



U.S. Renewable Energy Tax Equity Investment and the Treasury Cash Grant Program

Abstract

Tax equity financing has been a significant driver of the expansion of U.S. renewable energy over the past decade. It has had the most positive impact in the areas of utility-scale wind power generation and commercial-scale solar facilities. However, the effectiveness of tax equity financing has been negatively impacted by the effects of both the inconsistent regulatory environment and the financial crisis. The extension of the U.S. Department of Treasury program for cash grants in lieu of both Investment Tax Credit (ITC) and Production Tax Credits (PTCs) for renewable generation could potentially mitigate these effects. It could also increase the number of renewable energy tax equity financings, and ultimately help to increase the nation's renewable energy generation capacity.

Context

"Tax equity" is a term that is used to describe a passive ownership interest in an asset or a project, where an investor receives a return based not only on cash flow from the asset or project but also on federal and state income tax benefits (tax deductions and tax credits). Tax equity investors are usually large tax-paying financial entities such as banks, insurance companies and utility affiliates that use these investments to reduce future tax liabilities. Tax equity is distinct from traditional "corporate equity," where an investor makes an active investment and is actively involved in corporate governance. A tax equity investor is passive and only gets involved in management of the asset or project in downside cases where something has gone wrong with the performance of the investment or with the asset or project.

Tax equity benefits arise from two broad categories: tax deductions and tax credits. The most common tax deductions are depreciation (common to all renewable energy tax equity financings), and interest deductions (only available in transactions with leverage at the asset or project level). The most common federal tax credits in renewable energy tax equity financings are ITC and PTCs. ITC has been available in recent years to investors in solar and fuel cell assets in an amount equal to 30% of the cost of the assets and available the year they are put into service. There is a cap of \$3 per watt for fuel cell ITC. For microturbines, there is a cap of \$2 per watt. Microturbines and qualifying combined heat and power qualify for 10% ITC.

PTCs have been available in recent years to investors in wind, geothermal, biomass, landfill gas, municipal solid waste and some hydroelectric facilities. As the name suggests, PTCs are based on power output and are payable in cents per kilowatt hour of production. Levels vary with generation type. PTCs generally are available for the first ten years of operation. Wind and geothermal PTCs are currently set at 2.1 cents per kWh, and are adjusted each year for inflation. PTCs for biomass, landfill gas, municipal solid waste and qualifying hydroelectric facilities are available at half the credit rate for wind.

Impact of Regulatory Uncertainty

Prior to the financial crisis, investment in and development of renewable energy waxed and waned along with the threat of non-extension of tax incentives. For example, in periods where

it appeared that Congress was not going to extend the PTC, wind development dropped off precipitously. In each of 1999, 2001 and 2003, U.S. new wind capacity decreased by over 75% from each prior year, due to uncertainty surrounding tax incentives. Similar phenomena have occurred in the solar development market.

Perhaps the biggest and most visible impact of regulatory ambiguity was on project financing and construction, which could not proceed without certainty. This also affected manufacturers who could not commit to capacity expansions or supply chain contracts, which, in turn, created a scarcity of turbines that raised the cost of wind projects worldwide.

Partly in recognition of the negative impact that the uncertain regulatory environment was having on the renewable energy market, the Emergency Economic Stabilization Act that was enacted on October 3, 2008 extended the PTC for wind until the end of 2009 and for other technologies until the end of 2010*. The same law also extended the 30% ITC rate for solar and certain other facilities until the end of 2016 (at which point the ITC rate for solar and certain other facilities will revert to its “permanent” level of 10%). The law also allowed the ITC to reduce the Alternative Minimum Tax, which was helpful to some investors who had limited tax capacity.

Unfortunately, in the context of the expanding financial crisis, these changes did not have the desired effect as the marketplace did not respond with more financings. The issue became not only the lack of regulatory certainty, but also the dearth of tax capacity. Traditional tax equity investors were no longer able to reliably predict their own profitability, over both the short and long term. This meant they could not predict their projected tax liabilities either. That led to a growing reluctance on the part of big investors to invest due to their not being at all certain about their ability to absorb the tax benefits generated by these investments.

Most of the activity in U.S. big-ticket renewable energy investment has been in the wind sector. At this point, it may be helpful to review some statistics from that sector.** In 2006, fifteen wind tax equity transactions were mandated to investors, representing approximately \$3.1 billion in tax equity. In 2007, eighteen transactions were mandated to investors, representing approximately \$5.2 billion in tax equity. Many predicted that demand for wind tax equity in 2008 and 2009 would be \$8 billion and \$10 billion, respectively.

Impact of Financial Crisis

One of the many deleterious effects of the financial crisis was that traditional tax equity investors could no longer predict that they would have large amounts of tax capacity over the appropriate tax equity investment horizon. Of the approximately twenty-two investors who had previously participated in wind tax equity transactions, by the end of 2008, only two or three remained active. The market finished the year with fourteen transactions, representing approximately \$2.5 billion in tax equity, 30% of what had been predicted only a year before.

