

MEMORANDUM



TO: MEMBERS OF THE PLANNING COMMISSION
FROM: KRISTEN KAPELANSKI, PLANNER *krisk*
THRU: BARBARA MCBETH, COMMUNITY DEVELOPMENT DEPUTY
DIRECTOR
SUBJECT: PROPOSED ORDINANCE REGARDING WIND
ENERGY
DATE: FEBRUARY 4, 2010

In response to the recent push towards clean energy technology and in an effort to promote "green initiatives" in general, the Community Development Department has proposed a text amendment to address the siting and design of wind turbines to harness wind energy. Following is a brief summary of the standards proposed in the attached ordinance to address issues associated with wind turbines.

Wind turbines come in a variety of sizes designed to accommodate both private use in a residential or business setting and wind energy production via utility grade systems. According to the most recent U.S. Department of Energy National Renewable Energy Laboratory maps, the City of Novi does not have sufficient wind power to accommodate a large-scale utility wind farm. Therefore, the attached ordinance proposes regulations related to wind turbines designed for private use by local residents and businesses.

The proposed ordinance identifies three types of wind turbines: Small Tower-Mounted Wind Energy Turbines (STMWET), Small Structure-Mounted Wind Energy Turbines (SSMWET) and Medium Wind Energy Turbines (MWET). Staff prepared the attached chart summarizing the three types of turbines and the zoning districts where each would be allowed, either as a principal use permitted or a principal use permitted subject to special conditions (a special land use). The draft ordinance language has a number of considerations for siting and design requirements, as well as health and safety issues for all three types of wind turbines.

Small Tower-Mounted Wind Energy Turbines

STMWETs are proposed to be a special land use in all non-residential districts with a height not to exceed 100 feet. One exception is that these turbines would be a principal use permitted in the OST District (Office Service Technology), I-1 District (Light Industrial) and I-2 District (General Industrial) if the property is located at least 300 feet from residentially zoned property. These wind turbines would be limited to the rear yard with a required setback equal to the height of the tower. In most cases, STMWETs would not be permitted in any residential district. There is one exception. STMWETs would be permitted in single-family residential districts as a special land use requiring City Council approval on sites 25 acres or larger with already developed institutional uses. For the purposes of this ordinance, institutional uses would be defined as religious, educational and civic uses. A map identifying the parcels in the City that would meet the aforementioned requirements is attached. Turbines on residentially-zoned parcels with institutional uses would be limited to a height of 60 feet.

Small Structure-Mounted Wind Energy Turbines

SSMWETs are proposed to be a permitted use in all non-residential districts with a height not to exceed 15 feet measured from the highest point of the roof with a required setback of 15 feet. SSMWETs would be a special land use in single-family residential districts on parcels 25 acres or larger containing developed institutional uses and would not otherwise be permitted in any residential district.

Medium Wind Energy Turbines

MWETs are proposed to be a special land use in the I-1 District (Light Industrial), I-2 District (General Industrial) and the OST District (Office Service Technology). They would be limited to a height of 150 feet with a required setback equal to the total height of the tower. Additional regulations regarding ground clearance, noise, vibration, guy wires, etc. are also provided for in the proposed ordinance. No more than one medium-sized turbine would be allowed for each 2.5 acres of land.

The Implementation Committee met and discussed this matter at the meeting of May 6, 2009. A number of comments were received at the meeting and amendments were made to the ordinance to address some of those comments. Draft minutes of that meeting are attached.

The Planning Commission held a public hearing regarding the proposed text amendment on July 15, 2009. At that meeting, the Commission approved a motion to send the amendment back to the Implementation Committee for further review. Relevant meeting minutes are attached.

The Implementation Committee met and discussed this matter a second time on August 25, 2009. At that meeting staff presented a revised version of the amendment that did not permit any wind turbines in residential districts. The Committee discussed the revisions and recommended staff collect some additional public input before the matter was sent back to the Planning Commission for a public hearing and recommendation to City Council. Draft meeting minutes will be provided with the next packet. Since that meeting, staff has added the aforementioned provisions regarding turbines as a special land use on parcels 25 acres or larger with institutional uses in residential districts.

The Community Development Department has gathered a fair amount of public input through the use of surveys. A booth was set-up and comments collected at the Fall for Novi event held in September, 2009. In addition, a new section on the City's webpage was created to inform the public of the new ordinance and collect survey responses and comments. Generally, residents seem to agree with the ordinance as it is currently proposed. Survey results have been included in this packet.

Following the previous Planning Commission meeting, one of the Planning Commissioner's approached staff and noted that it may be appropriate where a turbine is installed a parcel with an institutional use to require the turbine be setback from all structures and from all property lines a distance equal to its height. Permitting turbines as a special land use in single-family residential districts on sites 25 acres or larger with already developed institutional uses was a recent amendment staff made to the proposed ordinance. The Planning Commission may wish to include as a condition of approval that such a provision be added to the proposed amendment.

