



# “Green” Tax Incentives

A GUIDE TO FEDERAL AND MICHIGAN INCENTIVES  
FOR CLEAN ENERGY AND ENERGY EFFICIENCY

*By Richard P. Manczak and Jeffrey D. Moss*

The United States consumes more than 20 percent of the energy produced in the world. It also is responsible for 25 percent of the global greenhouse gas emissions though accounting for only 4.5 percent of the world population. Approximately 83 percent of the United States' energy consumption comes from fossil fuels, 9 percent from nuclear electric power, and 8 percent from renewable sources.<sup>1</sup> We import 57 percent of the petroleum we consume.<sup>2</sup> In an era of global warming, continued environmental degradation, peaking petroleum production, war, terrorism, and political instability, it is no wonder that the United States seeks (yet again) to reduce its dependency on petroleum and embrace clean and renewable energy sources.

Government tinkering with energy markets is not new—it dates back to at least the end of World War I. For most of that time, government policies have focused on increasing domestic oil and gas reserves and production. Beginning in the 1970s, however, environmental issues, oil embargoes, and budget deficits influenced policy to shift in favor of energy efficiency and alternative fuel sources. Since then, this shift has accelerated as a result of national security and climate change issues, with growing emphasis on technologies that are both renewable and clean.

When intervening in markets, governments have a variety of tools at their disposal, including tax policy, mandates, and direct subsidy (e.g., grants, loans, guarantees, etc.). Tax policy can include taxing activities that are to be discouraged, subsidizing substitute activities, or both. For a variety of reasons, U.S. tax policy has tended to focus on tax subsidies or incentives. This article will discuss and summarize some of the more important federal and Michigan incentives currently available (as of October 2010) for renewable/clean energy and energy efficiency, with a focus on tax subsidies.

## FAST FACTS

By 2015, 10 percent of Michigan's energy must come from renewable sources.

Nationwide, 8 percent of energy produced is renewable source energy, but in Michigan we are below 5 percent renewable.

In addition to federal tax credits, Michigan offers commercial and residential credits and incentives to encourage more efficient uses of energy.

## Federal Incentives

### Renewable Clean Energy Incentives

#### Production Tax Credit (PTC)

Section 45 of the Internal Revenue Code (IRC) provides an income tax credit for the production of electricity from qualified wind power, solar energy, small irrigation power, geothermal energy, open-loop and closed-loop biomass production, municipal solid waste, hydropower production, and marine and hydrokinetic renewable energy facilities that is sold by the producing party to an unrelated party. For 2010, the credit was in the amount of 2.2 cents per kilowatt hour. The credit was also reduced for grants, tax-exempt bonds, subsidized energy financing, and other credits received by the producer.

#### Investment Tax Credit (ITC); Grants in Lieu

For qualified facilities placed in service between 2009 through 2013 (but 2012 for wind facilities), a producer may make an irrevocable election to obtain a 30 percent investment credit under IRC §48 rather than claim the PTC. Certain types of production are excluded from this election. In addition, Section 1603 of the American Recovery and Reinvestment Act (ARRA) allowed a producer to opt for a government grant equal to 30 percent of investment costs in lieu of claiming either the PTC or the ITC in 2009 and 2010. The provision was added by the ARRA because of the lack of appetite by tax equity investors resulting from the meltdown of credit markets.

#### Modified Accelerated Cost Recovery System

The standard accelerated depreciation provisions of IRC §168 remain in effect with most renewable energy properties classified as five-year properties. An additional bonus depreciation of 50 percent of eligible costs included in the Economic Stimulus Act of 2008 expired at the end of 2009 and has not been extended as of this writing.

### Renewable Energy Production Incentive

This incentive payment program complements the PTC. Qualifying systems owned by state and local governments, tribal governments, municipal utilities, and cooperatives can receive annual payments of 1.5 cents per kilowatt hour in 1993 dollars, indexed for inflation. The incentive in 2010 was 2.1 cents per kilowatt hour.

### Residential Renewable Energy Tax Credit

Individual taxpayers are eligible for a personal tax credit equal to 30 percent of the cost of qualified solar-electric, solar hot water, small wind energy, and geothermal heat pump property. The ARRA extended the applicability of this credit until December 31, 2016, and eliminated the previous cap of \$2,000.