Stimulative Effect of Cash Grant Program

The American Recovery and Reinvestment Act that was enacted on February 13, 2009 included several provisions to further incentivize investment in renewable energy. One of the most important is the cash grant program, where investors have the option of foregoing PTCs or ITC and instead receiving a check for 30% of the project cost from the U.S. Treasury within sixty days of a project achieving commercial operation. Rules with respect to what constitutes qualifying

“project costs” and other terms of the grant program are being worked out by Treasury. Consultation with qualified counsel to determine compliance with the provisions of the grant program is a must. The cash grant option is available for projects that are placed in service in 2009 or 2010 or those which start construction during those years and are completed by certain deadlines.

The cash grant program has undoubtedly been stimulative to tax equity financing of the wind industry, as evidenced by the rush of transactions since the cash grant program rules were announced on July 9, 2009. In that period, five wind tax equity transactions, representing approximately \$3.6 billion of tax equity, have been completed. That is more tax equity in the space of four months in 2009 than in all of 2008. Another three to five wind transactions are expected to close before the end of 2009.

In addition, a number of smaller solar sale-leaseback transactions that feature the cash grant have closed in that time frame. The market is expected to accommodate dozens more single-investor commercial-scale solar project leases that also utilize the cash grant before the end of 2010.

The cash grant program is successful thus far. Some projects which are eligible for the cash grant may be better off using PTCs (e.g. geothermal and sites with strong wind). Those projects may prefer to use traditional tax equity, if it is available. However, there is clearly still a need for tax equity financings even in the absence of ITC and PTCs. The program has had a stimulative effect because the use of a cash grant in lieu of tax credits effectively reduces the amount of the investor’s tax capacity used for a particular project, expanding the number of projects it can finance. The cash grant enables monetization of the majority of the tax benefits traditionally absorbed by tax equity investors, but outside of the tax system. Transactions now only require tax capacity associated with MACRS depreciation and interest deductions, if any, and do not require the large additional front-loaded tax capacity required by ITC, or the long term predictability of tax capacity required by investors using PTCs.

Potential Impact of Extension of Cash Grant Program

As currently structured, the cash grant program will begin to be phased out towards the end of 2010. The elimination of this incentive may put the market back where it was in early 2009 and put a significant damper on renewable energy development and financing.

- If the cash grant program were to be extended by one year, that could tilt the playing field in the favor of generation types that have construction periods of less than one year (e.g. wind, solar photovoltaics). A one-year extension would likely be detrimental to generation types with longer construction periods (e.g. geothermal, solar thermal).
- A two-year extension would likely not have such uneven effects, but could lead to the same kind of “wax and wane” cycle we have seen in renewable energy in the past.
- A five-year extension would likely add stability, leading to an expanding renewable energy development and finance market. There could be other indirect effects in the industrial sector also, including new participants with a willingness to commit to renewable energy in the U.S., and incremental investment in renewable energy manufacturing facilities to supply the expanding market.

Some observers have voiced concerns regarding a perceived higher cost to the Treasury of the use of a cash grant versus a tax credit. Actually, the program simply provides for a cash payment instead of a reduction in future tax revenue and thus has a limited net impact on cost. The cash grant is not a new subsidy, rather a *more efficient form* of an existing benefit. Any extension of the program would simply extend the variation on the subsidy, but not add significant new cost to the Treasury.

Other observers have voiced doubts about the need for tax equity financing for renewable energy in the U.S. However, the marketplace experience thus far in 2009 indicates that there is clearly ongoing demand on the part of project sponsors for tax-driven capital. Even if financings price in only depreciation, that remains valuable to sponsors who do not themselves have the capacity to effectively use those tax deductions.

Given PREF's estimate of an implied annual investment requirement of \$32 billion for each of the next ten years, it would benefit the marketplace to improve access to as many pools of capital as possible. Continued access to the tax equity pool could potentially be improved by extending the cash grant program. Renewable energy developers would be more likely to be able to rely on tax equity as a source of capital. They would therefore potentially no longer need to calibrate their development planning around the projected presence or absence of a tax equity market. The effects of the "wax and wane" financing and development cycle could be greatly reduced.

*Since extended until the end of 2012 for wind and 2013 for geothermal, biomass and marine.

**Note that these are private, rather than public, markets. Statistics in this paper are cobbled together from various market sources. These figures should be read as broadly correct, rather than precisely accurate.

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ABOUT US PREF

The objective of the US Partnership for Renewable Energy Finance (US PREF) is to unlock private capital flows to new, large-scale and distributed renewable energy projects in the United States. To achieve this objective, a balanced and credible group of highly experienced renewable energy financiers from financial institutions, investors, professional services firms, utilities and others, working with leading non-government organizations, have convened as US PREF. US PREF, founded in 2009 with support from the consulting firm Green Order, is a program of the American Council On Renewable Energy (ACORE), a Washington, DC - based 501 (c)(3) non-profit organization whose mission is to bring renewable energy into the mainstream of the US economy and lifestyle through research, education, convening, and communications.