



**Before the Senate Energy and Technology Committee  
Testimony on Senate Bill 438  
Prepared by Lead Midwest Energy Analyst Sam Gomberg  
On behalf of the Union of Concerned Scientists**

September 2, 2015

Chairman Nofs and Members of the Senate Energy and Technology Committee  
100 North Capitol Avenue  
Lansing, MI 48933

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Thank you for having me here today and providing me the opportunity to testify on these important issues. My name is Sam Gomberg. I am the Lead Midwest Energy Analyst for The Union of Concerned Scientists - a science-based, non-partisan, nonprofit organization with over 13,000 supporters in Michigan, including hundreds of scientists, economists, engineers and public health experts.

I'm here to testify in opposition to SB 438 because it repeals Michigan's energy optimization and renewable energy standards and because it inappropriately limits compensation for distributed generation resources. These legislative changes will cause Michigan to lose momentum and fall behind other Midwest states in the transition to a 21<sup>st</sup> century economy powered by cleaner, lower-risk, and more sustainable energy resources.

UCS has been engaged in the discussion about Michigan's energy future for several years. In addition to actively participating in the Governor's Energy Plan process in 2013 - submitting more than 100 pages of technical comments - we have also published multiple analyses over the past few years that are relevant to this discussion. For example, last year we released an analysis, using a model developed by the Department of Energy, titled *Charting Michigan's Renewable Energy Future* that looked at the costs and benefits of ramping up Michigan's use of renewable energy to 30 percent or more by 2030.

This report is included in the packets that we provided at the hearing on August 19<sup>th</sup>. In sum, our findings are consistent with the wealth of other information published by the MPSC, independent consultants, Michigan's utilities, and public interest organizations that show (1) the current renewable energy standard has successfully driven cost-effective investment in the state's renewable energy resources, (2) that there remains a vast untapped potential for Michigan to further develop its renewable energy resources, and (3)

that renewable energy is a cost-effective, low-risk, and economically beneficial choice for Michigan consumers going forward.

In fact, our analysis found that Michigan can achieve 30 percent renewable energy by 2030 with virtually no additional cost to consumers while attracting nearly \$10 billion in new capital investment to the state. This renewable energy development also brings additional tax revenue to the state and payments to local communities and landowners that host renewable energy facilities - all while driving down emissions and protecting Michigan's land, air, and water.

And achieving 30 percent renewable energy does not mean covering the state in wind turbines or solar panels, or cutting down Michigan's forests for bioenergy. For example, if we were to meet a full 30 percent of Michigan's energy demand with today's wind turbines alone, only 5 percent of Michigan's farmland would need to host wind farms. And 98 percent of that land would still be available for farming. Further, just tapping into the solar potential of Michigan's urban areas -- meaning rooftops and urban lands not suitable for other development, such as brownfields -- could provide about 25 percent of Michigan's energy demand. These greater levels of renewable energy investment would be a big step forward but in fact would only begin to scratch the surface of Michigan's true renewable energy potential.

Regarding the energy optimization standard, I will refrain from repeating all of the statistics that have been provided to you by other testifiers over the past couple weeks. But I will point out that the testimony provided has, almost unanimously, sang the praises of energy efficiency and all of the benefits that it has provided. DTE and Consumers Energy were here last week touting how much energy they have saved and how that translates into real cost savings for their customers. And I think we can all agree that there is a significant efficiency resource still untapped here in Michigan. But I must agree with those who doubt that Michigan will achieve its true potential to develop this resource if the energy optimization standard is repealed.

I recognize several committee members have proposed to replace these standards with an integrated resource planning (IRP) process. And while we are not here today to talk about the proposal put forth in SB 437, I will take this opportunity to commend Senators Nofs and Proos for putting forth legislation that has clearly been given a lot of thought and effort to accommodate the various interests involved. I look forward to engaging in that discussion in the near future. However, an IRP process should be considered in the context of complementing, rather than replacing Michigan's renewable energy and energy optimization standards.

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The state's renewable energy and energy optimization standards provide far more simplicity and certainty than an IRP process does. And when the evidence is so clear that renewables and efficiency carry with them significant benefits to the people of Michigan, I believe it is critical to preserve these standards rather than replace them with a less robust and more complex mechanism. We know we want to continue developing these resources, so let's maintain the standards and make sure that happens. Then we can use the IRP process to provide us with the most cost-effective path forward for achieving these goals.

Across the country, renewable and efficiency standards are driving cost-effective investments in homegrown energy and local communities, and they are reducing our current over-reliance on fossil fuels, meaning a more sustainable, lower-risk, and cleaner electricity system. Failing to take this opportunity to extend and strengthen Michigan's standards will leave important benefits unrealized in Michigan. And abandoning these standards will make it harder for Michigan to comply with the new federal Clean Power Plan.

