MICHIGAN PLANNER

American Planning Association
Michigan Chapter

A Publication of the Michigan Chapter of the American Planning Association

HARNESSING WIND POWER

OVER THE CENTURIES, wind has been used to grind grain, pump water, and sail. More recently, wind generates electricity--something we all use. In 2009, the MAP Board of Directors adopted a Wind Energy Policy. In less than a decade, innovations in technology and changes in practice have made wind energy an ever growing part of the Michigan landscape. There are pros and cons to all change. From big box retailers and suburban sprawl to gravel mining, and yes, now wind turbines, planners possess the technical expertise to help community leaders respond to changing conditions. Planners conduct research, analyze trends, gather community input, and provide recommendations that lead to solutions.

The articles in this issue of the *Michigan Planner* highlight techniques communities can use to determine for themselves what is best and how preliminary, comprehensive discussions can yield productive results.

WIND ENERGY IN MICHIGAN: Step Back and Plan

AUTHOR SARAH MILLS, PHD, is a lecturer and senior project manager at the University of Michigan's Ford School of Public Policy. She received her PhD in Urban and Regional Planning from the University of Michigan, looking at the connection between wind energy and farmland preservation. A native Michigander (from Maybee in Monroe County), she currently serves on the City of Ann Arbor's Planning Commission. She also served as a technical expert on the Wind Energy Stakeholder Committee convened by Wind on the Wires and 5 Lakes Energy that met throughout 2017 to discuss what could be learned from a decade of wind development in Michigan, and how new advances in the field might be incorporated in future projects.

IN THE LAST DECADE, the use of wind energy in Michigan has grown dramatically from less than 3 megawatts at the end of 2007 to 1,860 megawatts at the end of 2017(a megawatt is a unit for measuring power that is equivalent to one million watts; one megawatt is equivalent to the energy produced by 10 automobile engines). Much of the



The Michigan Association of Planning and the Michigan Municipal League are partnering for the first time to deliver a shared experience event. We'll bring together the best that both organizations have to offer and highlight national speakers and themes. We'll consider the relationship of Michigan's cities and villages to the townships and regions that surround them. We'll leverage the partnership to provide relevant and informative sessions which ALL of our members have come to expect. Register Now!

initial growth was spurred by legislation passed in 2008 that required utilities to source 10% of their power from renewable energy by 2015. The legislature subsequently increased that requirement to 15% by 2021, and the state's major investor-owned utilities plus a number of corporations and municipalities have publicly committed to exceeding those targets in the longer term both for economic and environmental reasons.

This boom means that wind energy has become—and will increasingly become—a topic of discussion in more communities across the state. While it is possible to locate

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CONNECT

MEMBERSHIP RENEWAL

It's dues renewal time for MAP's Chapter Only members! Our fiscal year ends June 30, and the new membership year starts up on July 1, 2018. Our Chapter Only membership category includes planning commissioners, zoning board members, elected leaders, and professionals from ancillary professions. Most professional planners also belong to the American Planning Association, and pay their dues directly to APA. Many thanks to the scores of renewing members; we are always deeply humbled at the trust you place in us to inform and guide your local officials. It's not too late to renew for the 2018 – 19 membership year. If you are unsure if your commission's membership has been renewed, ask your clerk or administrative / support staff. We look forward to serving you for another year!

PATRICIA BIRKHOLZ

Former State Senator Patricia Birkholz passed away at age 74 following a battle with cancer. She was first elected to the Michigan Legislature in 1996 as the first woman State Representative from Allegan County. She served in the House from 1997-2002 and was elected the first female Republican Speaker Pro-Tempore. She was subsequently elected to the Michigan Senate in 2002 and served two terms from 2003-2008.

Senator Birkholz' commitment to public service was evident in 2007 and 2008 when she worked closely with the Michigan Association of Planning, and many other stakeholders, to unify the three planning enabling acts into a single planning act, PA 33, the Planning Enabling Act. She led a stakeholder work group for nearly two years, negotiated compromise, and facilitated difficult conversations between interest groups with at times very different agendas. Her leadership was admirable, her patience was steadfast, and her generous and intelligent guidance was commendable. Her grace, poise and gift for diplomacy will be genuinely missed in our planning community and in Lansing.

NEW STUDENT MEMBERS

The MAP Board includes two appointed positions reserved for students, and this year the University of Michigan seats Andrew Moss and India Solomon, who will serve from May 2018 through April 2019. The organization greatly benefits from student perspectives, and these voices help inform organizational direction, especially as we seek to attract and maintain members for life from among our student and emerging professional cohorts.

VOTE!

Again, this year, the American Planning Association is hosting the Michigan Chapter board election. The nominating deadline has come and gone, and four candidates submitted petitions to be placed on the ballot. The ballots will be available August 7 online, and email reminders sent to all MAP members during the month-long voting period. September 7 is the deadline to vote. Candidate bios and position statements will be available in August.

