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Credits & Incentives talk with Deloitte

Credits and incentives
provide green for going
green

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CREDITS & INCENTIVES TALK WITH DELOITTE

Credits and Incentives Provide Green for Going Green

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Many individuals and businesses from around the world are making a conscious effort to "go green" to help protect the environment and sustain natural resources. For a business, "going green" can make not only environmental sense but financial sense as well. According to the U.S. Department of Energy, total commercial energy expenditures increased from \$10.7 billion in 1970 to \$172.1 billion in 2012.¹ For a business, especially one operating on a thin profit margin, high utility costs can substantially cut into profits.²

An investment in renewable energy may have the potential to dramatically reduce a company's utility bill primarily by consuming energy from on-site sources. For example, Walmart has undertaken an extensive project to equip many of its stores and distribution centers with renewable energy. Among its California locations equipped with renewable energy systems, Walmart has seen cost savings on electricity of 5-30% per store.³

There are many forms of renewable energy, including solar, wind, hydroelectric, biomass, hydrogen fuel cells and geothermal. Federal and state governments have recognized the economic, environmental and political value of promoting renewable energy, and in response have created a wide range of incentives to entice individuals and businesses to invest in renewable energy. The types of incentives range from tax credits to grants to "green loans."

The rise of financial incentives has been a major contributor to the rapid growth of renewable energy projects in the residential, commercial and utility sectors.⁴ Solar energy alone comprised 32 percent of all new electric generating capacity in the U.S. in 2014.⁵ Since 2013, new renewable energy capacity has outpaced new fossil fuel generation, and the U.S. is projected to install more than four times as much renewable energy capacity as fossil fuel generation by 2030.⁶

This article discusses how businesses can use tax credits and other incentives to help lower their overall cost of going green, including the installation of solar panels. Solar energy is the focus of this article as it is generally the most feasible, affordable and accessible form of renewable energy for commercial-scale, distributed generation projects.

The first section of this article outlines some of the current federal, state and local tax credits and incentives available to companies that invest in solar energy projects.⁷ The second section discusses possible financial models that a business may wish to consider to fund its solar energy project.

Tax benefits and incentives

Federal, state and local tax credits and incentives include the following.

Federal tax incentives: The solar Investment Tax Credit (ITC) and accelerated depreciation deductions are the primary federal tax incentives for solar energy projects in the United States. The solar industry attributes much of its recent growth to the ITC. Since the ITC's enactment in 2006, the private sector has invested \$66 billion in solar energy projects.⁸

The ITC is a nonrefundable 30% tax credit for solar energy systems installed on residential and commercial properties.⁹ The credit is a dollar-for-dollar reduction in the income taxes of the taxpayer. In the event the credit exceeds the tax liability, the unused portion of the credit may be carried back by businesses one year and carried forward 20 years.¹⁰ The credit is available for eligible property placed in

service before January 1, 2017.¹¹ On January 1, 2017, the credit will drop from 30% to a permanent 10% credit for commercial solar energy property and the residential credit for homeowners will expire.

Also, certain taxpayers may elect to receive a one-time 30% grant from the U.S. Treasury in lieu of the ITC under the Section 1603 Treasury Program created by the American Recovery and Reinvestment Act. The 1603 grant is similar in most respects to the ITC with the major difference being that the taxpayer receives a cash grant. For those electing the 1603 grant, the Treasury will release the payment within 60 days of its receipt of the application or the date the property is placed in service, whichever is later. In order to receive the grant, Treasury required that applicants begin construction on the solar project before January 1, 2012, and submit an application to Treasury before October 1, 2012, claiming that construction had commenced.

