

Fast Growing Success of Alternative Energy Cash Grant Program

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The authors discuss the success of the Treasury's §1603 cash grant program in stimulating alternative energy investments.

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In the course of our Energy Tax practice we have been impressed by the increasing popularity of the alternative energy cash grant program. The most popular grants we have been processing are for solar, geothermal, combined heat and power and wind.

The federal government has been totally transparent about the results of this program and publishes monthly grant results by alternative energy technology and by geographical location. The purpose of this article is to explain the program, analyze the year-to-date results and offer the authors' predictions on potential prospective results. Hopefully, the success of cash grants meant to stimulate investment in alternative energy will persuade lawmakers to renew the program.

American Recovery and Reinvestment Tax Act Section 1603: Alternative Energy Cash Grants

The Department of Treasury and Department of Energy have teamed up in order to create economic incentives for property owners contemplating whether to invest in alternative energy generation. Section 1603 of the ARRTA offers renewable energy project developers cash payments in lieu of investment tax credits.¹ The new law also allows taxpayers eligible for the renewable electricity production tax credits (PTC) to receive a grant from the Treasury Department instead of taking the PTC for new installations. In July 2009 the Department of Treasury issued documents detailing guidelines for the grants, terms and conditions and a sample application.

The Treasury's funds available through ARRTA are appropriated for payments to property owners who place specified energy property in service during 2009, 2010, or 2011, or after 2011 if construction began on the property during 2009, 2010, or 2011 and the property is placed in service by a certain date known as the credit termination date (described more fully in Table 1 below). Generally speaking, the Treasury will make Section 1603 payments to qualified applicants equal to 10% or 30% of the basis of the property, depending on the type of property. Applications are reviewed and payments made within 60 days from the later of the date of the complete application or the date the property is placed in service.

Eligible Technologies and Grant Amounts

The alternative technologies eligible for tax grants or credits, along with their credit termination dates and applicable percentage of eligible cost basis are presented in the following table:

Table 1. Alternative Energy Grants: Termination Dates and Cost Percentages

Specified Energy Property	Credit Termination Date	Applicable Percentage of Eligible Cost Basis
Large Wind	Jan 1, 2013	30%
Closed-Loop Biomass Facility	Jan 1, 2014	30%
Open-loop Biomass Facility	Jan 1, 2014	30%
Geothermal under IRC sec. 45	Jan 1, 2014	30%
Landfill Gas Facility	Jan 1, 2014	30%
Trash Facility	Jan 1, 2014	30%
Qualified Hydropower Facility	Jan 1, 2014	30%
Marine & Hydrokinetic	Jan 1, 2014	30%
Solar	Jan 1, 2017	30%
Geothermal under IRC sec. 48	Jan 1, 2017	10%
Fuel Cells	Jan 1, 2017	30%
Microturbines	Jan 1, 2017	10%
Combined Heat & Power	Jan 1, 2017	10%
Small Wind	Jan 1, 2017	30%
Geothermal Heat Pumps	Jan 1, 2017	10%

Program User Attributes

The typical program user is a commercial company whom either a) has no current tax capacity; b) is unsure of their current tax capacity; or c) likes the certainty and efficiency today's cash grant program. Our grant clients with no tax capacity or uncertain tax capacity are in this position for a variety of reasons. In certain cases they have experienced losses because of the current difficult economic climate. In other cases we have clients who have tax losses as a result of other tax programs including cost segregation and 100% bonus depreciation tax deductions.

Many of our clients are experiencing tax losses as a result of the alternative energy cash grant investment itself, particularly for alternative energy investments made from September 9th 2010 through December 31st 2011.

