Renewable Energy Tax Policy and U.S. Innovation
Title: PLI Chronicle: November/December 2020
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Published: Nov 2020

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The future of renewable energy tax policy may depend on the outcome of the presidential election. A Joe Biden victory likely means an increased focus on tax incentives directed at investment in renewable energy resources. The re-election of President Donald Trump could spell the end for several renewable energy tax incentives and the expansion of fossil fuel tax incentives. Both candidates support tax incentives for carbon capture. This article discusses the renewable energy tax policy of each candidate and the related stakes for U.S. innovation.

The Candidates' Renewable Energy Tax Policies

Biden's renewable energy tax policy revolves around his stated goal for the United States to achieve net-zero carbon emissions by 2050. In support of this goal, he plans to modify and extend renewable energy tax incentives in order to help achieve carbon pollution-free electricity generation by 2035. Biden's policies include restoring the full electric vehicle tax credit; reinstating tax credits for residential energy efficiency; expanding tax deductions for energy retrofits; smart metering systems and other emissions-reducing investments in commercial buildings; reinstating the solar investment tax credit; and tax benefits for carbon capture, storage and use. Interestingly, Biden recently signaled some reconciliation with natural gas as a bridge fuel. It is unclear how he will balance the internal tensions within his constituency on this issue.

President Trump does not have a stated renewable energy tax policy, and his support of fossil fuels during his time in office suggests he is at odds with the renewable energy industry. In 2018, President Trump instituted tariffs on foreign solar panels, which, according to the Solar Energies Industry Association, is estimated to have prevented 10.5 gigawatts of solar energy (enough to power 1.8 million homes) from powering the electric grid with carbon-free energy. Amid the coronavirus ("COVID-19") pandemic, his administration did not distribute over $43 billion of loans earmarked for clean energy projects, according to the New York Times.

Pursuant to the Center for American Progress, the U.S. Secretary of the Interior drafted policies this year that allowed oil and gas companies operating on public lands to either lower payments on royalty rates or suspend their 10-year leases without reciprocal measures aimed at the renewable energy industry. Moreover, since President Trump signed Congress' first COVID 19 relief package on March 6, his administration offered approximately 250,000 acres of public land and 78 million acres in the Gulf of Mexico for oil and gas leasing. These actions suggest that President Trump favors oil and gas at the expense of renewable energy. His support of fossil fuels, however, lends itself to the promotion of carbon capture technologies and either modification or expansion of related tax benefits.

Temporary Tax Incentives at Stake in the Election

Several renewable energy tax provisions are scheduled to expire at the end of 2020, including the credit for two-wheeled plug-in electric vehicles under Section 30C of the Internal Revenue Code of 1986, as amended (the "Code;" "Section" references herein are to the Code), the credit for nonbusiness energy property under Section 25C, and the credit for construction of energy efficient new homes under Section 45L. Several business tax provisions are also

scheduled to expire in 2021, 2022, or 2023, including the investment tax credit (ITC) under Section 48, the credit for residential energy property under Section 25D, the energy-efficient commercial building deduction under Section 179D, and the credit for carbon capture under Section 45Q.

For 2020, the Section 30C credit for two-wheeled plug-in electric vehicles is currently equal to 10% of the vehicle's cost (up to $2,500). The Section 25C credit provides homeowners with a nonrefundable tax credit (i.e., the amount of the tax credits claimed cannot exceed a taxpayer's income tax liability) for investments in high-efficiency energy property and energy-efficiency improvements. The tax credit is currently equal to 10% of qualifying home improvements plus the cost of each energy-efficiency property capped at an amount ranging from $50 to $300 (excluding labor and installation costs). The credit is subject to a lifetime cap of $500 per taxpayer.

Section 179D provides a deduction for certain energy-saving property used in domestic commercial buildings. To qualify, the eligible property must reduce a building's annual energy and power costs by 50% or more relative to the standards of the American Society of Heating, Refrigerating, and Air Conditioning Engineers and the Illuminating Engineering Society of North America.