Businesses investing in solar energy and other renewable energy projects can also claim accelerated depreciation deductions under the Modified Accelerated Cost Recovery System (MACRS). MACRS allows taxpayers to recover their investment in solar energy property through depreciation deductions on an accelerated, five-year schedule. The MACRS depreciation schedule provides a tax benefit value equal to approximately 26% of the property's costs, compared to normal straight-line depreciation that provides a tax benefit value of only 14% of the property's costs.¹²

In total, the ITC and the MACRS depreciation schedule represent an economic benefit of 50% to 60% of the cost of the solar energy property.¹³

State and local incentives: State and local governments have implemented a variety of tax and financial incentives to induce investment in renewable energy. Among the most popular incentives offered by state and local jurisdictions are income tax credits (both personal and corporate), sales and property tax exemptions, rebates, grants and low interest "green loans."

While the types and sizes of the incentives vary from jurisdiction to jurisdiction, these state and local incentives can often help to reduce the upfront cost of solar installations. The following provides some examples of available state tax credits and incentives.

- Illinois Green Energy Loans: Business owners may apply for a rate reduction on loans if the proceeds are intended for use in purchasing qualifying property. Loan amounts may not exceed \$10 million.¹⁴
- Maryland Commercial Clean Energy Grant Program: The Maryland Energy Administration provides grants to business owners who install solar photovoltaic systems, solar water heating,

geothermal heating and cooling, and wind turbine systems. The grant amount depends on the capacity of the system.¹⁵

- New York State Solar Sales Tax Exemption: The state of New York exempts the sale and installation of commercial solar systems from the state's sales and compensating use taxes.¹⁶
- North Carolina Renewable Energy Tax Credit (Corporate): This program offers a tax credit equal to 35% of the cost of eligible renewable energy property constructed, purchased or leased by the taxpayer.¹⁷ The credit may be taken against income tax, franchise tax, or in the case of an insurance company, against the gross premium tax and expires on December 31, 2015.

Net Metering and Renewable Portfolio Standards (RPS): Net metering is becoming an increasingly popular way for utility customers to lower their electricity costs. Net metering allows commercial customers that generate their own electricity from solar energy systems to feed excess electricity back into the power grid. Customers are generally credited on their utility bills for the electricity that is transmitted back to the grid.¹⁸

State RPSs require utility companies to source a certain percentage of electricity from renewables, and there are often special carve-outs specifically for solar energy.¹⁹ In order to meet state mandates, utility companies frequently purchase renewable energy credits (REC) or solar renewable energy credits (SREC).²⁰ Generally, each time a solar energy system generates 1,000 kWh (1MWh) of electricity, an SREC is issued, which can be sold or traded separately from the power.²¹ Monetizing SRECs is one way for businesses to potentially enhance their return on investment on solar energy projects.

Financing an investment in solar energy

Possible financial models that a business may wish to consider to fund its solar energy project include the following.

Types of solar panel systems: There are two common distributed solar energy systems: the photovoltaic (PV) system and the solar thermal system. Of the two, the PV system is generally the more popular for both commercial and residential properties. A PV system works by converting sunlight into direct current (DC) electricity via semiconductors. An inverter inverts the DC energy into alternating current (AC) energy. Since PV panels only generate electricity when there is sunlight, the system must be coupled with other power generation or otherwise be connected to a power grid to ensure a constant supply of electricity when there is no sunlight.

In contrast, a solar thermal system harnesses the sun's energy to heat (and cool) water and air. The thermal system features a solar collector that absorbs the sun's heat. The collector either heats the water directly or it heats a working fluid that then heats the water.

Traditionally, solar thermal energy systems have been less expensive than PV systems. However, in recent years this price gap has shrunk as manufacturers have increased PV system production and related installation costs have decreased. Between 2010 and 2014 the average price of a PV panel dropped by 63%.²²

As PV systems become more affordable, they are likely to continue to be the solar energy system of choice as they are more versatile. Besides generating electricity, a PV system may also heat water when coupled with an air-source heat pump. More importantly, for a business interested in monetizing SRECs, owners of solar thermal systems cannot sell SRECs or receive credit from net metering, while owners of a grid-connected PV system have these options.