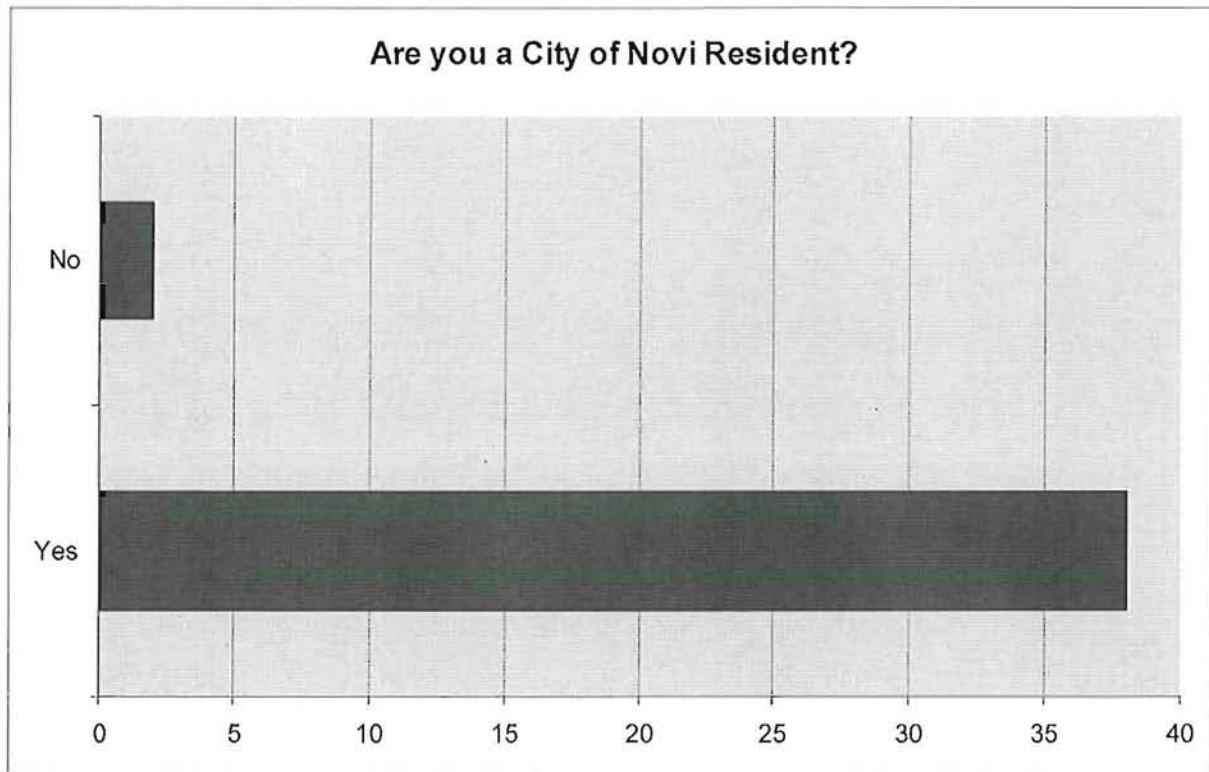
The Planning Commission is asked to hold the public hearing and make a recommendation to City Council. If any Commissioner has any questions related to this request, do not hesitate to contact Kristen Kapelanski, in the Community Development Department at (248) 347-0586 or kkapelanski@cityofnovi.org.

