THE BUCKEYE INSTITUTE

Impact of Renewable Portfolio Energy Standards on the Economy

By Orphe Pierre Divounguy, PhD and Joe Nichols

On December 8, the Ohio General Assembly passed legislation that will re-impose Ohio's alternative energy standards that were suspended in 2014. In 2015, Ohio's Energy Mandates Study Committee called for these standards to be suspended indefinitely,[1] but the General Assembly will instead end the two-year "freeze" on the standards and require compliance by 2019.[2]

Alternative energy standards require that some of Ohio's electricity must be generated by renewable energy sources. Renewable energy providers, however, are significantly more expensive than traditional energy sources, which means that energy mandates ultimately hamper job-growth and economic prosperity. As the fourth-largest consumer of electricity in the United States, Ohio's industry and economy are especially sensitive to higher electricity prices.[3] Facing higher energy prices, companies reduce their electricity usage by reducing production. Lower production means fewer jobs or fewer hours for workers. Fewer jobs and fewer hours mean less prosperity for hard-working families.

Advocates for the energy standards contend that the renewed mandates will spur job-growth in Ohio's renewable energy and energy-efficiency sectors. Unfortunately, as The Buckeye Institute has recently explained, good news for green energy companies will be heavily offset by damage to the rest of Ohio's economy—particularly in the energy-intensive manufacturing sector.

Background

In 2008, Ohio enacted Senate Bill 221, which implemented renewable energy and energy efficiency mandates. The bill implemented an Alternative Energy Portfolio Standard (AEPS) that required Ohio's electric utilities and retailers to supply at least 25% of their electricity from

---

1 The Energy Mandates Study Committee Co-Chairs' Report, September 30, 2015, http://emsc.legislature.ohio.gov/Assets/Reports/emsc-final-report.pdf.

2 Sub. H.B. 554 (As Enrolled), 131st Ohio General Assembly, (2016).

3 Joe Nichols, "Power to the People: Repeal Ohio's Counterproductive Energy Policies," The Buckeye Institute, July 20, 2015, http://www.buckeyeinstitute.org/library/doclib/Power-to-the-People-Repeal-Ohio-s-Counterproductive-Energy-Policies.pdf.

alternative energy resources by 2025.[4] The bill included two provisions. First, a Renewables Portfolio Standard (RPS) specified that utilities must meet at least 12.5% of this alternative energy goal with renewable resources such as wind and solar. The bill provided a schedule that gradually increased the required level of alternative energy generation each year until the state met the 25% goal in 2025. Second, the bill included an energy efficiency mandate (commonly called an Energy Efficiency Resource Standard or EERS) that required electric utilities and electric retailers to implement programs that would reduce electricity consumption by 22% by 2025.[5]

Ohio suspended the mandate and created the Energy Mandates Study Committee in 2014, and the Committee issued its 2015 report calling for an indefinite suspension.[6]

Impact on Prices

RPS laws create a market for new electricity-generating resources that would not be competitive in the current electricity market and would not likely exist without the mandate. Forcing electric utilities and electric retailers to purchase electricity from these new, uncompetitive resources creates "imposed costs" on existing, conventional resources.[7] That is, utilities must purchase the new politically-favored electricity instead of conventionally-generated electricity, leaving less revenue available for the conventional power plants. Because the conventional plants sell less electricity, they must fetch a higher price in terms of dollars per megawatt-hour (MWh) of electricity generated in order to continue operating, driving up the existing plants' costs to generate electricity by approximately $15 to $30 per MWh.[8] Inevitably, mandating renewable sources means higher retail prices for consumers—who will ultimately foot the bill—because installing new renewable resources is more expensive than allowing existing conventional power plants to operate.

Impact on Jobs

The Economic Research Center (ERC) analyzed data from the Energy Information Administration indicating that electricity prices increased more in states that have adopted RPS as compared to states that have not adopted RPS. As expected, renewable energy generation increased more in states that adopted RPS, while total electricity generation grew faster in states that never adopted RPS. Thus, adopting RPS is consistent with higher electricity prices and lower electricity generation overall.

---

4 Am. Sub. S.B. 221 (As Enacted), 127th Ohio General Assembly, (2008).
5 Ibid.
6 The Energy Mandates Study Committee Co-Chairs' Report, September 30, 2015, http://emsc.legislature.ohio.gov/Assets/Reports/emsc-final-report.pdf.
7 Thomas F. Stacy and George S. Taylor, PhD, "The Levelized Cost of Electricity from Existing Generation Resources," Institute for Energy Research, June 2015, http://instituteforenergyresearch.org/wp-content/uploads/2015/06/ier_lcoe_2015.pdf.
8 *Ibid*.

The ERC model found that overall employment grew less in states that adopted RPS mandates than in states that did not as higher energy prices reduced demand for labor. RPS supporters often claim that the policy will create "green jobs," but our model shows that even if those claims are true, the artificially gained "green jobs" are more than offset by decreases in other types of jobs, like energy-intensive manufacturing.

Another important finding is that RPS policies decreased hiring rates in the utilities sector as well as the manufacturing sector, although hiring rates and wages were still relatively less harmed in the utilities sector. These findings echo similar findings in the literature that artificially high prices distort the labor market.[9]

Conclusion

Ideally, the General Assembly would have eliminated Ohio's job-killing energy standards altogether, or followed the Study Committee's recommendation to suspend the standards indefinitely. As The Buckeye Institute's research demonstrates, alternative energy mandates distort the marketplace and reduce the number of overall employment opportunities available. Any potential employment gains in the "green energy" sector are more than offset by fewer job opportunities in other sectors, particularly manufacturing. The only silver-lining on this otherwise dark cloud is the extended compliance deadline that gives electricity providers until 2019 to find the least expensive contracts for renewable energy and renewable energy credits.

9 For examples see Constant Tra, "Have Renewables Portfolio Standards Raised Electricity Rates? Evidence from US Electric Utilities," Center for Business and Economic Research at the University of Nevada, Las Vegas, June 5, 2009, http://web.unlv.edu/projects/RePEc/pdf/0923.pdf; Rakesh Puram, "An evaluation of the impact of state renewables portfolio standards (RPS) on residential, commercial, and industrial electricity prices," Georgetown University Graduate School of Arts and Sciences, April 14, 2011, https://repository.library.georgetown.edu/bitstream/handle/10822/553880/puramRakesh.pdf?sequence=1&isAllowed=y.

About the Authors

Orphe Divounguy is an Economist with The Buckeye Institute's Economic Research Center.

In this role at Buckeye, Divounguy analyzes the impact of federal and state government policy on economic outcomes in Ohio.

Divounguy joined The Buckeye Institute after earning his Ph.D. from England's University of Southampton, where he also obtained his master's degree.

After receiving his Ph.D., Divounguy served as a teaching and research fellow. He also worked as an international economic consultant. His research focused on labor policy, migration policy, and economic development.

Before his time in higher education, Divounguy interned at the United Nations Department of Economic and Social Affairs in New York, and Cato Institute in Washington, D.C.

Joe Nichols is the Strategic Partnerships Officer at The Buckeye Institute.

In this role, Nichols develops existing and new relationships with the Institute’s investors and partners.

Prior to his current position, Nichols was a policy analyst in The Buckeye Institute’s Economic Research Center. He obtained his Bachelor of Arts in Economics from Denison University in Granville, Ohio. During college, Nichols worked for a law firm, the Denison Admissions Office, and a local farm.