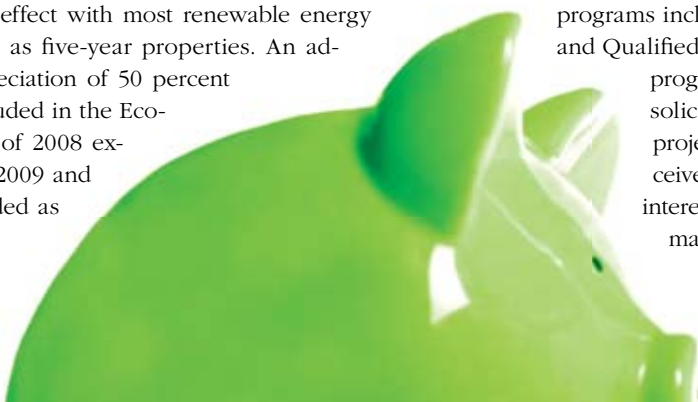
### Federal Grants

Three major grant programs are available to Native American tribes and rural communities. The Tribal Energy Grant Program of the Department of Energy (DOE) provides financial and technical assistance to tribes for the development of renewable energy projects and energy-efficiency programs. The United States Department of Agriculture's Rural Energy for America Program (REAP) provides grants and loan guarantees of up to 25 percent of project cost for the development of renewable energy systems by agricultural producers and small rural businesses. Grants are also available to state and local governments, tribal governments, rural electric co-ops, etc. The USDA's High Energy Cost Grant Program provides grants to individuals; businesses; and state, local, and tribal governments to improve energy systems in rural communities that have high energy costs (275 percent of national average).

Innumerable technical and research grants are also available through the DOE and other government agencies, amounting to potentially billions in subsidies. The reader is directed to [www.grants.gov](http://www.grants.gov) for more information.

### Federal Loans and Guarantees

Several loan and guarantee programs are available for renewable energy projects. REAP guarantees have been noted above. The DOE's Title XVII loan guarantee programs (as amended by the ARRA) are the most widely publicized (and criticized—only 14 guarantees have been issued in five years). The program focuses on large-scale projects in renewable energy and advanced vehicle manufacturing, but requires entities to possess a B+ or better credit rating, thereby making them difficult for new market entrants to obtain. Other programs include the Clean Renewable Energy Bond (CREB) and Qualified Energy Conservation Bond (QECB). The CREB program is administered through the IRS under open solicitations and is available for renewable energy projects in the public sector. Holders of CREBs receive tax credits (treated as taxable income) in lieu of interest. For CREBs issued after March 18, 2010, issuers may elect to receive a refundable tax credit (a direct





payment) in lieu of the nonrefundable tax credit provided to the bondholder. The QECB program is administered by the states under allocations from the U.S. Treasury. In Michigan, the program is administered by the Department of Energy, Labor & Economic Growth. It is available to state, local, and tribal governments and is similar to the CREB program except for the allocation process. At this time, approximately \$40 million of Michigan's current QECB allocation has not been awarded.

### Energy-Efficiency Programs

In addition to providing incentives for producing renewable energy, the federal government has programs to encourage individuals and businesses to increase their energy efficiency with the goal of reducing energy production.

#### Energy-Efficient Commercial Buildings Tax Deduction

Section 136 of the IRC provides a tax deduction ranging from \$0.30 to \$1.80 per square foot for building envelope, lighting, HVAC, or hot water systems that reduce energy costs to meet certain national standards.

#### Residential Energy-Efficiency Tax Credit

There is currently a federal tax credit equal to 30 percent of the amount expended for purchasing new, efficient technologies such as water heaters, furnaces, boilers, heat pumps, central air conditioners, insulation, windows, doors, roofs, and fans. The maximum amount of this tax credit for all technologies placed in service in 2009 or 2010 was \$1,500. This provision expired December 31, 2010. There is a bill in Congress currently to extend this program; however, at the time of this writing, it had not passed.

### State of Michigan Incentives

#### Utility Rebates and Subsidies

Both DTE Energy and Consumers Energy have enacted pilot programs and experimental programs that also provide incentives for acquisition and installation of solar energy systems and other renewable energy-type systems.

#### Michigan Business Tax Credits

The Michigan Business Tax (MBT) offers a variety of different credits for alternative energy. For example, a business that is certified by the NextEnergy Authority as a qualified "alternative energy technology" business can claim a credit against the MBT based on the percentage of payroll for employees working on alternative energy-related research, development, or manufacturing within the NextEnergy zone. There is also a nonrefundable MBT credit that allows businesses engaged in qualified alternative energy research, development, or manufacturing that are not located in the NextEnergy zone to offset portions of MBT liability. There are other credits for advance battery manufacturing and photo-

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voltaic manufacturing and developments. These two credits as proposed are refundable credits, but also require pre-approval from the Michigan Economic Growth Authority (MEGA) and a level of job creation.

#### Renewable Energy Renaissance Zones

In 2006, Michigan enacted legislation to allow MEGA and the Michigan Strategic Fund, in conjunction with state and local municipalities, to create Renewable Energy Renaissance Zones for the production of renewable energy such as solar, wind, biomass, landfill gas, and renewable fuels; most recently, this legislation was amended to permit the manufacturing of electric batteries. A renaissance zone allows the producer to be exempt from state and local taxes—such as real estate tax, personal property tax, and the MBT—for 15 years. This is a significant benefit to encourage development of renewable energy sources. Recently, electric battery and cell manufacturers such as Johnson Controls/SAFT and Compact Power, Inc./LG Chem have obtained renaissance zone status for the construction of large-scale plants in Holland, Michigan.