MEMORANDUM

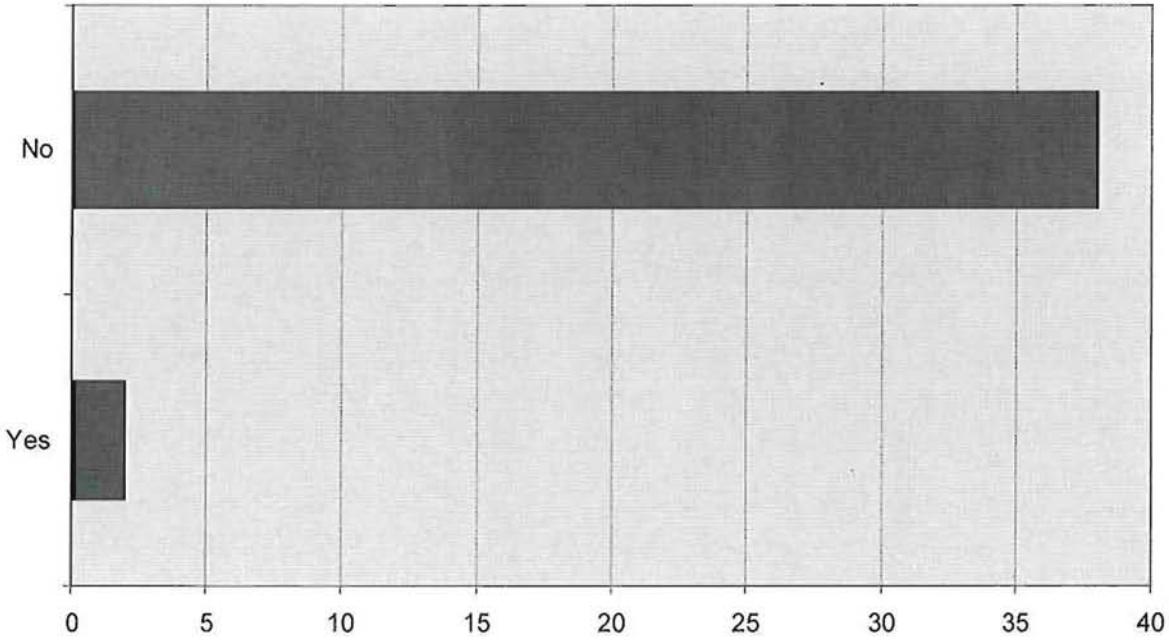


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FROM: KRISTEN KAPELANSKI, PLANNER
THRU: BARBARA MCBETH, COMMUNITY DEVELOPMENT DEPUTY
DIRECTOR
SUBJECT: PROPOSED ORDINANCE REGARDING WIND
ENERGY – SURVEY RESULTS
DATE: FEBRUARY 1, 2010

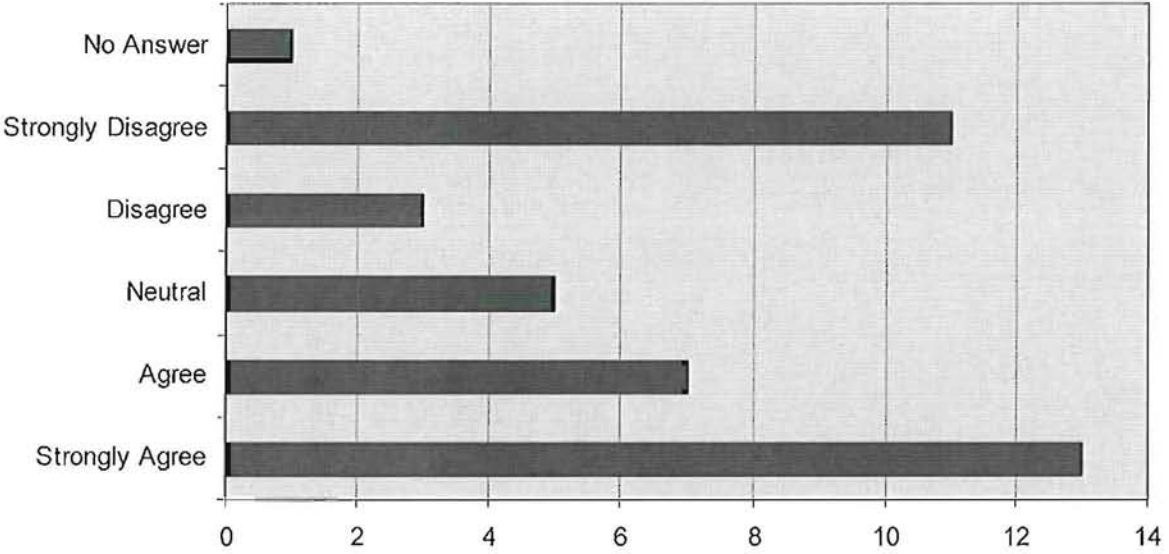
Below you will find the combined results of the attached wind energy survey posted on the City's website and distributed at the Fall for Novi event held in September 2009. These results reflect all of the surveys completed as of January 31, 2010. In total 40 surveys were submitted. If you have any questions related to the survey or the results, please contact me.



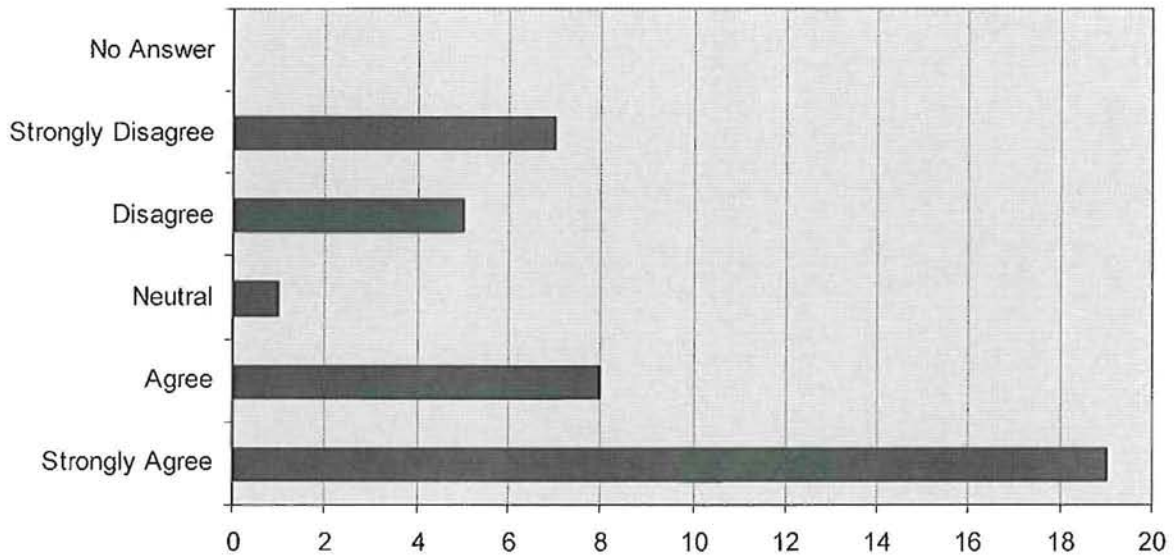
Are you a City of Novi Business Owner?



