



HOW MICHIGAN CAN MEET ITS CLEAN POWER PLAN TARGETS

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In August 2015, the U.S. Environmental Protection Agency (EPA) finalized the Clean Power Plan (CPP), the first-ever carbon pollution standards for existing power plants.¹ The CPP enables states to use a wide range of options to meet their standards, including fuel switching, increased use of renewables, energy efficiency, a carbon fee, or participation in a trading program.

For Michigan, EPA set a mass-based standard for existing fossil plants of 47.5 million short tons of carbon dioxide (CO₂), which is about a 33 percent reduction below the state's 2012 levels.² In this fact sheet, we show how Michigan can meet, and even exceed, its mass-based standard through its clean energy policies and better use of existing infrastructure while minimizing compliance costs, ensuring reliability, and harnessing economic opportunities in clean energy.

WRI analysis finds that Michigan can reduce existing power plant CO₂ emissions 36 percent below 2012 levels by 2030 by achieving its clean energy policies and making better use of existing infrastructure, surpassing its mass-based target (Figure 1).

FOUR WAYS TO REDUCE POWER SECTOR EMISSIONS IN MICHIGAN

Michigan is well-positioned to meet its CPP standards—it can get 98 percent of the reductions required under its mass-based emission target with its existing clean energy policies. Michigan can make up the small remaining gap, and even exceed its targets, by making better use of existing power plants:

- **Energy efficiency resource standard:** Requires annual electricity savings of 1 percent of the previous year's sales from 2012 forward.
- **Renewable energy standard:** Requires 10 percent of sales to come from renewable sources by 2015, and the same amount of credits to be maintained going forward.
- **Increasing the use of existing natural gas plants:** Combined cycle plants generated less than one-fourth of the electricity they were capable of producing in 2012. Running existing plants at 75 percent could cut emissions further.

- **Increasing coal plant efficiency:** Low- and no-cost operational improvements and best practices at existing coal plants could cut emissions further.

sources if it surpasses its CPP target by expanding its clean energy policies and using infrastructure opportunities as described above.

Michigan has the opportunity to go even further by expanding its successful clean energy policies. Michigan could nearly double its required reductions by increasing the renewable standard to 20 percent of sales by 2022 and the efficiency standard to 2 percent of sales beginning in 2019, as well as implementing the infrastructure opportunities listed above.

2. **Investing in energy efficiency.** Efficiency is one of the most cost-effective tools for Michigan to cut its emissions while saving money for residents. Every dollar invested in the state’s current efficiency programs returns an estimated \$4 to \$5 in savings to electricity customers.

MAXIMIZING THE ECONOMIC BENEFITS OF THE CLEAN POWER PLAN

Michigan can develop an implementation plan that maximizes the economic benefits to the state and achieves emission reductions cost-effectively by:

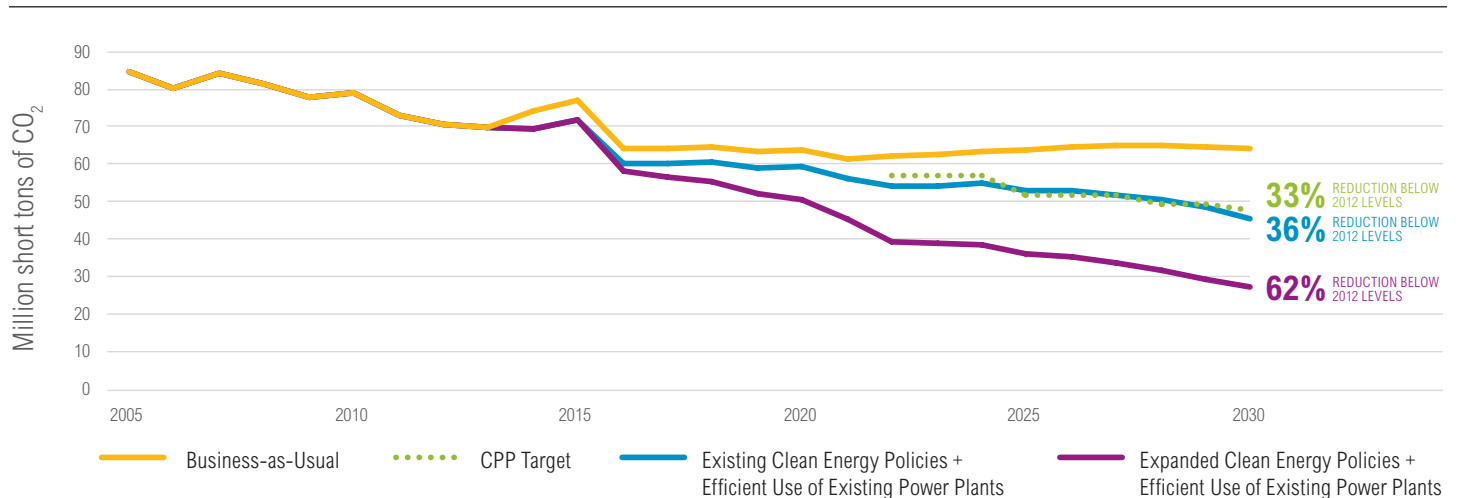
1. **Adopting a market-based carbon pricing program,** which encourages cost-effective emission cuts and generates revenue that can be used for public investments or reducing taxes. The CPP encourages states to trade credits without formally joining a trading program. Assuming a \$10 per short ton price of interstate emissions allowances, Michigan could generate an average of over \$160 million per year in revenue between 2022 and 2030 from out-of-state

CONCLUSION

Michigan is in a strong position to comply with the Clean Power Plan while taking advantage of economic opportunities and maintaining grid reliability. Michigan’s clean energy policies are already cutting CO₂ emissions and other harmful air pollution while saving money for the state’s residents. Michigan can meet its mass-based standard by continuing to implement these policies and making better use of existing power plants. Repealing or weakening these policies, as has recently been proposed, could make meeting the standards more difficult and expensive. But by expanding these policies, Michigan can scale up their benefits and achieve deeper reductions more cost-effectively.

For details on the measures Michigan can take, see: <http://www.wri.org/publication/power-plan-targets-michigan>.

Figure 1 | Existing Power Plant Emission Pathways for Michigan



ENDNOTES

- 1 For more information, see EPA’s Clean Power Plan at: <http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>.
- 2 Percent reductions calculated using an adjusted 2012 baseline, including emissions and generation from affected plants under construction as of January 8, 2014, consistent with EPA’s methodology.



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