind energy systems when feed-in tariffs are allowed to go into effect.

Feed-in tariffs for this state I believe are indeed just a matter of time. Once the public begins to realize the potential of using the wind resource as a second income in a legitimately fair and equitable manner, myself and many others predict a demand that is much more than represented by the potential megawatt buildout referred to in this report. In public meetings, I often wonder if public sentiment would be different if...
we were a few years into a feed-in tariff policy and they
could acknowledge the jobs created and the extra sources
of income that became available for residents and
community organizations who have access to the wind
resource. Once the public fully understands and believes
how this policy works, the estimates of this board may
become somewhat obsolete. In this vein I hope that
within the final report there may be contained what the
potential demand would be if a feed-in tariff such as
House Bill 4137 were instituted.

Further, I believe that there is new --
that this new demand may also represent a balancing of
the resource into all nine --

DAVID WALTERS: Tom, we're going to have
to cut you off. Please submit all your comments to us if
you can.

TOM KARAS: I was going to -- O.K. Thank
you very much.

DAVID WALTERS: Thank you. I'm going to
state the next person and then the person after that as
well so you can prepare. Don Wotring and Dave North,
you're up next.

DON WOTRING: Hello. My name is Don
Wotring. Thank you. I represent NTH Consultants, Grand
Rapids area of Kent County.
I had three or four questions, but I think you've pretty much answered most of them. I have a couple quick followups.

You mentioned that there is another board checking out or evaluating offshore wind potential. Do you know what the name of that board is?

JULIE BALDWIN: The Great Lakes Wind Council, and they do have a website, also.

DON WOTRING: And finally, this may be a bit of speculation on your part, but do you think governance is going to be left in the hands of the local ordinances, or may there be state legislation that actually governs this within a few years?

DAVID WALTERS: We have no --

DON WOTRING: No idea. O.K. Thanks.

DAVE NORTH: My name is Dave North, I'm a private landowner in Victory Township where there is, I've been contacted in regards to a proposed wind, industrial wind facility that would cover over 6,000 acres and include as many as 70 large turbines. My main concern is setbacks for health and safety concerns. I've been doing a fair amount of reading and research on the internet, there has been numerous studies done both in this country and in Europe regarding safety, health concerns of setbacks. The minimum setbacks that are
suggested range from 1.25 miles to as many as 3 miles from residential structures of these large wind turbines. Some of the health problems that have been documented are cardiovascular, respiratory, neurologic, renal and pathology symptoms which are kind of combined together to what they are referring to as vibroacoustic disease, and I have some statistics, these are related to the Mars Hill Turbine project in Aroostook County, Maine, it involves slightly over 50 people, and these are statistics based on examinations, medical examinations, psychological examinations of people after the turbines came into effect. 93 percent of those interviewed experienced or are experiencing sleep disturbances, 87 percent to a degree that they've consulted a doctor, up to 33 percent have problems with -- I'm going to jump forward here.

One hundred percent agree that the quality of their life has been affected with such comments as loss of joy of living, putting life's plans on hold, no desire to go outside, feel they have feelings of being trapped, dreams have been dashed --

DAVID WALTERS: We're going to --

DAVE NORTH: -- have problem sleeping. 100 percent have considered moving away, 73 percent of those can't afford to because 90 percent of the homes
have lost value in the recent appraisals, making it impossible for them to sell their homes and move away.

UNIDENTIFIED SPEAKER: What county?

DAVE NORTH: Victory Township, Mason County.

DAVID WALTERS: Again, as we stated earlier, there will be development inside and outside the regions. Mason County was not one of the regions that we established, but he is correct in that there's developers that are looking at this area in addition to the areas that we've already designated.

SUSAN NORTH: I'm Susan North. I'm similarly located to David North, I live in Mason County in Victory Township. I'm also a registered nurse and a master's prepared in community health, and I'm on faculty at Ferris State University.

I became aware of this situation because I live there. Had that not been true, I wouldn't have researched it as much as I did, but became interested in the effects of, the health effects of wind energy. Even though the township that I'm in is not identified as high potential, they could be built there. And although I support the idea of alternative energy, I think it should be a cost benefit between the well-being of the environment and also the well-being of humans that might
be affected.

