

STATE OF MICHIGAN
DEPARTMENT OF ENERGY, LABOR & ECONOMIC GROWTH
MICHIGAN PUBLIC SERVICE COMMISSION
WIND ENERGY RESOURCE ZONE BOARD

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PUBLIC HEARING 2
At West Shore Community College
3000 North Stiles Road
Scottville, Michigan 49454

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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:

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

I N D E X

	Page
1	
2	
3	I. Welcome and Introduction - David Walters 3
4	II. Overview of the Board's Proposed Report - 5
5	David Walters
6	III. Public Comments
7	1. Tom Karas 17
8	2. Don Wotring 19
9	3. Dave North 20
10	4. Susan North 22
11	5. Jeanne Crampton 24
12	6. Bob Stegmier 25
13	7. Annie Doyle 26
14	8. Tom Gallery 28
15	9. Jerome Bush Pass
16	10. Susan Och 30
17	11. Tom Coleman 32
18	12. Max Chiddister 33
19	13. Joan Thompson 35
20	14. Jerome Bush 37
21	15. Mark Hull 38
22	
23	
24	
25	

1 Scottville, Michigan

2 Monday, August 31, 2009

3 11:00 a.m.

4 - - -

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

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

17 There will be three ways to make comment
18 today; you can either write your comments and attach them
19 to your card, you can come up and verbally make your
20 comments, or if you desire, we can receive comments on
21 the web. The web page will be on the screen as well, and
22 you can make your written comments that way. We are
23 limiting comments today to three minutes. There may be
24 some of you that say, well, gees, we don't have that many
25 comments today, why are you limiting. We also had a
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1 public hearing last week in the Thumb area, we received
2 about 40, 50 comments at that time, and we were requiring
3 them that they limit their comments to three minutes, so
4 we're going to do that again today.

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

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

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

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

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

23 JOHN MICELI: Morning. John Miceli with
24 Wolverine Power Supply Cooperative, I represent the
25 alternative energy suppliers.

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1 STEVE BROCK: Morning, everyone. I'm
2 Steve Brock, city manager of Farmington Hills, and I
3 represent the cities and villages.

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

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

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

18 Today, this is the public hearing of the
19 proposed report that we had published. We are the Wind
20 Energy Resource Zone Board, and we must hold at least one
21 public hearing; we are holding two on our proposed
22 report. The purpose of today's meeting is to give
23 everyone an opportunity, including local governments and
24 the public, to comment on our proposed report. The
25 board's role is to listen and to gather comments today.

1 All input, including written and verbal comments, will be
2 considered by the board as it prepares its final report.

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

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

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

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

4 We're to develop a list of regions with
5 the highest wind energy potential, estimate the maximum
6 and minimum wind energy potential for each region,
7 conduct modeling and other studies on existing and
8 proposed wind energy systems, on wind speeds and the
9 viability of wind as a source of commercial energy.
10 We're to issue a final report to the Public Service
11 Commission after accepting comments from local
12 governments and the public.

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

20 The team that we established, we did hire
21 two consultants to assist us in our process, the first
22 being the Michigan State University Land Policy
23 Institute, they performed a technical analysis; and
24 Public Sector Consultants was the report writing and
25 management of the comment process. Particular instances
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1 of land -- the Land Policy Institute already had a,
2 developed a wind energy prospecting tool that they used,
3 and that was very valuable in our analysis as well. All
4 of the consultants were selected through a competitive
5 bidding process.

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

20 The methodology that we utilized: We
21 started with a statewide map, we determined land
22 available after application of some initial exclusion
23 criteria, which I'll discuss in just a moment, and
24 considered several scenarios based on different setbacks
25 of roads, water and many other factors. We overlaid a
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1 theoretical grid of wind turbines on top of the
2 non-excluded areas, and we calculated the wind energy
3 production potential in each region, we identified the
4 regions with the highest wind energy potential.

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

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

24 Removing of that initial exclusion
25 criteria took the State of Michigan which is comprised of
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1 about 37 million acres down to 19 million acres of
2 available space after these initial exclusion areas were
3 removed. We then looked at that exclusion area and laid
4 it on top of the wind maps that were utilized. We
5 analyzed various different wind maps. This shows the
6 50-meter height. We also looked at 100-meter height.
7 And we actually utilized in our final run a hybrid of the
8 two, the 50 meter and the 100 meter.

