



In 2005, the Montana Legislature passed the Montana Renewable Power Production and Rural Economic Development Act (the Act) which established a state Renewable Portfolio Standard (RPS). The RPS will be phased in over time: mandating that “renewables” account for 5 percent of all power generated for the years 2008-2009; 10% for 2010-2014; 15% by 2015 and thereafter.

The statute defines alternative energy to include only solar, wind, small-scale hydropower, ocean thermal, wave power, geothermal, hydrogen derived from renewable sources, and certain forms of biomass energy “renewable” resources. Large-scale hydroelectric generation is specifically excluded as a form of “renewable” power.

A literature review shows that the U.S. Energy Information Agency (EIA), a division of the Department of Energy, in most cases, projects costs at the low end of the range of estimates and capacity factor 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.

BHI therefore applied its STAMP[®] (State Tax Analysis Modeling Program) to estimate the economic effects of the RPS mandate. Full methodology will be provided with the final study in late January, 2011.

The study provides three estimates of the cost of federal RPS mandates: low, average and high, using different cost and capacity factors estimates for electricity-generating technologies from the academic literature. Major cost findings include:

- The state’s electricity consumers will pay \$225 million more for power in 2015, within a range of \$141 million and \$348 million due to the RPS.
- Over the period of 2010 to 2015, the Act will cost Montanans an additional \$1.865 billion over conventional power, within a range of \$1.102 billion and \$2.886 billion.
- Montana’s electricity prices will increase by an average of 1.33 cents per kilowatt hour (kWh), or 18%, in 2015, within a range of \$0.83 cents per kWh, or 11% and 2.06 cents per kWh, or 28%.

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

- By 2015 Montana will lose an average of 1,874 jobs, within a range of between 1,172 jobs under our low cost scenario and 2,893 jobs under our high cost scenario.
- In 2015, the RPS mandate will reduce annual wages by an average of \$520 per worker, within a range of between \$325 per worker \$803 per worker.
- Due to higher home energy costs, in 2015, annual real disposable income will fall by \$175 million, within a range of \$109 million and \$270 million.
- In 2015, the RPS will cost families an average of \$142 per year, commercial businesses an average of \$673 per year and industrial businesses an average \$16,722 per year. Over the 10 years, the average household ratepayer will pay \$1,163 in higher electricity costs; the average commercial ratepayer will spend an extra \$5,527 and the average industrial ratepayer an extra \$137,419.

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 may 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. A 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 Montana 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.

In the language of the Act, the Montana Legislature found that:

“...increased use of renewable energy will enhance Montana’s energy self-sufficiency and independence; and... fuel diversity, economic, and environmental benefits from renewable energy production accrue to the public at large, and therefore all consumers and utilities should support expanded development of these resources to meet the state’s electricity demand and stabilize electricity prices”

Contrary to the findings of the legislature, current forms of renewable energy are more costly and less reliable than traditional sources and those not deemed renewable, such as large hydroelectric plants. Therefore, 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 carry demonstrably high costs with dubious benefits. We should eliminate entirely or postpone them until we can debate all facets of the policy and make informed decisions about how best to serve Montanans while being responsible environmental stewards.