There are well documented, and I refer to a report by Fray and Hadden from February of 2007 of the noise radiation from wind turbines which causes stress and has been documented to have endocrine effects, cardiovascular effects, as well as insomnia, which leads to stress. And also there's vibratory effects which aren't necessarily audible, but they affect the body nevertheless and can also travel through those same pathways, and they cause numerous health effects. Shadow flicker is another issue which is something that is a, kind of perceptible but sort of beyond -- it's the visual flicker. So in addition to having the auditory flicker, you're constantly, or occasionally exposed to the visual flicker as well, which can precipitate migraine headaches, and those have been well documented in medical studies as well.

So I think that as the board looks not only at Victory Township, not only at Mason County or these other counties, that these effects from Europe and other parts of the United States be looked at carefully, and then that balance of cost benefit be weighed. Thank you.

DAVID WALTERS: Thank you. Jeanne Crampton and Bob Stegmier will be up next.
JEANNE CRAMPTON: I'm Jeanne Crampton, I'm representing Pleasanton Township in Manistee County. We're up in the -- our township is the northwest county in, or the northwest township in Manistee, and we're a rural township, mostly a tourist area, we have half of Bear Lake in our township. And only two sections of the township are being considered for wind generation, and our planning Commission, of which I am a member, felt that probably their biggest problem might be with transmission lines rather than the actual wind generators themselves. And I have a letter here that the township has submitted, and I'll give that to you.

We've been through the gas and oil production and development, so to some degree, some of the members of our planning commission are really sort of gun shy about any kind of development. We don't have any kind of staff or anything, and it's all volunteer. But I'll run through these quickly here.

Transmission lines can split property and create physical barriers, as well as becoming a visual eyesore and safety hazard. The township realizes that buried transmission lines are expensive; however, the township would request that transmission lines be buried underground if at all feasible. The township would request to be informed of any potential wind generator.
development, including transmission lines.

The township would also like to see the results of the comments and how they will be handled. We're assuming that when the final report is issued, we may be sent a copy of it. We'd also appreciate maps that are more readable than what was in the report.

The township's very concerned about the environmental impacts posed by wind generation, including but not limited to noise, light flicker, ice throw, grease spatter, bird kill, et cetera, and would request that mitigation of these impacts be implemented to the fullest extent.

I will say that as far as I personally am concerned, I'm all in favor of alternative energy. I spend my winters in Baja, Mexico, in an old trailer with a solar panel, so I'm well used to alternative forms of energy. And I think that a lot of these questions that are coming up can be alleviated in the second report perhaps. Thank you very much.

DAVID WALTERS: Thank you. Bob Stegmier, and Annie Doyle up next.

BOB STEGMIER: Bob Stegmier, and I live in Rockford, Michigan, but also spend a lot of time in Baldwin. I am a member of the Izaak Walton League, I'm a national director, sit on both of the local chapter's Metro Court Reporters, Inc. 248.426.9530
energy committee and the national energy committee.

The Izaak Walton League and myself for years have been supporting alternative clean energy, wind and solar. I have solar photon (inaudible) on my house, I'm not very suited for wind. Our midwest office of the Izaak Walton League has been a strong supporter of wind, they're in St. Paul, Minnesota.

We fully support the maximum development of wind energy, and I'll throw in solar also, in the State of Michigan. Sure, there's some concerns about bird kill, bat kill, and noise and so on, but we have power lines now all over, and many animals and birds die on those power lines. I almost hit a hawk coming here this morning; I didn't. But automobiles kill many of that wildlife; it's unfortunately a fact, many every year. Workers die from electrocution. So those are concerns, we need to be wise, and I think you folks are, you know, being wise and thoughtful in your evaluation. And we fully support the maximum development of wind energy in the State of Michigan. Thank you.

DAVID WALTERS: Annie Doyle, with Tom Gallery next.

ANNIE DOYLE: Hi, I'm Annie Doyle, I'm a planning commissioner from Norwood Township, as well as the chairperson for our township's commercial wind
turbine development committee.

Specifically, in the report you have excluded or I'm -- we're assuming it's an error, omission error, the Charlevoix Municipal Airport, and as a result, the excluding we're assuming 6.32-mile radius that would be around it, which is comparable to other airports in your study that are the same size. If you consider the airport, it eliminates most of Norwood Township, as well as a significant portion of Hayes Township and Marion Township, which alters, greatly alters the energy output of our Region 2, so I'm hoping that this can be corrected. Again, I don't know if you've intentionally, you didn't add the airport or if that's something that was just looked over. But if you do include the airport, it definitely does change the energy output of that region.