For Example: Presume a company that expects \$300,000 in 2011 pretax income makes a \$1,000,000 solar investment in 2011. The first year tax results from the solar investment would be as follows:

	2011 Bonus (100%)
Project Cost	\$ 1,000,000
Remaining Basis After ARRTA §1603 Tax Grant*	\$ 850,000
Bonus Depreciation 100%	\$ 850,000
MACRS 1st Year Depreciation	\$ -
Value of Depreciation X 35% Federal Tax Rate	\$ 297,500
30% Tax Grant	\$ 300,000
Total of first Year Tax Benefit	\$ 597,500
*Includes 50% grant depreciation add-on	

In this case the \$850,000 first year tax depreciation expense far exceeds the \$300,000 in operating income making the \$300,000 cash grant the better choice.

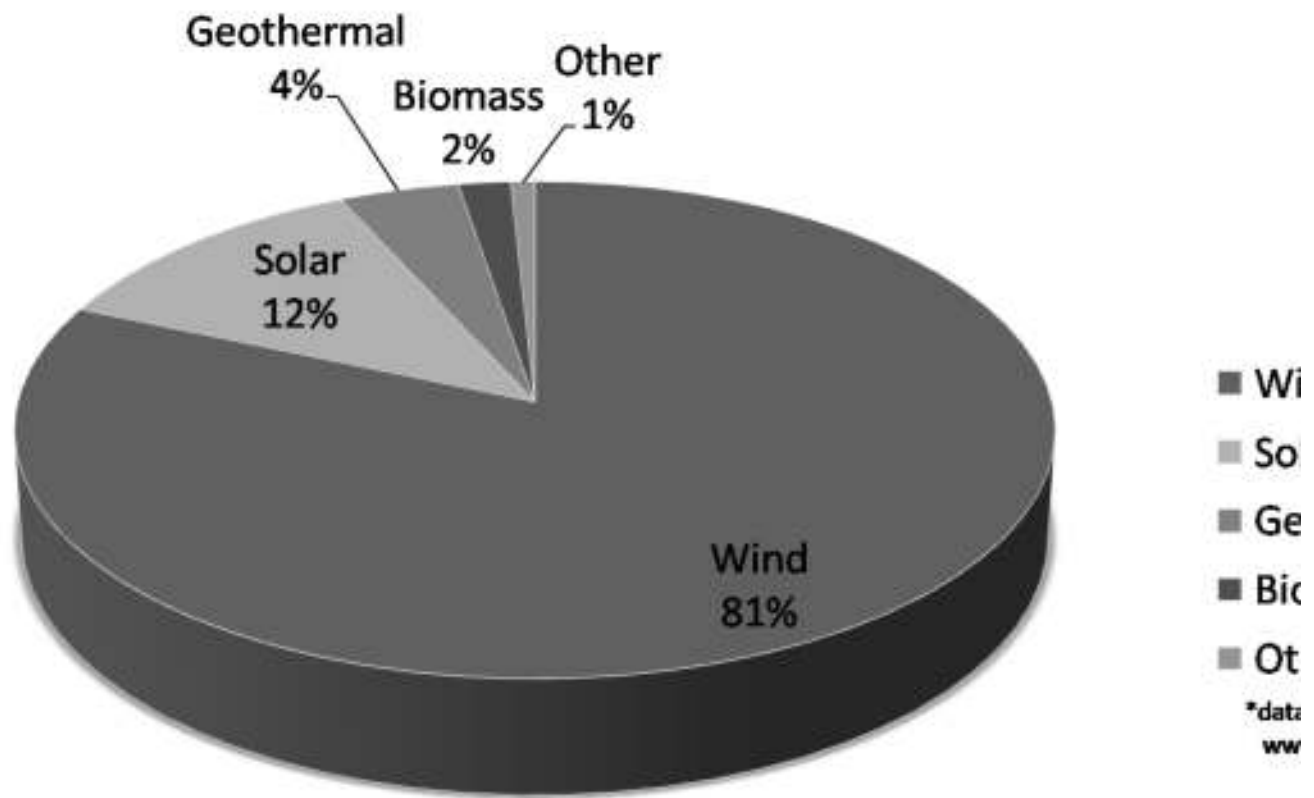
Current Program Results:

As of February 25, 2011, a total of 7,180 alternative energy projects were funded through the §1603 program, totally \$6.4 Billion in Treasury funding. While the majority of this funding has been divided between the four technologies of geothermal, solar, biomass and wind, wind has received the lion's share of the total funding with an astounding \$5.246 Billion in Treasury grants. That figure reflects a total of nearly \$17.5 Billion in combined federal and private funding for wind power projects alone. Below, Table 2 illustrates the awards already given by project type through the first 3 months of 2011.