OCTOBER IS COMMUNITY PLANNING MONTH

The September | October issue of the Michigan Planner magazine will highlight member communities and the state-of-the-art planning occurring across the state. Have you led an innovative planning process? Implemented a plan element resulting in real community change? Integrated inclusive engagement techniques? Contact Amy Vansen, AICP at <code>avansen@planningmi.org</code> to get details about submitting your community story.

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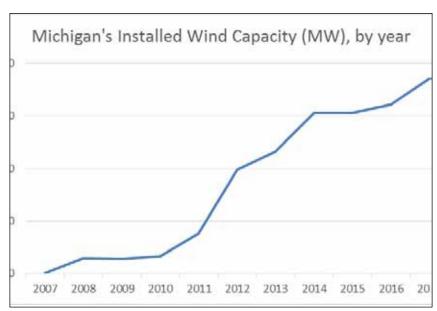
Wind Energy in Michigan, continued from page 1

turbines in urban environments, most utility-scale "windfarms" in the state will be built in rural areas where there is more open space. Currently, more than 35 townships in the state host utility-scale wind projects, and there are close to 35 more townships actively discussing future projects.

Last year I received a grant from the C.S. Mott Foundation to collect data about the impacts existing windfarms have had on Michigan communities, with that information then being shared with communities considering wind energy. The research portion of the project entailed sending a survey about perceptions of wind energy and the wind planning process to every owner of residential and agricultural land in 10 Michigan townships that host utility-scale wind farms. Just over 2,000 landowners (53% of those who received the survey) responded. [The next E-Dition will provide links to the survey and findings]. The goal was to share the pros and cons of wind development—and the lessons learned from across the state-to help ensure that communities had good information to determine whether and how wind development meshed with local community values. Here are some key take-aways.

WIND ENERGY AND THE MASTER PLAN

Consider how wind energy fits into your community's long-term plan. For most rural communities in Michigan, wind energy development is primarily an economic development proposition, bringing with it not only benefits to the landowners who enter into agreements with wind developers, but also community-wide economic benefits in the form of property tax revenues. This sort of economic development, though, might not be compatible with other community goals.



My research suggests, for example, that large wind developments might conflict with economic development plans calling for substantial residential development or substantial growth in tourism. Landowners with smaller properties are less likely to directly benefit from the project (though some wind developers are using business models that incorporate even those with small parcels). Furthermore, there may be a smaller pool of people who are willing to buy a vacation home or build a brand new home in a subdivision in the midst of a large windfarm. Landowners who move to rural areas specifically in search of peace and quiet are more likely to find wind turbines incompatible with that ideal.

On the other hand, for communities looking to maintain or expand their agricultural industry, my research finds that wind development can be very compatible with those goals [See sidebar on farmland preservation, page 7]. By giving farmers another way to generate revenue from their land, wind energy development allows farmers to diversify their income and shore up succession plans. This may also help stabilize the population if young people choose to stay on the

farm rather than move away.

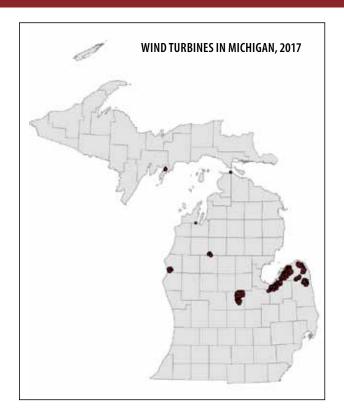
Community leaders and stakeholders must determine whether and how wind energy fits into their long-term vision for the community.

INVOLVE THE COMMUNITY

The next step is determining how to translate that vision into the zoning ordinance.

As a planning scholar, I came to this research hoping to find a silverbullet zoning ordinance that would satisfy both sides of the issue: those in the community who sought the economic benefits of wind and those that wanted to reduce or mitigate the noise and visual impact of utility scale wind turbines. There is no silver bullet. My survey research reveals that a larger setback distance or lower noise threshold doesn't necessarily translate into residents who are more satisfied with the turbines in their township or more willing to accept additional turbines.

Instead, research reveals that perceptions of the planning process influence how people feel about wind energy. Those landowners who say that they had ample opportunity to provide input during the wind



project planning stage were much more likely to give positive assessments of the wind project in their community and to say they would support future wind development. The same is true among those who felt that local government officials' decisions were in the best interests of the township and who felt that the wind project developer acted openly and transparently.

This suggests, like with any other land use issues, the importance of having an open and transparent process while developing an ordinance, providing as many opportunities as possible for residents to ask questions about the impacts wind turbines might have on the community, and to give feedback about where wind turbines might be most appropriate. As many planning commissioners know, it's rare to make decisions that will satisfy everyone, but when there is a process that seriously considers resident feedback, openly highlights where there are differing opinions, and publicly discusses how to balance those opinions in light of the community's long-term plan residents are much more likely to accept the outcome.