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

16 Selection of regions. We classified the
17 townships into tiers using a statistical method. We
18 based our estimates on the energy. We based estimates of
19 energy production potential by township, and then we
20 selected the townships in the highest tier out of five as
21 the building blocks of the region. You can see the red
22 townships were our starting point. We also included in
23 the region adjacent townships in the second tier and then
24 an additional ring of townships adjacent to those
25 townships to form our regions.

1 Then within the established regions, we
2 then applied the setback for homes and other structures,
3 we excluded areas within 200 meters of built areas as
4 defined by the National Oceanic and Atmospheric
5 Associated Administration. Beyond that distance, noise
6 from turbines falls below the levels of state guidelines.

7 These theoretical estimates resulted in
8 an unrealistic number of turbines being placed within the
9 regions. Many social, economic and environmental factors
10 affect the placement of turbines beyond the initial
11 exclusion areas. For each region, the board reduced the
12 theoretical estimates of capacity and energy potential to
13 account for various factors affecting turbine placement.
14 And this is an important thing to note: If you look at
15 the previous slides and slides that we'll show, we've
16 mapped the exclusion areas very specifically. But those
17 exclusion areas were then reduced by 66 percent in the
18 maximum case and 81 percent in the minimum case. This
19 resulted in substantially lower available land than what
20 was included in the initial exclusion areas. Similar
21 approaches were used in other studies of wind energy
22 potential. These reductions in theoretical estimates
23 were to account for land leases or easements. It's not
24 expected that every portion of those non-excluded areas
25 will be available under a land lease. We also -- it's

1 also to consider for land fragmentation, the parcels of
2 land could be small and not conducive to large steel wind
3 development.

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

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

19 Pictorial closeup of the various regions.
20 And again, I caution, looking at these particular maps in
21 particular, some individuals have tried to say, well,
22 look at these shaded areas, and say, well, gees, this is
23 the area that we can put turbines in and then try to do a
24 micro analysis based on these maps. That would not
25 account for the reductions that I talked about earlier.

1 These gray areas in the maps do show the maximum area,
2 and then again we reduced those from the theoretical
3 maximum using those reduction factors that I talked about
4 earlier.

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

13 The estimated energy production in each
14 region in megawatt hours.

15 Our committee was also tasked with
16 looking at the various turbine systems already in place.
17 There's five systems currently operating in Michigan.
18 The primary output is in the Thumb Area with the Michigan
19 Wind I, Huron County, and the Harvest Wind, Huron County,
20 comprising the majority of our current capacity. Current
21 capacity of 130 megawatts of installed capacity in the
22 state, and almost all was placed into service during
23 2008.

24 Our proposed commercial wind systems,
25 that are in the current queue, and there's some formal

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1 applications currently under review in the transmission
2 siting process, 24 proposed projects with nearly 2,700
3 megawatts of capacity. Again, these are in the siting,
4 initial siting stages, and it does not mean that these
5 projects will be constructed, but we did analyze the
6 application process currently under way as part of our
7 analysis.

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

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

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

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

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

23 Comments today can be provided in writing
24 or verbally, and it could also be submitted online, or
25 they can mailed to the Public Service Commission, and
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1 comments must be received by September 8th.

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

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

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

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

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

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

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

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

18 Feed-in tariffs for this state I believe
19 are indeed just a matter of time. Once the public begins
20 to realize the potential of using the wind resource as a
21 second income in a legitimately fair and equitable
22 manner, myself and many others predict a demand that is
23 much more than represented by the potential megawatt
24 buildout referred to in this report. In public meetings,
25 I often wonder if public sentiment would be different if

1 we were a few years into a feed-in tariff policy and they
2 could acknowledge the jobs created and the extra sources
3 of income that became available for residents and
4 community organizations who have access to the wind
5 resource. Once the public fully understands and believes
6 how this policy works, the estimates of this board may
7 become somewhat obsolete. In this vein I hope that
8 within the final report there may be contained what the
9 potential demand would be if a feed-in tariff such as
10 House Bill 4137 were instituted.

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

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

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

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

23 DON WOTRING: Hello. My name is Don
24 Wotring. Thank you. I represent NTH Consultants, Grand
25 Rapids area of Kent County.

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1 I had three or four questions, but I
2 think you've pretty much answered most of them. I have a
3 couple quick followups.

