

25% Renewable Generation Mandate

Policy summary

Senate Bill 450 and Assembly Bill 649 would accelerate Wisconsin's existing 10% Renewable Portfolio Standard (RPS) from a 2015 compliance date to a 2013 compliance date. The legislation would also require utilities to meet a 20% RPS by 2020 and 25% RPS by 2025. The proposal also makes definitional changes to expand the technologies that qualify as "renewable," including a modification to the cap on out-of-state hydroelectric generation.

Background & Policy Considerations

- Wisconsin is about halfway toward meeting the current 10% RPS
- In 2008, Wisconsin's electric generation reserve margin was **30.9%** according to the PSC's Strategic Energy Assessment 2014, released in April of 2009. This a measure of our excess generation capacity.
- Wind generation has a capacity factor of roughly 25% - 30% in Wisconsin, meaning a wind turbine will generate electricity about 25% - 30% of the time. **As such, wind is not a substitute power for coal or natural gas electric generation – it must be backed up with fossil fuel generation, which is more reliable for base load demand.** This makes wind a more expensive, less reliable and less efficient energy source.
- Because wind is not a replacement or substitute for fossil fuel generation, it does not result in significant greenhouse gas savings, and will not significantly lessen Wisconsin's consumption of fossil fuels.
- **The Task Force's own modeling, which assumed meeting a 25% RPS by 2025, found that greenhouse gas emissions would not drop below 2005 baseline levels even when the RPS mandate is fully implemented by 2025.** This is not an effective strategy to reduce emissions or meaningfully reduce our consumption of fossil fuels.
- Because other states like Minnesota and Iowa have more favorable wind velocities, the majority of renewable generation to meet the 10% mandate has occurred out-of-state. Indeed, the global warming legislation requires less than half (40%) of Wisconsin's renewable generation to occur within our own borders. This calls into serious doubt the magnitude of job/economic benefits to Wisconsin's economy.

Cost

- Constructing new renewable electric generation has proved to be very expensive in the context of our current 10% RPS mandate. For example, WE Energies recently stated that they expect to spend \$1 billion to achieve a 6% renewable portfolio for their own generation – a little more than half of what is required under current law. Because the "low hanging fruit" has already been plucked, the future cost of renewable development is not likely to be linear, but exponential.
- In the PSC's Strategic Energy Assessment 2014, they priced the cost of wind generation to be \$2.32 million per Megawatt. They also concluded that wind would continue to be the most affordable renewable technology. The PSC report concluded that meeting a 25% RPS by 2025 would require at least 400 Megawatts of renewable generation to be built each year until 2025, with 600 Megawatts possibly required in later years.

- **Using the PSC's price of \$2.32 million per Megawatt, a 25% RPS by 2025 would cost roughly \$15 billion.**
- Consistent with the PSC numbers, the Wisconsin Policy Research Institute (WPRI) economic study on the cost of global warming legislation concluded that **a 25% RPS by 2025 would cost a net \$16.2 billion**, even after accounting for savings from avoided costs due to very modest reductions in fossil fuel consumption.
- Aside from the significant capital costs associated with massive scale shifts to intermittent power sources like wind and solar, there are substantial costs associated with new transmission lines necessary to transit the power to Wisconsin electric customers. These costs have yet to be quantified, but must be known before a 25% RPS is enacted in Wisconsin.
- The WPRI study found that expensive energy policies, driven primary by the 25% RPS, would cost Wisconsinites over \$1,000 per capita by the year 2020.

Key Questions

- The PSC has concluded that Wisconsin had a 30% surplus of electric generation in 2008. At a time when we have significantly more generation than is needed to meet customer demand, does it make sense for the Legislature to make electricity more expensive by forcing electric customers to pay to construct additional generation that is not needed to meet our demand for electricity?
- Most of the renewable generation under the 10% RPS has occurred out-of-state, and that trend would continue under SB 450 and AB 649. How does building wind farms in Minnesota and Iowa equate to "green jobs" in Wisconsin?
- Wisconsin has the most manufacturing-intensive economy in the United States, and these jobs rely upon the availability of affordable energy to stay afloat. How will increasing the cost of electricity by \$15 billion or \$16 billion (depending upon who's estimate you use) help us keep energy prices at affordable levels to keep manufacturing jobs viable in our state? How does increasing the cost of energy make Wisconsin's business climate more competitive?
- The Governor's Global Warming Task Force modeling published in their final report showed that a 25% RPS would not reduce greenhouse gas emissions below 2005 baseline levels, even when fully implemented. Yet the policy will cost Wisconsinites at least \$15 billion, perhaps much more. What is the magnitude of the benefit to global temperate, climate and sea levels that Wisconsin citizens can expect in return for this very expensive investment?
- Wisconsin electric rates have risen faster than any other Midwest state in the last decade. What, if any, are the specific cost-containment elements of the 25% RPS proposal that will insulate electric customers (not utilities) in Wisconsin from the inevitable rate hikes that will result from this proposal? Given the current economic recession and overall state of our economy, how much more should Wisconsin customers be forced to pay for their electricity?