We are acutely aware of the need for Michigan to prosper in its economy, we have all felt the oppressive hand of the current economic situation, and we also are very wanting to support sustainable greener energy in our country; however, our community, Norwood, is a place that prides itself on a tourist industry, and whoever has been there, Charlevoix, northern Michigan, it's one of the most beautiful places that you'll ever be, and we tread very lightly on putting such a large
footprint as would be a wind turbine farm in our community, and just want to make sure that all the factors are considered, such as the airport, before we as public officials representing Norwood Township do make a move to make such a great impact on our community.

DAVID WALTERS: Tom Gallery, with Jerome Bush.

TOM GALLERY: My name is Tom Gallery, I'm from Northport, which is in Leelanau County, and Leelanau Township, that's the very tip of the little finger. I just want to talk about two things; one is the lack of, the shortfall in the report about addressing any kind of community wind or mid-scale turbines. I know you wanted to simplify it by just using one type of turbine and making it a very large one. So I want to give an example of what we're doing in Northport in that area for wind energy; and secondly, I just want to give a brief description or at least comment that there seems to be no interest whatsoever in commercial development in our township. So again, I'm only going to be addressing Leelanau Township.

I represent a group called the Northport Energy Action Task Force, and we're a committee under the local utility, and we were tasked for, to develop a wind energy system in order to supplement the electrical usage.
in the township, specifically the sewer system, water
treatment plant and the municipal buildings within the
township. Currently we're planning on two 300-kilowatt
turbines on public land near Northport, these are going
to be fairly small units, 150-foot hub height, 200-foot
tip height, with a total production approximately
equivalent to the one in Traverse City, the Traverse City
Power and Light unit, that's a 600 kilowatt. It's not
the most efficient way to do things, because we're doing
two smaller ones, but it's something that we can do very
quickly, there's virtually no community resistance to
this, it's small in scale, under the height of a typical
cell tower, 199 feet, and the rewards for the community
are very high, about $100,000 a year in electricity, and
the cost of the unit is going to be around, between
$800,000 and $900,000.

Now, I mentioned that there seems to be
no interest in the area for commercial, and I think it's
maybe a flaw in your report that you might want to look
at, and that is that Leelanau Township, the average width
between Grand Traverse Bay and Lake Michigan is only
three miles. When you exclude the shorelines, you only
have this skinny one-mile strip, and there's a lot of
fragmented land in there and very steep slopes, so I
suspect that's why you, when you look at the map and see
who's interested in doing commercial wind development, there's nobody interested in our township for doing large turbines. So I suggest that you address at some future point community-scale wind and perhaps take a good look at the map for Leelanau Township. O.K. Thank you.

DAVID WALTERS: Jerome Bush.

JEROME BUSH: Yes, I had a question, it's already been answered, so I'll just pass it up. Thank you.

DAVID WALTERS: Susan Och.

SUSAN OCH: Och.

DAVID WALTERS: And Tim Coleman will be up next.

SUSAN OCH: I'm Susan Och, I'm from Leland Township, just south of George, so I'll kind of pick up where he left off.

I'm a township trustee, but I'm speaking on my own today. I made the drive down here because I really appreciate the work that you guys have done, and I want to make sure that you get a reality check about Leelanau County before you start thinking that this is going to be the next commercial wind farm site.

Leelanau County is expensive. George talked about our rolling hills, our fragmented land, our fragmented farms. It's because land is expensive.
buy a building lot will cost you about $30,000 an acre. Typically people are developing orchards and vineyards. To develop a vineyard, you're going to spend about $20,000 an acre on top of that, that's the bottom end acre; if you plant fancy French vines, you're going to be spending even more. Anybody who is prospecting to put wind leases in a place like that is going to have to be willing to spend a lot a money and talk to a lot of people.

We don't have a, Leland Township doesn't have a policy on wind right now. We have an old zoning ordinance, we're working on a new one. We will be probably following Centerville Township's, which has put a very detailed zoning ordinance in place. I do have a sheet of last year of all the zoning ordinances in our township vis a vis wind if you folks are interested in that.

We did recently go through ridgeline zoning. We had a room the third the size of this with more people in it than this saying, I own land on a ridge top, I don't want anybody telling me what I can and can not build here because that land is expensive.