Table 2

image

Awards Given By Project Type



Wind power has received the majority of the \$1603 grants, due in part to wind's large project cost, but also presumably because wind projects have the earliest credit termination dates. Furthermore, wind energy's development has been disproportionately high in states like Texas, Illinois, and Oregon, where there is ample development land and transmission capacity and robust state incentives. Other Western states with a lot of open space like Arizona and California, where local utility rebates and state incentives encourage solar development have experienced significant utility scale solar installations.

The Authors' Predictions for Future Results of the \$1603 Program

We don't believe that the program results to date will necessarily be illustrative of prospective program results. Readers should be cautioned that this is merely our opinion. We believe that the overall prospective grant levels will be much higher and that their will be technology mix shift with proportionately more grants related to solar, geothermal, combined heat and power and fuel cells, while wind will continue to experience robust if somewhat diminished investment. Our predictions are based on the following:

Overall Growth

Because of a confluence of market, political, and technological reasons, price points on nearly all alternative energy technologies are steadily declining, which will inevitably result in more investment. For instance, solar rooftop P.V., geothermal heat pumps, and combined heat and power systems are all experiencing high growth rates.² Additionally, sectors across the U.S. economy, from the automobile industry³ to furniture chains⁴, are emerging from the economic crisis of 2008 and 2009 with a renewed focus on consolidation and efficiency.

Wind

As the existing results of the Treasury's efforts to measure the effectiveness of the §1603 Program indicate, wind to date is a very popular alternative energy investment. However, a leading industry study by IHS Emerging Energy Research entitled "U.S. Wind Power Markets and Strategies: 2010-2025" highlights a series of potential obstacles that will slow the heretofore fast growth in wind energy development: transmissions systems constraints, economically infeasible power purchase agreements, and a shift from a seller's to buyer's market forcing developers to differentiate themselves based on cost, product, services or track record. Still, despite what many expect to be a deflation in wind energy's growth, the technology is still going to garner heavy funding. In fact, the Cape Wind Energy Project off the coast of Nantucket may by itself result in enough wind turbine installations to constitute a net increase in wind energy development. Should Cape Wind Associates, as the primary developers of the project, choose to take a cash grant in lieu of a tax credit, 2011 may prove to be one of the largest success stories of the §1603 program.

Solar

In a 2008 full-page newspaper ad, Sharp, the multinational electronics giant, touts the prediction that the 21st century is going to be "the solar century." Consistent with its prediction, Sharp has also recently announced a large multibillion-dollar investment in expanded solar panel manufacturing plant capacity. Regardless of the actual outcome of Sharp's prediction, there is no question the solar sector is experiencing unprecedented growth.⁵

Whereas solar P.V. installations in 2010 grew by 114% over 2009, netting \$757 Million in 1603 grants, industry analysts forecast that solar installation will grow by an even larger factor through 2011. Solar has been receiving more attention in recent months from consumers, industry analysts and property owners alike. This attention has raised awareness of the benefits to installing solar, resulting in a spike in ground mounted and rooftop P.V. installation. In 2011 and beyond, the authors are confident improved technology and increased economic incentives will meet with this awareness to result in a marked increase in the amount of cash grants dedicated to solar technology.