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

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

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

14 DAVID WALTERS: We have no --

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

16 DAVE NORTH: My name is Dave North, I'm a
17 private landowner in Victory Township where there is,
18 I've been contacted in regards to a proposed wind,
19 industrial wind facility that would cover over 6,000
20 acres and include as many as 70 large turbines. My main
21 concern is setbacks for health and safety concerns. I've
22 been doing a fair amount of reading and research on the
23 internet, there has been numerous studies done both in
24 this country and in Europe regarding safety, health
25 concerns of setbacks. The minimum setbacks that are

1 suggested range from 1.25 miles to as many as 3 miles
2 from residential structures of these large wind turbines.

3 Some of the health problems that have
4 been documented are cardiovascular, respiratory,
5 neurologic, renal and pathology symptoms which are kind
6 of combined together to what they are referring to as
7 vibroacoustic disease, and I have some statistics, these
8 are related to the Mars Hill Turbine project in Aroostook
9 County, Maine, it involves slightly over 50 people, and
10 these are statistics based on examinations, medical
11 examinations, psychological examinations of people after
12 the turbines came into effect. 93 percent of those
13 interviewed experienced or are experiencing sleep
14 disturbances, 87 percent to a degree that they've
15 consulted a doctor, up to 33 percent have problems
16 with -- I'm going to jump forward here.

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

22 DAVID WALTERS: We're going to --

23 DAVE NORTH: -- have problem sleeping.

24 100 percent have considered moving away, 73 percent of
25 those can't afford to because 90 percent of the homes

1 have lost value in the recent appraisals, making it
2 impossible for them to sell their homes and move away.

3 UNIDENTIFIED SPEAKER: What county?

4 DAVE NORTH: Victory Township, Mason
5 County.

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

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

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

1 be affected.

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

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

24 DAVID WALTERS: Thank you. Jeanne
25 Crampton and Bob Stegmier will be up next.

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

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

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

1 development, including transmission lines.

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

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

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

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

22 BOB STEGMIER: Bob Stegmier, and I live
23 in Rockford, Michigan, but also spend a lot of time in
24 Baldwin. I am a member of the Izaak Walton League, I'm a
25 national director, sit on both of the local chapter's
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1 energy committee and the national energy committee.

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

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

21 DAVID WALTERS: Annie Doyle, with Tom
22 Gallery next.

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

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

17 We are acutely aware of the need for
18 Michigan to prosper in its economy, we have all felt the
19 oppressive hand of the current economic situation, and we
20 also are very wanting to support sustainable greener
21 energy in our country; however, our community, Norwood,
22 is a place that prides itself on a tourist industry, and
23 whoever has been there, Charlevoix, northern Michigan,
24 it's one of the most beautiful places that you'll ever
25 be, and we tread very lightly on putting such a large

1 footprint as would be a wind turbine farm in our
2 community, and just want to make sure that all the
3 factors are considered, such as the airport, before we as
4 public officials representing Norwood Township do make a
5 move to make such a great impact on our community.

6 DAVID WALTERS: Tom Gallery, with Jerome
7 Bush.

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

22 I represent a group called the Northport
23 Energy Action Task Force, and we're a committee under the
24 local utility, and we were tasked for, to develop a wind
25 energy system in order to supplement the electrical usage
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1 in the township, specifically the sewer system, water
2 treatment plant and the municipal buildings within the
3 township. Currently we're planning on two 300-kilowatt
4 turbines on public land near Northport, these are going
5 to be fairly small units, 150-foot hub height, 200-foot
6 tip height, with a total production approximately
7 equivalent to the one in Traverse City, the Traverse City
8 Power and Light unit, that's a 600 kilowatt. It's not
9 the most efficient way to do things, because we're doing
10 two smaller ones, but it's something that we can do very
11 quickly, there's virtually no community resistance to
12 this, it's small in scale, under the height of a typical
13 cell tower, 199 feet, and the rewards for the community
14 are very high, about \$100,000 a year in electricity, and
15 the cost of the unit is going to be around, between
16 \$800,000 and \$900,000.

17 Now, I mentioned that there seems to be
18 no interest in the area for commercial, and I think it's
19 maybe a flaw in your report that you might want to look
20 at, and that is that Leelanau Township, the average width
21 between Grand Traverse Bay and Lake Michigan is only
22 three miles. When you exclude the shorelines, you only
23 have this skinny one-mile strip, and there's a lot of
24 fragmented land in there and very steep slopes, so I
25 suspect that's why you, when you look at the map and see

1 who's interested in doing commercial wind development,
2 there's nobody interested in our township for doing large
3 turbines. So I suggest that you address at some future
4 point community-scale wind and perhaps take a good look
5 at the map for Leelanau Township. O.K. Thank you.