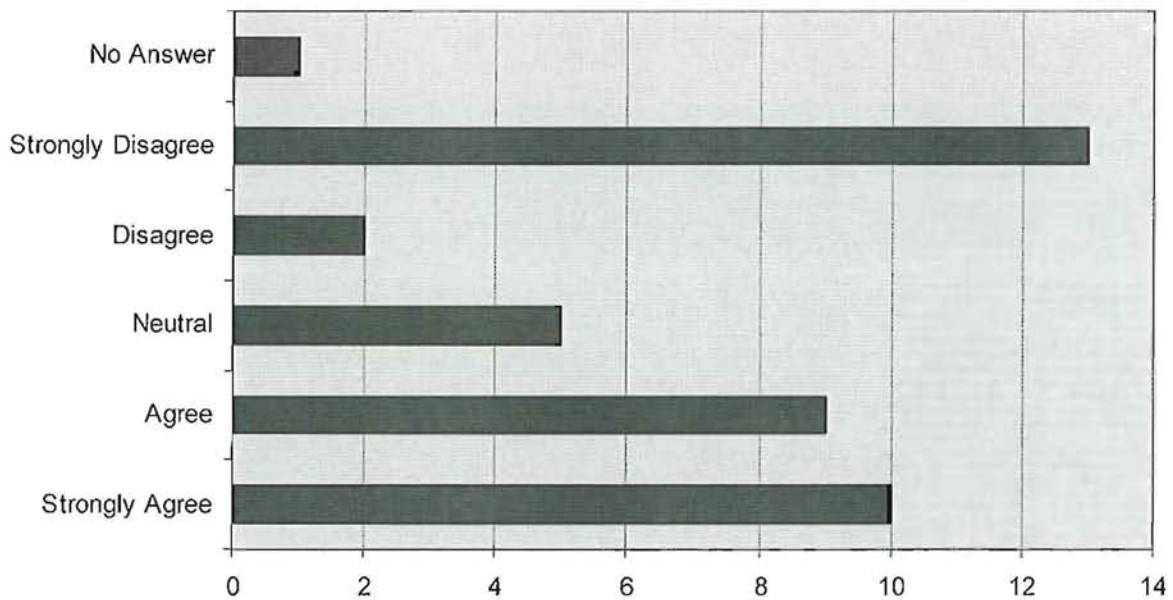
Structure-mounted wind turbines projecting up to fifteen feet above the roofline of a structure should be permitted in residential districts.



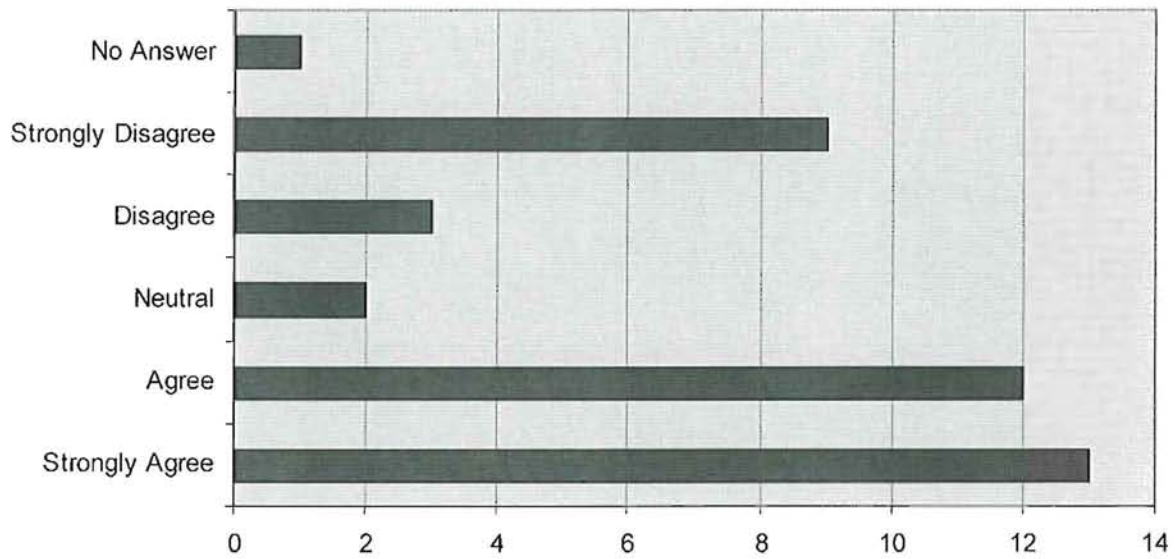
Structure-mounted wind turbines projecting up to fifteen feet above the roofline of a structure should be permitted in commercial, office and industrial districts.



