Renewable Energy Subsidies

The Issue

Federal policies that subsidize increased installation of wind and solar power undermine the competitive Texas energy market. The International Energy Agency defines energy subsidies as "any government action that affects . . . the competitiveness of each fuel or technology," including grants, tax abatements, federal loans, loan guarantees, and Renewable Energy Credits (RECs).

According to Subsidy Tracker, total subsidies given only to the largest wind operators amount to $176 billion. General Electric—the biggest manufacturer of wind turbines—has received $159 billion in federal loans or loan guarantees. NextEra Energy—the country's largest wind power producer—has received $5.5 billion in subsidies.

Those countries that most aggressively have rushed to renewables have experienced ballooning subsidies that have driven conventional generators out of production and led to average retail rates in Germany as high as three times the average U.S. electric rates. Many German industries have relocated to other countries with lower-priced and more reliable electricity. In July 2016, Germany cut major renewable subsidies because they were unsustainable.

The full cost of renewable energy is masked by generous subsidies and because the many ancillary services such as back-up generation, grid adjustments, voltage and transmission are not calculated by officials or renewable energy promoters.

The largest share of renewable subsidies comes from the federal government. Local governments also provide tax abatements and incentives for renewables. The Competitive Renewable Energy Zones (CREZ), a major indirect subsidy, is a massive new system of transmission lines that carries wind power hundreds of miles from West Texas to population centers bordering Interstate 35. It cost Texas rate-payers $7 billion.

Enacted in 1992, the federal Production Tax Credit (PTC) is a per-kilowatt subsidy for electricity generated using select renewable sources. The PTC was initially created as a way to jump-start emerging renewable technology. Instead, it has been extended nine times. The Congressional Joint Committee on Taxation estimates the recently extended PTC will cost U.S. taxpayers around $12.4 billion through 2019.

The PTC is now $23 per megawatt-hour of electricity generated, allowing wind operators to sell their power at a discounted or even negative price (below the wholesale price). In the winter of 2015, peak wholesale electricity prices in Texas averaged $21 per megawatt-hour. The depressed market prices force conventional generators to go offline, while renewable producers remain profitable as a result of the subsidy. This is a threat to the fundamental competitiveness of the Texas electric market.

The Texas Legislature imposed a Renewable Portfolio Standard (RPS) in 1999. The Texas RPS acts as an indirect subsidy for renewable generators by requiring that retail electric providers meet a minimum annual renewable requirement, either by owning renewable capacity or by purchasing RECs from renewable generators. The RPS mandated installation of 5,000 MW of renewable energy capacity by 2015 and 10,000 MW by 2025. Supported by federal subsidies, Texas surpassed the 2025 mandate in 2010.

The goal of the Texas RPS has long since been met. The question the Texas Legislature now faces is whether to extend RPS and build more infrastructure for renewable industries that would not exist at the current scale without federal subsidies. Congress extended the major federal subsidies for wind and solar power in December 2015. This assurance that the federal subsidies will continue for the next five-seven years has catalyzed aggressive installation of new wind and solar facilities. But there is no guarantee that the next deadline will be greeted as kindly by Congress.

The Arguments

Proponents of renewable energy attempt to justify subsidies for the industry arguing that the fossil fuel industry also receives large amounts of federal support. However, U.S. renewable industries receive the lion's share of direct federal subsidies while their output of electric power is far less than that of conventional generators. In 2015, wind power received 72 percent of direct subsidies, yet generated only 4.7 percent of U.S. electricity. Conventional energy sources received about 11 percent of total subsidies and provided 78.5 percent of total production.

This points to the falseness in claims that renewable energy is cost competitive with traditional fuels. Without the hundreds of billions of dollars described above, very few renewable sources of energy would be in operation today. In addition to the inherent problem renewable fuels have with fuel density, the amount of energy stored in a given fuel per unit volume or mass, renewables are also more expensive due to their intermittent, seasonal, and variable nature, making them unable to meet fluctuating and unpredictable demand.

Renewables supporters' resistance to passage of Senate Bill 931 in the 84th Legislature, which would have made Texas' system of RECs voluntary, suggests that the renewable industry understands its dependence on government subsidies to stay in business. Despite the challenges the renewable energy industry might face under such reforms, Texans would be much better off under these reforms that would steer Texas toward a market-driven system with lower electricity costs for consumers.

Recommendations

- Eliminate the mandatory Texas' Renewable Portfolio Standard.
- Support elimination of the federal production tax credit, grants, and loan guarantees.
- Require the Texas PUC to calculate full direct and indirect costs of renewables. ☆

Resources

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