The solar ITC is a credit against investment costs in qualified solar energy property. The solar ITC is equal to 30% of the cost basis of qualified property for projects that commenced construction on such property in 2019, 26% for commencing construction in 2020, 22% for commencing construction in 2021, and 10% thereafter. The tax basis in the qualified property must be reduced by 50% of the credit amount.

For 2020, the Section 45Q credit is generally the sum of four amounts: (i) $23.82 per metric ton of carbon oxide captured using equipment placed in service before February 9, 2018 that is not used as a tertiary injectant; (ii) $11.91 per metric ton of carbon oxide captured using equipment placed in service before February 9, 2018 that is used as a tertiary injectant; (iii) $31.77 per metric ton of carbon oxide captured using equipment placed in service on or after February 9 2018 that is not used as a tertiary injectant during the first 12 years after the facility is placed in service; and (iv) $20.22 per metric ton of carbon oxide capture using equipment placed in service on or after February 9, 2018 that is used as a tertiary injectant during the first 12 years after the facility is placed in service. Carbon oxide not used as a tertiary injectant must be disposed of in a secure geological facility.

U.S. Innovation

Biden's renewable energy tax policies may support U.S. energy innovation, whereas President Trump's tendencies appear to fall short of spurring U.S. energy innovation (absent promotion of carbon capture technologies). According to the Congressional Research Service's (CRS) publication on Energy Tax Provisions Expiring in 2020, 2021, 2022, and 2023, the tax credits for plug-in electric vehicles may support innovation. This result depends, as CRS notes, on whether such vehicles are purchased only by high-income taxpayers. If high-income taxpayers would purchase these vehicles without tax incentives, the credit may provide a windfall to such high income purchasers. This effect could be mitigated by making the credit available to a wider range of vehicles—a policy implemented by the American Recovery and Reinvestment Act, P.L. 111-5, which provided for a tax credit for two or three-wheeled vehicles, as well as low-speed vehicles.

It is unclear whether residential energy efficiency credits would lead to innovation. Moreover, because the Section 25C incentive is nonrefundable, there is less motivation for low- and middle income taxpayers with limited tax liability to invest in energy-efficient improvements or property. The Section 179D deduction theoretically incentivizes investment in energy-savings properties, but it is not known whether such investment promotes innovation. The deduction is generally claimed by taxpayers constructing new buildings—a nod towards innovation—but owners of older buildings may find it more difficult to retrofit for energy-savings due to high costs—a nod towards stagnation. Many of these credits are used by equipment sellers as a means of lowering consumer cost, and thus the emphasis is more on equipment deployment rather than innovation.

The solar ITC decreases the costs of installing solar energy equipment and increases the rate of return on investment in solar energy systems. The ITC may also contribute to reduced carbon emissions. Together these factors suggest that the solar ITC promotes U.S. innovation in renewable energy projects. This innovation metric, however, is mitigated by the fact that most solar panels used in projects are from foreign sources (evidenced by the impact on the solar industry caused by President Trump's tariffs). The focus on the ITC may discourage domestic innovation as it blunts the competitive advantage that new technology developments would typically yield in a free market.

The Section 45Q tax credit may promote innovation in low- and zero-emissions technologies and the use of domestic energy resources. Both Biden and President Trump support these tax benefits. Given the stringent nature of environmental permitting of fossil fuel facilities, carbon capture fills a gap in controlling emissions, which President Trump could see as supporting the industry. Biden may see this as integral to his natural gas policies and as a means of reducing ambient carbon.

Conclusion

Renewable energy tax policy will be a byproduct of the presidential election. The renewable energy industry undoubtedly favors a Biden win, while fossil fuels likely support President Trump. Between both candidates, however, carbon capture and related technologies stand to win. Biden's proposals may indeed promote U.S. innovation. President Trump's support of carbon capture technologies may also promote innovation. Absent this specific policy, however, President Trump's energy policies may not promote U.S. innovation.

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