There is a lot of interest in home wind, community wind, farm wind, solar, folks are not oblivious to the idea that we need to start making our own energy.
it's just not -- there is just very little interest in
taking the risk that would -- of perhaps cutting into our
tourism business, perhaps messing up our farms. So we're
with you, we're just not on the big commercial wind farm.
So thank you very much for your work.

DAVID WALTERS: Thank you.

TOM COLEMAN: Hi. It's Tom, not Tim, Coleman. I guess more of a question than a comment.

That I read in the Section 153, it says the certificate
takes precedence over a conflicting local ordinance, law,
rule, regulation, policy or practice that prohibits or
regulates the location or construction of a transmission
line, and I'd like to have a little more information from
you and in the report what really that says as far as
transmission lines themselves. If you locate a wind,
large wind turbine somewhere, you have to go across
somebody's land to get to the other main transmission
line. I want to know whether eminent domain is allowed
in this case. I also happen to be a property owner in
Victory Township in Mason County, as well as the chair of
the planning commission or the City of Ludington where we
have been looking at small wind turbines. But that is a
concern.

We also read on the various health issues
and that we've previously discussed. So I think one of
the things that I would certainly caution would be to do no harm as you look at these things as far as the individuals and as far as the land itself. Thank you.

DAVID WALTERS: We have one additional comment, Max Chiddister.

MAX CHIDDISTER: Good morning. Thank you. I represent some families whose properties are along the shoreline, but additionally, their properties are contiguous to the Huron-Manistee National Forest, and that forest, unlike other national forests, is a product-producing forest, not a recreational one. So they have timber, mining, mineral mining, and gas. So we're a little bit different, except for they told us in their deliberation, they're going to come out with an environmental impact study sometime next year, that they would be sensitive to state law and to local ordinances. Now, federal law, of course, trumps what you're doing. And so our concern, like I said again, is that we're, want to know what's going on statewide and locally.

So I have a couple of technical questions I think here. Could you tell me again the height of the turbines that you said you came up with?

DAVID WALTERS: We're not developers, so I mean I think it, we cautioned everyone here in the audience to suggest that we're dictating to people what
type of turbines or what type of development is going to occur. In our analysis, we assumed a 80-meter turbine that was 1.5 megawatts in capacity, but what will actually happen will be the developers, if they're interested -- if they're not interested, they aren't going to come. We're just saying as a board, what is the estimated potential. So in our analysis, we made some assumptions, that doesn't necessarily mean that that's what, the assumptions that a developer is going to make when he comes and proposes to a township what development they're going to put there.

MAX CHIDDISTER: BP Products has a certificate in to get approval to put a wind farm in there.

The other thing, I was talking to someone from DTE who was at, works with people in the Thumb Area, and they said their grids are full and they can't purchase electricity that is generated by the wind turbines. Did you check that out at all and see what the availability is for people buying the generation, electricity that's generated?

DAVID WALTERS: We do have a DTE representative on our board, he's not here today. But that -- you can talk to him after the meeting. But our task is not to represent any utility either.
MAX CHIDDISTER: And then the final question is, the governor I think wanted 10 percent of energy generated in the state from wind energy. Does this meet that; I mean what you've studied and what you're suggesting, do these areas generate 10 percent?

DAVID WALTERS: Again, the governor did not require 10 percent to come from wind, it was 10 percent from all renewable resources, and that 10 percent number would fall in the range of our potential.

MAX CHIDDISTER: Thank you.

DAVID WALTERS: I don't have anymore cards here, but if anyone else wants to address the committee, please come forward. We'd ask that you fill out a card after you speak then, but please come forward and state your name and who you represent or where you're from.

JOAN THOMPSON: My name is Joan Thompson, and I live right on the border between Mason and Manistee County near the lake. I have just a question. Someone brought up the offshore report, Great Lakes, you said it was, Wind Council. And when is that report due?

JULIE BALDWIN: Tomorrow I believe it's coming out.

JOAN THOMPSON: Tomorrow. Well, that's good, because it seems to me that it could render many of
the analyses here obsolete within a short amount of time, depending on -- I remember when we were doing research on all of this, that there was a great map that Canada puts out, I can't remember the exact name, it's the Canada Environmental Quality Board or something, showing for North America, went down into about mid U.S., the greatest wind, and exactly in Michigan in the areas you're talking about. Of course, the greatest was offshore, even though right along the edge there was great wind potential. So Europe it seems to me for years has done offshore and certainly it's being explored. If within a few years someone decides that's the best way to do it, there ought to be coordination here. So I'm glad to hear that report's coming out that soon.