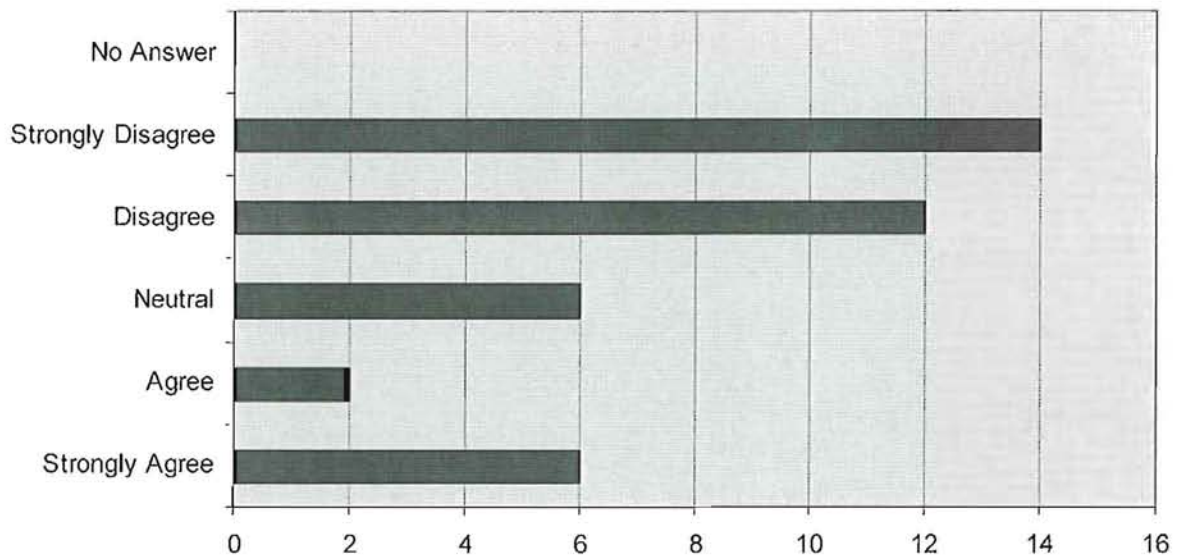
Small-scale tower-mounted wind turbines up to a height of sixty feet should be permitted in residential districts.



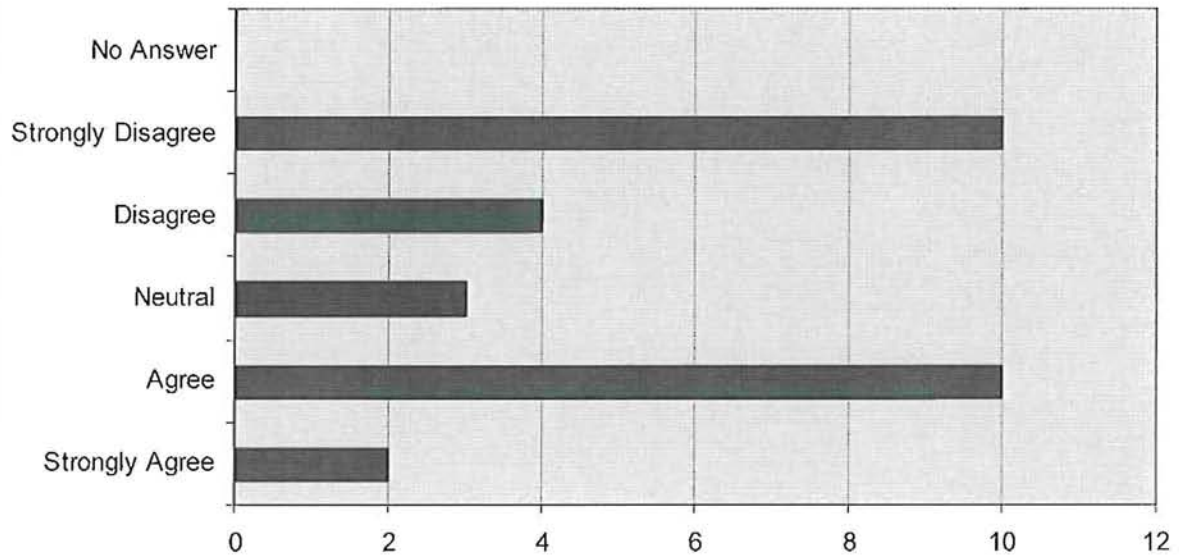
Small-scale tower-mounted wind turbines up to a height of one-hundred feet should be permitted in commercial, office and industrial districts.