Models for financing a commercial solar energy project: There are a range of innovative financing options that potentially may make converting to solar energy more affordable. The right financial structure may result in a business having positive cash flow, meaning the energy savings and financial incentives potentially may be worth more to a business than the cost of the solar panels. Below is a sampling of possible financial structures that a business may want to consider for funding a solar energy project. The list is by no means exhaustive. As in any commercial-scale project, there are always a variety of financing options.

Single-owner model: For consideration by entities with sizeable tax liabilities and access to upfront capital--The owner pays all of the project's upfront costs. The business receives all federal and state tax benefits and incentives. The single-owner model is one option for companies with sufficient upfront capital to fund a commercial solar energy project and that expect to have sizeable tax liability. Under this model, the company has the ability to receive all benefits flowing from the solar energy project, including the ITC and whatever state and local incentives are available. If the solar PV system is connected to the local utility's power grid through net metering, any excess electricity the system produces is fed into the grid and may be credited on the customer's electricity account.

Single owner + leveraged debt: For consideration by entities with sizeable tax liabilities but without access to upfront capital--The single owner + leveraged debt model is similar to the single-owner model with the one difference being that the business procures debt to finance the system. The loan may be recourse or non-recourse depending on the complexity and size of the project. The lender may be a third-party

financier or the installation company. The business receives all federal and state tax benefits and incentives, including claiming interest deductions on the loan.

Sale leaseback model: For consideration by entities with reduced tax liability and no access to upfront capital--In many cases, a business may not have sufficient tax liability to make use of the ITC or the depreciation deductions and may have no access to upfront capital. The sale leaseback model provides these business entities with reduced energy costs without having to provide capital to finance the project. A third-party financier may be the installation company or a tax equity investor that purchases the project and leases the solar energy system to the company.²³ The third-party financier or tax equity investor receives the incentives flowing from the solar energy project. "Tax equity" investors are typically banks, insurance companies or a few large investors who provide upfront capital in exchange for tax credits, in addition to other economic benefits. Projects may have one tax equity investor or multiple investors. The length of a lease varies; it can run for a period of years or last decades.²⁴

Partnership flip: For consideration by entities with reduced tax liability but who have access to some upfront capital--The partnership flip involves a partnership between the business and a tax equity investor. Under this structure, the tax equity investor contributes a significant portion of the capital, usually 45%-65%,²⁵ to the project while the business entity contributes the balance, either by using its own cash or by taking on debt. Within the initial 5-7 years of the project being placed in service, the tax equity investor, in exchange for providing a significant portion of the upfront capital, receives nearly 100% of the ITC and depreciation deductions associated with the qualifying solar energy property. The investor may also receive cash from the sale of electricity and/or sale of SRECs. After the initial 5-7 year period, during which the tax equity investor has received its negotiated return on investment, the two parties will "flip" the partnership allocations such that the majority ownership interest is transferred from the investor to the business.

Conclusion

The above-mentioned arrangements are just a few possible approaches that a business may wish to consider to finance a solar energy project. There are a variety of techniques a business can use to structure a commercial solar energy project, ranging from straightforward to very complex.

The bottom line is that a business may potentially save money on utility bills by using solar energy and, at the same time, decrease its carbon footprint. Government incentives, coupled with the significant decline

in solar panel costs, may create a business case for companies to consider making the switch to renewable energy. An exact determination of energy savings requires consideration of many factors. Dollar savings may depend on how much electricity is produced, when it is produced, and whether the business qualifies for additional incentives that may affect project economics.

A company considering converting to solar energy may wish to move quickly to start the project. Although growth of solar energy is expected to continue, businesses should be aware that the biggest financial incentive, the IRC Section 48 commercial 30% federal income tax credit, is set to drop to 10% in 2017. If a company procrastinates, it potentially may miss out on this important tax-enabled mechanism to finance a solar energy project.