#### Property Tax Exemptions

Michigan has legislation that exempts certain alternative energy personal property from taxation. The types of property that can be exempted from personal property taxes include, but are not limited to, PV systems, wind turbines, fuel cells, and other property used solely for the purposes of research, development, and manufacturing of alternative energy technologies. Michigan is monitoring the various types of technologies and does appear to make changes for inclusiveness to promote alternative energy.

#### Renewable Portfolio Standards

In October 2008, Michigan became the 28th state to create a renewable portfolio standard (RPS).<sup>3</sup> The RPS established the mandate that 10 percent of the state's energy come from renewable sources by 2015. In addition, the two largest utilities—Detroit Edison and Consumers Energy—have additional obligations to meet interim renewable energy capacity goals by December 31, 2013. Utilities may meet their goals by acquiring renewable energy credits with or without the associated renewable energy. Types of energy that are included are solar and solar thermal, biomass, wind, geothermal, municipal solid waste, landfill gas, existing hydroelectric, wave, and water current.

Along with the RPS standards, Michigan also created a Net Metering Program, which divided net metering into two different categories for residential customers. For customers who generate 20 kilowatts or less, a modified net metering concept will occur when "net excess generation during a billing period may be carried over to the next billing period at either the monthly average real time marginal price or the utility's retail rate." Customers who generate more than 20 kilowatts will be eligible for true net metering in the sense that the power they generate and the power they use will offset each other in real time. The utility is required to use the customer's existing meter if it is capable of reverse registration or may install an upgraded meter at no additional cost to the net metering customer. If a utility has fewer than one million customers, it may charge the net metering customer at-cost for an upgraded meter.

### Pending and Proposed Legislation

The ARRA, passed in 2009, was an expansive piece of legislation aimed in part at promoting the production of energy from renewable energy sources. Since February 2009, a plethora of different bills was introduced in the U.S. House and Senate that would extend many of these incentives or increase them to make more projects economically viable. On September 14, 2010, HR 6121, called the Renewable Energy Investment Incentive Act of 2010, was introduced in the House of Representatives, which quite simply extends to 2019 most of the incentives, including the PTC, the ITC, and the grant, in lieu of credits. This legislation, if passed, would provide utilities and project developers with sufficient comfort that they could continue to plan additional projects that could begin three to five years from now, and provide the markets with sufficient time to create and plan appropriate projects. HR 6117 was also introduced on September 14 and was passed in the House, creating another set of clean-energy renewable bonds that would provide for a source of financing for large-scale projects. Other bills passed in the House include HR 5856, Waste to Energy Technology Act of 2010; HR 5805, Thermal Renewable Energy and Efficiency Act of 2010; and HR 5792, Manufacturer Renewable Energy Systems. On September 29, 2010, SB 3935, the proposed Advanced Energy Tax Incentives Act, was introduced in the Senate. This proposed act appears to be the most comprehensive of the possible legislation, expanding building and energy-efficiency incentives, promoting thermal energy and vehicle efficiency, providing additional credits for advanced energy manufacturing, providing new incentives for energy storage, and more.

At the time of this writing, we do not know which, if any, of this legislation will pass before year end or will be introduced again in the future. We are also not sure which types of renewable energy will ultimately be the major source of energy in the United States. We do applaud and encourage all efforts to develop alternative sources of energy that are renewable and clean for the benefit of future generations.



### Summary

Whether this elaborate system of federal and state tax subsidies and incentives is the most efficient intervention in energy markets is an open question and the appropriate subject of another article.<sup>4</sup> We do support efforts to encourage the research, development, and manufacture of renewable energy in the United States. Others may argue, especially in light of current deficits, that our tax policy should also include a tax on coal-produced electricity and increases in gasoline and diesel fuel taxes or a broader-based carbon tax to discourage on a marginal basis the consumption of fossil fuels. These policies might also promote efficiency and conservation rather than encourage more energy production. It is argued that these policies would be more efficient and produce fewer economic distortions and contradictions (e.g., by lowering the cost of energy consumption, tax subsidies for renewable energy stimulate energy demand inconsistent with the goals of energy efficiency).<sup>5</sup> Moreover, subsidy systems are subject to abuse and unintended consequences. One has only to note that the primary beneficiaries of the unconventional fuel and alcohol fuel subsidies of the 1990s and 2000s were, contrary to the policymakers' intent, existing coal producers and suppliers and the paper pulp industry.<sup>6</sup> It is clear that we will continue to see lots of changes in the technology for energy development consumption and the taxes and subsidies related to the development of energy. ■

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### FOOTNOTES

1. U.S. Energy Information Administration, *Annual Energy Review 2009* (Washington, DC: 2010).
2. *Id.*
3. MCL 460.1021 *et seq.*
4. See Sherlock, *Energy Tax Policy: Historical Perspectives on and Current Status of Energy Tax Expenditures*, BNA Daily Tax Report (May 7, 2010).
5. *Id.*
6. *Id.*