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Fact Sheet

POWER SECTOR OPPORTUNITIES FOR REDUCING CARBON DIOXIDE EMISSIONS: MISSOURI

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President Obama announced a national climate plan in June 2013, and directed the U.S. Environmental Protection Agency (EPA) to set carbon pollution standards for the power sector. EPA issued proposed standards for existing power plants on June 2, 2014, and after they are finalized in June 2015, states will implement their own plans for meeting those standards. In this fact sheet, WRI examines both existing tools and additional opportunities Missouri can use to reduce its carbon dioxide (CO_2) emission rate, a measure of the carbon-intensity of its power sector.

WRI analysis finds that Missouri can decrease its emission rate by 21 percent below 2012 levels in 2020. By 2030, Missouri can decrease its emission rate 31 percent below 2012 levels, which would exceed EPA's proposed standard for existing power plants in the state.

PROPOSED EPA STANDARDS

Under EPA's Clean Power Plan, Missouri would need to reduce its CO_2 emission rate by 23 percent below 2012 levels between 2020 and 2029 to be in line with the state's interim target, and 27 percent below 2012 levels to meet its 2030 target.[1]

Disclaimer: *This Fact Sheet contains preliminary research, analysis, findings, and recommendations. It is intended to stimulate timely discussion and critical feedback and to influence ongoing debate on emerging issues. Its contents may eventually be revised and published in another form.*

1. For more information, see EPA's proposed Clean Power Plan at: <http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule>. While our estimates are generally comparable with EPA's standards, the methodologies differ slightly. For example, EPA uses emissions factors based on the eGRID database to estimate CO_2 emissions from generation and nameplate capacity to estimate potential generation from natural gas combined cycle units. We base our emissions factors off of state-specific emissions and generation data from EIA and use summer capacity in our natural gas combined cycle estimates. For additional discussion, see the full fact sheet or our methodology.

FIVE WAYS TO REDUCE MISSOURI's POWER SECTOR EMISSION RATE:

Missouri can meet about 70 percent of EPA's emission rate target for the state between 2020 and 2030 with the following measures:

- **Meeting energy efficiency targets**. Missouri's Energy Efficiency Investment Act calls for the state's investor-owned utilities to capture all cost-effective energy efficiency opportunities, and establishes a voluntary target of nearly 10 percent cumulative savings of electricity sales by 2020. Meeting this goal can help the state lower its emission rate.
- **Meeting renewable energy targets.** Missouri's Renewable Energy Standard (RES) requires 15 percent of the electricity sold by its investor-owned utilities to come from renewable sources by 2021. Meeting the RES through new in-state generation can help the state lower its emission rate.
- **Using more gas.** Missouri's most efficient natural gas plants—combined cycle (NGCC) units—generated much less electricity than they were capable of producing in 2012. Fully utilizing existing combined cycle natural gas capacity can help the state meet its emission target.
- **Increasing existing coal plant efficiency by 2.5 percent.** Existing coal plants could save energy by upgrading their equipment and making other operational improvements.
- **Using more combined heat and power (CHP).** Missouri can build more CHP systems—which use waste heat to generate electricity more efficiently than the average power plant—at sites like universities, hospitals, and manufacturing facilities.

Missouri can close the gap that remains, and even exceed its proposed target, by:

- Increasing its energy efficiency goal to 2 percent of sales from 2015 onward.
- Requiring all utilities, not just investor-owned utilities, to meet the current RES (15 percent by 2021) and continuing to increase renewable generation to 20 percent of total generation by 2030.

CONCLUSION

Missouri has already put measures in place that will reduce the emission intensity of its power sector. The state can achieve greater reductions by building off of its progress to date. By taking advantage of available infrastructure and expanding its clean energy policies going forward, Missouri can place itself in a strong position to comply with EPA's standards for existing power plants.

For details on the measures Missouri can take, see http://wri.org/publication/power-sector-opportunities-for-reducing-carbon-dioxide-emissions-missouri.

Figure 1 | **Missouri Carbon Dioxide Reduction Opportunities for Power Sector Compliance Under the Clean Air Act**