Medium-scale tower-mounted wind turbines up to a height of one-hundred and fifty feet should be permitted in residential districts.



Medium-scale tower-mounted wind turbines up to a height of one-hundred and fifty feet should be permitted in commercial, office and industrial districts.



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TO: MEMBERS OF THE PLANNING COMMISSION
FROM: KRISTEN KAPELANSKI, PLANNER
THRU: BARBARA MCBETH, COMMUNITY DEVELOPMENT DEPUTY DIRECTOR
SUBJECT: PROPOSED ORDINANCE REGARDING WIND ENERGY – SURVEY RESPONSES
DATE: FEBRUARY 1, 2010

Below are the written responses gathered as part of the wind energy survey posted on the City's website and distributed at the Fall for Novi event held in September 2009. If you have any questions related to the survey or the responses, please contact me.

- Safety regard is too long!
- To prevent frivolous installation of wind turbines on sites that will not have sufficient quantity/quality of wind, each project should have a comprehensive performance analysis conducted based on realistic wind values at appropriate durations. This will cut down on wind turbines that are abandoned due to perceived poor performance.
- Schools and athletic parks should be considered for these wind turbines.
- Height of the turbine is important but noise limits must be part of the ordinance.
- Wind turbines create noise and vibration. They should be located in a central remote area tied to the power grid. All effects of wind turbines should be taken into consideration.
- This technology will enhance our cities reputation, and can have long term benefit as the state embraces alternative energy.
- Noisy.
- I work in the utility scale wind industry as a design engineer. You will have noise and flicker issues with turbines installed near people. Note that the units only get louder with age. Solar is much more appropriate and peak output coincides with air conditioning load - just when wind dies out!
- Novi is not a suitable area for any wind turbines.
- There are other viable sources of renewable energy...Solar, Biomass, Geothermal, etc. Wind is the most environmentally unfriendly...noise pollution, wildlife interference, safety hazards. I agree with having a sustainable, renewable energy plan for the city, but wind is not necessary and the least desirable for residential areas. Let's keep wind farms in remote areas or offshore in the great lakes.
- The possibility that my neighbor could put any wind turbine in his backyard greatly concerns me. The sound and the pulsating shadow would drive me crazy. We spend a lot of time in our screen porch on the back of our house and leave the windows of the house open when the weather permits. PLEASE DO NOT CONSIDER THESE FOR USE IN RESIDENTIAL DISTRICTS!

- I am totally opposed to wind turbines of any size in the city. Not only are they a visual blight, they potentially can create unpleasant noise and have the potential to cause the death of birds and bats.
- Wind turbines have not proven to be safe and have proven to be harmful to wildlife and residents enjoyment of their property and life. The birds and animals are harmed by the wind movement and flickering. People are adversely affected by the sound and flickering. There seems to be a lot of thought put into this proposal with much careful attention to restrictions. If I thought that this form of energy was harmless I would support this proposal, but I fear we are going to find out in the future that this method does even more harm than we currently know. I would like to see a complete ban for 10 years while the effects are studied more. I don't think this is a bandwagon that the city should jump on. Citizens of Novi do not need to be test subjects. Speak with residents of Michigan up north who now live with these turbines. They have many regrets.
- I have read quite a few articles about wind turbines and complaints people have about them. Some complain about the noise - even a mile away. Some even complain of a vibration charge (?) in the air strong enough to interfere with sleep, etc. I am very sensitive to vibration - even when others around me don't feel it - and definitely would not want this in Novi. There are too many open lands outside of Novi for these wind turbines.
- There should be no interference, review or anything associated with any installation that produces free energy. Keep the city out of this.
- Turbines in residential locations should take into account setbacks and lot sizes. Larger turbines should be permitted on larger parcels where adequate setback can be provided.
- Thank you for conducting this survey on such an important matter. I look forward to seeing your results, and hopefully watching Novi become a leader in implementing distributed energy generation.

MICHIGAN STATE
UNIVERSITY

January 11, 2010

Community Development Department
City of Novi

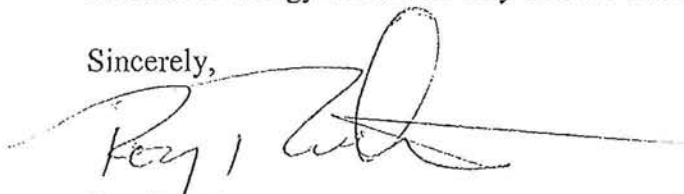
Greetings,

We live in a time of many challenges. Among the challenges that we face as a society is to develop clean, abundant sources of energy that are sustainable now and in the future. Michigan State University and the Governor's office have both identified the development and utilization of alternative energy as one of the prime areas of focus for Michigan. As part of this effort, the Michigan State University Tollgate Education Center is in the process of developing a solar, wind and other alternative energy teaching and demonstration area on the property located in Novi. As currently planned, this facility would be used primarily by all who are interested in installing, maintaining and inspecting small to medium scale alternative energy installations. Wind powered generation equipment would be an important component of this teaching project. Wind powered generating equipment can be very efficient and effective, but only if it is positioned high enough to be above the wind shading effects of trees and structures on the ground. Although there are noise disturbance, aesthetic and other concerns involved in placing wind driven power generation devices in urban environments, currently available quieter turbines and the placement of turbines at an appropriate distance from homes should mitigate these concerns.