Just last week we released a report titled *States of Progress* that highlights how Michigan's current renewable energy and energy optimization standards, combined with announced coal plant retirements, have already moved Michigan more than 60 percent of the way towards compliance with the state's 2022 interim target under the EPA's final Clean Power Plan. As the state considers how best to meet the remainder of its requirements, strengthened standards can provide a straightforward pathway towards continued emission reductions.

Finally, we cannot overlook the risk-mitigating benefits of diversifying the state's electricity portfolio with renewables and efficiency. I strongly agree with previous statements made by the MPSC and others that a more diverse electricity portfolio is a less risky portfolio. Unfortunately, the way Michigan's regulated utility system is designed, the vast majority of these risks falls on ratepayers and are therefore often overlooked or undervalued in the typical utility planning process. Standards are a good way to help protect against volatile fossil fuel prices, the impacts of future regulations, and the risks of future fuel availability. They also help insulate Michiganders from the public health, environmental and climate change risks associated with investing in the fossil fuel and nuclear resources that the traditional utility business model is built around.

For all of these reasons, I would encourage the Committee to reconsider extending and strengthening Michigan's renewable energy and energy optimization standards.

Another critical element of SB 438 that should be reconsidered is the valuation given to distributed generation, or "DG" resources. The reimbursement for DG resources laid out in

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SB 438 inappropriately damages the economics of these resources by ignoring the wide range of benefits these resources provide to the electricity system and the cost-savings they can provide for all ratepayers. We recommend removing these sections from SB 438 and instead setting up a process before the MPSC that includes input from stakeholders to determine the true value of DG resources to Michigan.

It is now widely accepted that DG resources provide significantly more benefits to the system and to ratepayers than simply the avoided cost of generation at centralized power plants. As such, DG resources should be valued significantly higher than what is reflected in SB 438. Both Maine and Minnesota have recently concluded proceedings before their utility commissions to determine the value of distributed solar. Both commissions concluded that the value of distributed solar was far higher than just the wholesale cost of electricity. The recognized benefits of DG resources include reduced transmission and distribution congestion and, over time, the avoidance of transmission investments, reduced line losses because generation is in close proximity to load, voltage regulation benefits, market response to reduced demand, reduced power plant operation and maintenance costs, avoided fuel costs, and - particularly in the case of solar resources - reduced demand for higher-priced peaking resources. Of course, when DG resources are made up of renewable energy technologies, there are also the public health and environmental benefits of avoided emissions.

To illustrate how DG resource can reduce costs for all ratepayers, consider the value as seen by a municipal utility from the cumulative effect of distributed solar PV installed within its service territory. The municipal utility is not a Transmission Owner, and obtains Network (or transmission) Services from an adjacent utility at the posted tariff rate. In PJM, these rates may range from \$10,000 to \$50,000 per megawatt-year. The cost of that service is paid to the transmission owner based on the municipal utility's demand at the time of the peak, multiplied by the published rate. When the peak load reduction of installed DG causes the municipal utility to have a 1 megawatt lower peak demand, the Network Service charge savings will be \$10,000 to \$50,000 per year. These savings are then passed on to all ratepayers served by that municipal utility.

Also, SB 438's setting of the price for energy paid at the day-ahead wholesale energy market price misses the opportunity to reflect the hourly price difference of energy and the value of resources that generate on-peak versus off-peak. Part of the value of solar as a mid-day resource is that it's able to generate electricity at times when prices are higher. Further, day ahead prices will not include the highest values that result from unexpected needs (such as during an unexpected outage or extreme heat event), so the decision to set compensation levels at the day-ahead wholesale price rather than "real-time" or actual energy market price inaccurately discounts the value of these resources.



It would be premature to speculate on what the outcome might be of MPSC proceedings to determine the true value of DG resources to Michigan's ratepayers. The range of costs and benefits studied by commissions in Maine and Minnesota highlights the complexity of this issue. But the results of those proceedings strongly suggest that the value of DG resources here in MI is significantly higher than the day-ahead wholesale cost of electricity. I would strongly encourage you to remove the DG resource compensation sections from SB 438 and instead direct the MPSC to initiate proceedings to determine appropriate compensation levels for DG resources in Michigan. Until this process is completed, I would recommend maintaining the current net metering provisions so that investors in distributed resources continue to receive a fair level of compensation.

Thank you for the opportunity to provide this testimony. I am happy to answer any questions.

Sincerely,

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