Is there going to be coordination between that report and your report?

DAVID WALTERS: I don't think that that report will make what we do here moot. Our task was to determine what the potential is on land. Whether there's potential in the offshore or not, that report will report on what the potential is offshore.

JOAN THOMPSON: And at some point someone will be comparing or figuring out how those can work together, right, offshore and land? Right? Someone's going to compare both of them, I assume.
DAVID WALTERS: Yes.

JOAN THOMPSON: O.K.

DAVID WALTERS: Yes, Jerome.

JEROME BUSH: Yes, Jerome Bush from Fillmore Township, and I did have a card, but I'd like to ask one more question. On page 27 of your report it shows Exhibit 15, which is Area 1. And I'm wondering, is there a map which is more detailed than the way you show it now, or perhaps it doesn't require any more detail? Just wondering about that.

DAVID WALTERS: I'm just going to make a short comment here. We're not here to answer questions, but we'll try to answer the question we can. But that was one of the cautions I had initially; those maps, and I think somebody else made that report, or that question, to please have more detailed maps. The maps aren't intended to show regions which we say, you know, don't those maps say, gees, these are the areas that the board has determined that wind will be located. What those maps show and what they're intended to just give a general feeling for the exclusion areas in the initial pass of our analysis, and they're not intended to be a road map to pin down a particular parcel or a particular region within a township for a developer to come in and use those, they're not intended for that purpose, and...
they're really not designed for that purpose, and that's why if you blow down on them and say look at a particular parcel and say is my parcel included in that area or not, they're really not intended for that purpose.

And secondly, I'd like to just note that again, at the back end of that analysis, we reduced those areas by a substantial number. We took 66 to 81 percent of those gray areas out of the analysis. So to suggest that all of those areas will be fully developed is not a good interpretation of the report. So that's why we caution you, I caution everyone to look at those areas and want, you know, more detail and to zoom in on a particular parcel within those areas, that wasn't the intention of those particular maps.

JEROME BUSH: O.K. Thank you. That answered the question.

DAVID WALTERS: Anyone else --

MARK HULL: My name is Mark Hull, and I'm a resident of Gratiot County in Emerson Township, and on your map here it's No. 8 that you have pointed there. And I just wanted to give an update of what's going on Gratiot County.

We have accepted a zoning ordinance for wind there. We've had multiple meetings to see if public acceptance, and we've had overwhelming acceptance there.
I'm representing Beebe Community Wind Farms, and we have two (inaudible) towers up, and we've collected over a year's worth of wind data there and we're in the process of leasing ground, and there's a potential of 40,000 acres in that area.

DAVID WALTERS: All right. Thank you.

TOM KARAS: Could I finish my comments, Mr. Chairman?

DAVID WALTERS: We're not going to do that. And again, I caution everyone, you don't realize what the last week's public hearing was, so we were very strict in limiting everyone to three minutes. I apologize. But we did it last week, and I don't want to hear those people saying we allowed people more than three minutes today.

Anyone else? We don't want to limit people from speaking, though, so if you have any additional comments, we'd love to hear them.

Hearing none, any board members, questions or any additional comments? I'd entertain a motion to adjourn the public hearing.

UNIDENTIFIED BOARD MEMBER: So moved.

UNIDENTIFIED BOARD MEMBER: Support.

DAVID WALTERS: All in favor, aye.

BOARD MEMBERS: Aye.

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DAVID WALTERS: Our public hearing is closed. Thank you, all.

(At 12:00 p.m., the public hearing closed.)

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CERTIFICATE

I, Lori Anne Penn (CSR-1315), do hereby certify that I reported in stenotype the proceedings had in the above-entitled matter, that being the Michigan Public Service Commission Wind Energy Resource Zone Board Public Hearing, at the West Shore Community College, 3000 North Stiles Road, Scottville, Michigan, on Monday, August 31, 2009; and do further certify that the foregoing transcript constitutes a true and correct transcript of my stenotype notes.

______________________________
Lori Anne Penn, CSR-1315
33231 Grand River Avenue
Farmington, Michigan 48336

Dated: September 8, 2009

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