Geothermal

The U.S. Environmental Protection Agency considers geothermal heat pumps the most energy-efficient, environmentally clean and cost-effective HVAC systems available. Leading companies like Google, SAP and Halliburton place the U.S. among the top countries using this very desirable technology. When it comes to alternative energy the big three are solar, wind and geothermal; however, geothermal has an advantage in that it provides consistent uninterrupted energy savings and is not dependent on weather conditions, such as the sun shining or the wind blowing. Though they are one of the more expensive systems to install, as they require a more thorough planning process, the rare combination of EPAct tax deductions, tax credits and utility rebates uniquely available to geothermal heat pump users through 2017, coupled with extraordinary energy cost savings, has led to many companies now implementing geothermal heat pump projects.⁶

Geothermal heat pump installations are soon going to reach a critical mass, which spells cheaper installations costs and the further adoption of this technology on a wide scale.

Geothermal industry analysts expect geothermal growth to continue for the foreseeable future. Although the amount of geothermal capacity that came online in 2010 did not reach 2009 levels (176 MW), many projects that were in the advanced stages of development during 2010 will be completed during 2011. By some estimates, these projects will amount to between 500 to 700 MW, compared to 187 total MW between 2009 and 2010 combined. This bodes well for geothermal Treasury grants, which could nearly triple during 2011.

Combined Heat and Power

Combined Heat and Power (CHP), or cogeneration as it is more commonly referred to, is the simultaneous generation of usable heat and electric power in a single process. In other words, it utilizes the heat produced in electricity generation rather than releasing it wastefully into the atmosphere. These systems, which currently account for approximately seven percent of U.S. electrical generation, produce a fraction of the nitrogen oxides that conventional systems do. As a result of the potential energy efficiency and the greenhouse gas reductions, both the U.S. Department of Energy and the Environmental Protection Agency have the achievable goal of doubling the number of these CHP systems in the United States.⁷

CHP system is an independent system that remains operational during power outages. This is helped in part by the fact that CHP offers flexibility in fuel selection and can take advantage of both fossil fuels and locally sourced and renewable fuels like biomass or ethanol. This means that when traditional fuel sources like coal and oil spike in cost, CHP systems offer certainty and insulation from volatility.⁸ Given the current pace at which fuel costs around the country are rising, we will see much more investment in CHP to offset the expense of traditional fuels. Indeed, while 2009 and 2010 were below expectation years for CHP, as neither year saw over 1 GW in capacity installed, market analysts anticipate at least 1.1 GW of capacity to be installed in 2011. This added capacity equates to large increases in CHP §1603 grants.

Fuel cells

An innovative alternative energy source made multiple nationally known on CBS's "60 Minutes" is the fuel cell. Bloom Energy is just one of the providers of fuel-cell energy and calls its product the Bloom Box. This is a unit made up of fuel cell stacks; oxygen and fuel are drawn from opposite sides of the unit and together, through a clean electrochemical process, they create power. Water is the only waste generated. An attractive aspect of the Bloom Box is that energy is produced without connection to an electric grid and, therefore, is more reliable. Google, eBay, Staples and Wal-Mart are just some of the large corporations generating power using the Bloom Box. Not only is the Bloom Box energy efficient, but also it is eligible for a 30% federal tax credit, plus in California, there is a 20% tax credit. The Fujitsu data center located in Sunnyvale, California, reaped \$500,000 in utility rebates from fuel cell use and will recover its costs in just 3.5 years⁹

As communication and technology leaders, companies like Google, eBay, Staples, and Wal-Mart are a signal of what is to come. Though fuel cells are still in their beginning stages, they are already proving to achieve near-perfect energy efficiency and as they become cheaper to install, property owners, particularly data center operators, who want to be at the front line of energy efficiency will take advantage of §1603 grants in order to finance installing fuel cells.

Conclusion

The §1603 cash grant program has already proven to be a major success, but as market factors encourage alternative energy investment the future holds even greater opportunities for developers to take advantage of Treasury cash grants. With comprehensive monthly year-to-date Federal government reporting we can regularly monitor whether your authors' opinions prove accurate.

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