6 DAVID WALTERS: Jerome Bush.

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

10 DAVID WALTERS: Susan Och.

11 SUSAN OCH: Och.

12 DAVID WALTERS: And Tim Coleman will be
13 up next.

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

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

23 Leelanau County is expensive. George
24 talked about our rolling hills, our fragmented land, our
25 fragmented farms. It's because land is expensive. To
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1 buy a building lot will cost you about \$30,000 an acre.
2 Typically people are developing orchards and vineyards.
3 To develop a vineyard, you're going to spend about
4 \$20,000 an acre on top of that, that's the bottom end
5 acre; if you plant fancy French vines, you're going to be
6 spending even more. Anybody who is prospecting to put
7 wind leases in a place like that is going to have to be
8 willing to spend a lot a money and talk to a lot of
9 people.

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

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

23 There is a lot of interest in home wind,
24 community wind, farm wind, solar, folks are not oblivious
25 to the idea that we need to start making our own energy,

1 it's just not -- there is just very little interest in
2 taking the risk that would -- of perhaps cutting into our
3 tourism business, perhaps messing up our farms. So we're
4 with you, we're just not on the big commercial wind farm.
5 So thank you very much for your work.

6 DAVID WALTERS: Thank you.

7 TOM COLEMAN: Hi. It's Tom, not Tim,
8 Coleman. I guess more of a question than a comment.
9 That I read in the Section 153, it says the certificate
10 takes precedence over a conflicting local ordinance, law,
11 rule, regulation, policy or practice that prohibits or
12 regulates the location or construction of a transmission
13 line, and I'd like to have a little more information from
14 you and in the report what really that says as far as
15 transmission lines themselves. If you locate a wind,
16 large wind turbine somewhere, you have to go across
17 somebody's land to get to the other main transmission
18 line. I want to know whether eminent domain is allowed
19 in this case. I also happen to be a property owner in
20 Victory Township in Mason County, as well as the chair of
21 the planning commission or the City of Ludington where we
22 have been looking at small wind turbines. But that is a
23 concern.

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

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

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

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

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

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

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

22 DAVID WALTERS: We do have a DTE
23 representative on our board, he's not here today. But
24 that -- you can talk to him after the meeting. But our
25 task is not to represent any utility either.

1 MAX CHIDDISTER: And then the final
2 question is, the governor I think wanted 10 percent of
3 energy generated in the state from wind energy. Does
4 this meet that; I mean what you've studied and what
5 you're suggesting, do these areas generate 10 percent?

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

10 MAX CHIDDISTER: Thank you.

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

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

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

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

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

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

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

1 DAVID WALTERS: Yes.

2 JOAN THOMPSON: O.K.

3 DAVID WALTERS: Yes, Jerome.

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

11 DAVID WALTERS: I'm just going to make a
12 short comment here. We're not here to answer questions,
13 but we'll try to answer the question we can. But that
14 was one of the cautions I had initially; those maps, and
15 I think somebody else made that report, or that question,
16 to please have more detailed maps. The maps aren't
17 intended to show regions which we say, you know, don't
18 those maps say, gees, these are the areas that the board
19 has determined that wind will be located. What those
20 maps show and what they're intended to just give a
21 general feeling for the exclusion areas in the initial
22 pass of our analysis, and they're not intended to be a
23 road map to pin down a particular parcel or a particular
24 region within a township for a developer to come in and
25 use those, they're not intended for that purpose, and

1 they're really not designed for that purpose, and that's
2 why if you blow down on them and say look at a particular
3 parcel and say is my parcel included in that area or not,
4 they're really not intended for that purpose.

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

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

17 DAVID WALTERS: Anyone else --

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

23 We have accepted a zoning ordinance for
24 wind there. We've had multiple meetings to see if public
25 acceptance, and we've had overwhelming acceptance there.

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1 I'm representing Beebe Community Wind Farms, and we have
2 two (inaudible) towers up, and we've collected over a
3 year's worth of wind data there and we're in the process
4 of leasing ground, and there's a potential of 40,000
5 acres in that area.

6 DAVID WALTERS: All right. Thank you.

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

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

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

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

22 UNIDENTIFIED BOARD MEMBER: So moved.

23 UNIDENTIFIED BOARD MEMBER: Support.

24 DAVID WALTERS: All in favor, aye.

25 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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C E R T I F I C A T E

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