While there is no single setback distance to guarantee community happiness, the zoning specifics make a difference about whether

BRIDGE MAGAZINE & MAP Finding Common Values

BRIDGE MAGAZINE is a non-partisan, non-profit Michigan news source whose mission is to inform through fact-based, nonpartisan journalism about the critical issues facing our state, and to help citizens navigate the challenges of civic life. Bridge covers many issues relevant to community planners and appointed and elected officials. MAP's adopted land use and planning policies are remarkably consistent with positions taken by The Center for Michigan, under which Bridge Magazine operates.

Bridge Magazine's recent "In Search of Common Ground" initiative, in fact, parallels MAP's 2017 Finding Common Values theme, wherein throughout 2017 your MAP Board of Directors invited guests and experts to join them for conversations about the complex issues many community planners struggle with. Local conversations and community engagement have become more difficult than ever in recent years, and planners do play a unique role in bringing locals together to . . . well . . . find common values.

READ MORE ABOUT BRIDGE MAGAZINE'S INITIATIVE HERE: https://www.bridgemi.com/special-reports/michigan-divided, as they followed 11 Michigan people and families throughout 2017.

In 2018, *Bridge* is conducting Truth Tours across the state. Follow this link to see if a Truth Tour is already scheduled in your community, and how to plan one if there is not: https://www.bridgemi.com/center-michigan/be-part-2018-michigan-truth-tour

And finally, *Bridge Magazine* will join MAP and MML at our first ever annual partner conference on September 20–22, 2018, in Grand Rapids. We'll hold our own Truth Tour event, providing structured, as well as informal opportunities to bring together elected and appointed leaders, city managers and township supervisors, and professional planners and more to learn from each other and find the common values to move Michigan forward.

wind turbines can reasonably be located in a community. As with any ordinance amendment, carefully consider whether the amendment furthers community goals and objectives.

PLAN—AND ZONE—EARLY

There is more time to plan and zone, of course, when there isn't an active proposal on the table. When townships are able to proactively address wind energy, it puts the community in the drivers' seat, and also allows for a conversation before residents have a vested financial interest in the issue. As any planning commissioner will attest, it's easier to have a rational discussion in the abstract, before the change is proposed for one's own "backyard." Planning early ensures that discussion happens on the community's own terms rather than reacting to a wind development proposal or responding to outside interests seeking to influence local decisions late in the game.

In traveling the state talking to communities about wind energy, I've seen this first hand. In townships I visited where wind projects were already in the planning stages, most people at the meetings had largely already formed their opinions and many in the audience were from out-of-town. In townships curious about wind energy, but where no project was proposed, the audiences were admittedly smaller, but often the conversation was much richer as attendees were better able to grapple with what wind energy might mean, not for themselves and the current generation, but for their entire community well into the future.

Regardless of when the planning process starts, it's important that

discussions are grounded in factual information. Research suggests that such education is more valuable when it comes early in the process, preferably before specifics of a project are proposed.

MAP adopted a wind energy policy in 2009, and is updating it in response to significant changes in the industry, both in terms of technical advances in the turbines themselves, and more experienced local officials who have learned how to better respond to siting petitions. In addition, MSU Extension has educational materials on siting and social acceptance of wind energy that are available.

CHECK OUT THE NEXT

E-DITION FOR MORE
WIND ENERGY RESOURCES.

PLANNING FOR WIND: The First Step for Successful Siting

MUCH HAS BEEN WRITTEN ABOUT THE SITING OF UTILITY-SCALE WIND TURBINES. The Michigan Energy Office of the then-Department of Labor and Economic Growth (DLEG) first published guidelines for siting wind energy systems in 2005. The DLEG siting guidelines included background commentary and suggested zoning language on a variety of siting topics such as setbacks, shadow flicker, sound, visual impact, and wildlife impact. The DLEG siting guidelines, which eventually took the form of sample zoning provisions, were last reissued in 2008. In 2017, Michigan State University Extension published a variation of the DLEG's sample zoning language.

Both the DLEG siting guidelines and the variation published by MSU Extension share the common

goal of "striking an appropriate balance between the need for clean. renewable energy and the necessity to protect the public health, safety, and welfare." While a laudable goal, zoning is supposed to be based on a plan. The first and most important question is deciding if and where utility-scale wind turbines - or, more specifically an array of wind turbines or a "wind farm" - fit within the framework of a community's master plan goals. Land use studies should shape the development of zoning policies. Sample zoning regulations are valuable, but the zoning-centric focus of these resources may be the reason why many communities move straight from passing a wind energy development moratorium to debating the merits of turbine setbacks without doing the important background analysis.

Previously, wind technology limited potentially affected communities to those in the thumb region. See Map 1, next page. But wind turbines have become taller and more efficient which increases the number of potential site locations. See Map 2, next page.

Wind energy development presents unique land use planning challenges.

The scale of commercial wind energy is unlike almost any other land use that a rural community could be expected to plan for. A typical wind energy project may involve thousands, if not tens of thousands, of acres. DTE Energy, which owns and operates 13 wind energy projects in Michigan, reports that one utility-scale wind turbine can require 150 acres of land. This number is consistent with the American Planning Association's