In addition to the planned educational installation at MSU Tollgate, I believe that alternative energy generation systems are appropriate at schools and other similar facilities. Placing alternative energy generating equipment in a school environment has two primary advantages in addition to offsetting electrical use. Having the equipment sited at schools allows youth to become familiarized with this technology. I believe that alternative power generation is going to be a future growth industry in Michigan. Today's students will be tomorrow's workers in green energy jobs. Generation equipment on school grounds is also a great match for the community. Air conditioning use dictates that electrical need in the summer is at its peak while electrical use by schools is at its lowest. School based power generation equipment maximizes its power supply to the grid when it is most needed.

As our community and our state move into the future, I believe that it is up to our educational institutions to provide leadership. Teaching about and demonstrating alternative energy use is one way that we can do this.

Sincerely,



Roy Prentice
MSU Tollgate Farm Manager



**TOLLGATE
EDUCATION
CENTER**

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Novi, MI
48377-3128
248/347-3860
Fax: 248/380-9193
Web: www.tollgate.msu.edu

At issue: Alternative energy

Thumb-area residents to air pros and cons of wind farms

Hearing is set for Monday in Bad Axe

By KATHLEEN GRAY
FREE PRESS STAFF WRITER

Backed by research showing that Michigan's Thumb is among the breeziest areas in the state suitable for wind farm development, officials will travel to Bad Axe on Monday to hear from residents about the pros and cons of the towers and turbines beginning to dot the farmland of Huron County.

Michigan's Wind Energy Resource Zone Board is overseeing efforts to target places to develop wind farms.

The group's recent report identified four areas — one in the Thumb and three along the shores of Lake Michigan — that have the available space and consistent winds needed for renewable energy development.

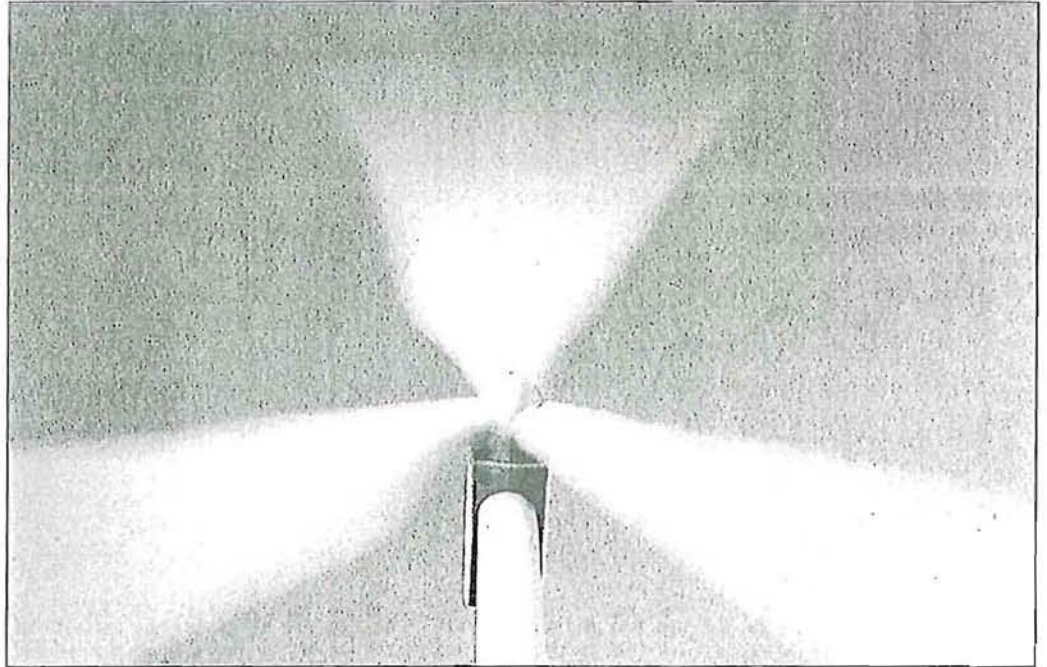
At the 11 a.m. hearing in Bad Axe, they are expected to hear from Charlie Briolat, who has five turbines on his 480-acre farm in Bingham Township and loves the green technology.

"I don't even hear them when I'm in my house," he said, even though one of the turbines is just 600 feet from his barn. "It's the way we've got to be looking."

He's getting paid by the John Deere Wind Energy Co. which runs the 32 windmills in the Harvest Wind Farm, so Briolat has a vested interest in the technology.

The board will likely get a very different opinion from David Peplinski and his family.

