



In March 2004 Gov. Bill Richardson of New Mexico signed into law Senate Bill 43. This bill required sources of renewable energy to make up 5 percent of the investor-owned electric utilities sales by 2006, and 10 percent by 2011. In 2007 the law was expanded by Senate Bill 418, which accelerated the timeline and increased the mandate such that renewable sources account for 10 percent of all power generated by 2011; 15 percent for 2015; and 20 percent for 2020 and thereafter. Renewable sources include energy from solar, wind, geothermal, biomass and small hydroelectric facilities.<sup>1</sup>

A literature review shows that the U.S. Energy Information Administration (EIA), a division of the Department of Energy, in most cases projects costs for wind at the low end of the range of estimates, and capacity factors for wind at the high end of the range. EIA does not take into account the actual experience of existing renewable electricity power plants in its estimates.

Beacon Hill Institute applied its STAMP<sup>®</sup> (State Tax Analysis Modeling Program) to estimate the economic effects of the RPS mandate. Full methodology is provided with the full study available for review at <http://www.atinstitute.org> and at <http://www.riograndefoundation.org>.

The study uses different cost and capacity factor estimates for electricity-generating technologies from expert academic literature to provide three calculations of the cost of New Mexico's RPS mandate: low, average and high. Major cost findings include:

- The state's electricity consumers will pay \$619 million more for power in 2020, within a range of \$105 million and \$991 million, because of the RPS.
- Over the period of 2011 to 2020 these laws will cost New Mexicans an additional \$2.3 billion over conventional power, within a range of \$626 million and \$3.64 billion.
- In 2020 New Mexico's electricity prices will increase by an average of 1.92 cents per kilowatt-hour (kWh), or by 20 percent, within a range of 0.61 cents per kWh, or by 6 percent, and 3.07 cents per kWh, or by 32 percent.

These increased energy prices will hurt New Mexico's households and businesses and, in turn, inflict significant harm on the state economy. According to the study:

- By 2020 New Mexico will lose an average of 2,859 jobs, within a range of between 506 jobs under our low cost scenario and 4,573 jobs under our high cost scenario.
- In 2020, the RPS mandate will reduce annual wages by an average of \$707 per worker, within a range of between \$139 per worker \$1,130 per worker.

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<sup>1</sup> SB43 <http://www.nmlegis.gov/Sessions/04%20Regular/final/SB0043.pdf>. SB418 <http://www.nmlegis.gov/Sessions/07%20Regular/final/SB0418.pdf>.

- Due to higher home energy costs, in 2020, annual real disposable income will fall by \$465 million, within a range of \$91 million and \$743 million.
- Investment will fall by \$39 million, within a range of \$8 million and \$62 million.
- In 2020 the RPS will cost families an average of \$160 per year; commercial businesses on average \$1,393 per year; and industrial businesses on average \$22,340 per year. Over the 10 years, the average household ratepayer will pay \$628 in higher electricity costs; the average commercial ratepayer will spend an extra \$5,468; and the average industrial ratepayer an extra \$87,671.

Higher electricity costs may be justifiable if the environmental benefits outweigh the costs. However, it is unclear that the use of renewable resources, especially wind and solar, actually reduce GHG emissions. In fact, studies show increased pollution due to wind variability.

- Wind and solar require significant fossil fuel-based backup power sources to accommodate variability in the availability of wind and sun for power conversion. One recent study found that wind power actually increases pollution and greenhouse gas emissions due to these required backup systems.
- Firms with high electricity usage will likely move their production, and emissions, out of New Mexico to locations with lower electricity prices and less stringent regulatory regimes. Exporting energy production and jobs will not reduce global emissions, but rather send production, jobs and capital investment outside the state, or even outside the country where net global emissions would almost surely be increased.

The expanded development of these resources will threaten the stability of the state's electricity grid and raise electricity prices across the board. Moreover, the environmental benefits of wind power are a mirage due to the necessity of keeping backup power generation sources online and available to cycle-up when wind power is unavailable.

RPS standards were put in place without taking into account long term and unintended consequences, and they carry demonstrably high costs with dubious benefits. Lawmakers should eliminate entirely or postpone them until they can debate all facets of the policy and make informed decisions about how best to serve New Mexicans while being responsible environmental stewards.