Since the 46 turbines in the Michigan Wind 1 farm went up



July photo by ROBERT F. BUKATY/Associated Press

The blades of a windmill blur as they catch the wind on Stetson Mountain in Maine. Some people who live near wind farms complain about the noise the turbines make.

Wind farm hearings

The Wind Energy Resource Zone Board will hold two hearings in areas of the state deemed most suitable for wind farms:

■ 11 a.m. Monday at the Huron County Expo Center, 170 W. Soper, Bad Axe.

■ 11 a.m. Aug. 31 at West Shore Community College, 3000 N. Stiles Road, Scottville.

For more information, go to www.michigan.gov/mpsc

in Ubyly in December, including one 1,300 feet from his home, Peplinski says he hasn't gotten a decent night's sleep.

"It's directly affecting our health," Peplinski said. "It's like having a jet running, sitting at the end of a runway

waiting to take off, but it never takes off."

The Peplinskis keep their windows closed and have only spent three days enjoying their backyard this summer.

"We're not in anyway against green energy or wind turbines," Peplinski said. "The issue is our inability to live in our own home."

Members of the board are prepared for any and all comments, said David Bertram, a board member and legislative director for the Michigan Townships Association.

Rules to be drafted

While the board won't make decisions about where windmills will go, the input from the meetings will be used by the Michigan Public Service Commission and local units of gov-

ernment to develop rules on issues like how close windmills can be placed to homes or businesses.

"Our report isn't going to change if wind turbines are going to be put up in the Thumb or anywhere else," Bertram added. "Wind developers have lease agreements all over the Thumb."

Other than windmills at individual businesses, there are five wind farms across the state.

The two largest are in the Thumb, generating electricity for utilities, which use the energy to reach a state-mandated goal of 10% of their electricity coming from renewable sources. The largest farm has 46 turbines.

■ CONTACT KATHLEEN GRAY: 313-223-4407
OR KGRAY99@FREEPRESS.COM

**PLANNING COMMISSION
ACTION SUMMARY
JANUARY 13, 2010**



cityofnovi.org

PLANNING COMMISSION ACTION SUMMARY

CITY OF NOVI
Regular Meeting

Wednesday, January 13, 2010 | 7 PM

Council Chambers | Novi Civic Center | 45175 W. Ten Mile
(248) 347-0475

CALL TO ORDER

The meeting was called to order at or about 7:00 PM.

ROLL CALL

Present: Member Baratta, Member Cassis, Member Gutman, Member Larson, Member Meyer, Member Prince

Absent: Member Greco (excused), Member Lynch (excused), Chair Pehrson (excused)

Also Present: Barbara McBeth, Deputy Director of Community Development; Kristen Kapelanski, Planner; Mark Spencer, Planner; Lindon Ivezaj, City Engineer; Deputy Chief Lindberg, Police Department; Kristin Kolb, City Attorney

APPROVAL OF AGENDA

A motion to approve the January 13, 2010 Agenda. *Motion carried 6-0.*

MATTERS FOR CONSIDERATION

1. SET A PUBLIC HEARING FOR FEBRUARY 10, 2010 FOR A ZONING ORDINANCE TEXT AMENDMENT RELATED TO THE WIND TURBINE ORDINANCE

A motion to set a Public Hearing for February 10, 2010 for the Text Amendment related to the Wind Turbine Ordinance. *Motion carried 6-0.*

2. SET A PUBLIC HEARING FOR FEBRUARY 10, 2010 FOR A ZONING ORDINANCE TEXT AMENDMENT RELATED TO THE SOLAR COLLECTOR ORDINANCE

A motion to set a Public Hearing for February 10, 2010 for the Text Amendment related to Solar Collector Ordinance. *Motion carried 6-0.*

3. SET A PUBLIC HEARING FOR FEBRUARY 10, 2010 FOR ZONING MAP AMENDMENT 18.693 A CITY-INITIATED REZONING FOR THE LANDINGS PROPERTY NEAR THE INTERSECTIONS OF 13 MILE ROAD AND EAST LAKE DRIVE AND 13 MILE ROAD, OLD NOVI ROAD AND SOUTH LAKE DRIVE.

A motion to set a Public Hearing for February 10, 2010 for Zoning Map Amendment 18.693, a City initiated rezoning for the Landings Property. *Motion carried 6-0.*

ADJOURNMENT

The meeting adjourned at 8:55 PM.

MON	01/18/10	CITY OFFICES CLOSED	
MON	01/25/10	CITY COUNCIL MEETING	7:00 PM
WED	01/27/10	PLANNING COMMISSION MEETING	7:00 PM
MON	02/08/10	CITY COUNCIL MEETING	7:00 PM
TUE	02/09/10	ZONING BOARD OF APPEALS MEETING	7:00 PM
WED	02/10/10	PLANNING COMMISSION MEETING	7:00 PM
MON	02/15/10	CITY OFFICES CLOSED	
MON	02/22/10	CITY COUNCIL MEETING	7:00 PM
WED	02/24/10	PLANNING COMMISSION MEETING	7:00 PM

* Actual Language of motions subject to review.