¹ U.S. Energy Information Administration, *Commercial Sector Energy Price and Expenditure Estimates by Source, 1970-2012, United States* (last visited April 17, 2015), http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/com/pr_com_US.html&sid=US.

² For example, certain estimates show that restaurants spend about 3 to 5 percent of their total operating costs on energy while a hotel can see as much as 4.4% of its total revenue going toward utility costs. (http://www.nationalgridus.com/non_html/shared_energyeff_restaurants.pdf, http://www.hotel-online.com/News/PR2011_3rd/Sep11_UtilityCosts.html).

³ *Walmart Raises the Bar for Businesses to "Go Solar,"* (last visited March 30, 2015), <http://www.solarcity.com/commercial/commercial-solar-projects/walmart>.

⁴ See Solar Energy Industries Association (SEIA), *The Case for the Solar Investment Tax Credit (ITC)* (last visited April 16, 2015), (<http://www.seia.org/research-resources/case-solar-investment-tax-credit-itc>) (the solar investment tax credit has fueled dramatic growth in solar installations); American Wind Energy Association (AWEA), *Federal Production Tax Credit for Wind Energy* (last visited April 16, 2015), <http://www.awea.org/Advocacy/content.aspx?ItemNumber=797> (wind tax credit has spurred significant technology cost reductions and economic development across all 50 states).

⁵ See SEIA and GTM Research, *Solar Market Insight Report 2014 Q4* (last visited April 16, 2015), www.seia.org/research-resources/solar-market-insight-report-2014-q4.

⁶ See *State of the Industry Keynote*, Bloomberg New Energy Finance Summit 2015 (last visited April 16, 2015), <http://about.bnef.com/content/uploads/sites/4/2015/04/BNEF-2015-Keynote-ML.pdf>.

⁷ Companies should confirm the specific incentives potentially available in a given jurisdiction.

⁸ SEIA, *The Case for the Solar Investment Tax Credit (ITC)* (last visited April 16, 2015), <http://www.seia.org/research-resources/case-solar-investment-tax-credit-itc>.

⁹ See 26 U.S.C. § 25D 26 U.S.C. § 25D for ITC for residential property and 26 U.S.C. § 48 26 U.S.C. § 48 for ITC for commercial property.

¹⁰ 26 U.S.C. § 39 26 U.S.C. § 39.

¹¹ 26 U.S.C. § 48(a)(2)(A)(i)(II) 26 U.S.C. § 48(a)(2)(A)(i)(II); 26 U.S.C. § 25D(g) 26 U.S.C. § 25D(g).

¹² Mark Bolinger, *Financing Non-Residential Photovoltaic Projects: Options and Implications*, Lawrence Berkeley National Laboratory, <http://emp.lbl.gov/sites/all/files/REPORT%20lbl-1410e.pdf>.

¹³ *Id.*

¹⁴ *Green Energy Loans*, Database of State Incentives for Renewable & Efficiencies (DSIRE) (Feb. 27, 2015), <http://programs.dsireusa.org/system/program/detail/4168>.

¹⁵ *Commercial Clean Energy Grant Program*, DSIRE (Oct. 16, 2014), <http://programs.dsireusa.org/system/program/detail/3753>.

¹⁶ *Sales and Use Tax Exemption for the Sale and Installation of Commercial Solar Energy Systems Equipment*, New York State Department of Taxation and Finance, http://www.tax.ny.gov/pdf/memos/sales/m12_14s.pdf.

¹⁷ *Guidelines for Determining The Tax Credit for Investing in Renewable Energy Property*, North Carolina Department of Revenue, http://www.dor.state.nc.us/taxes/corporate/renewable_energy_credits.pdf.

¹⁸ SEIA, *Net Metering* (last visited April 16, 2015), <http://www.seia.org/policy/distributed-solar/net-metering>.

¹⁹ *Renewable Portfolio Standard Policies*, DSIRE, (March 2015), <http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2014/11/Renewable-Portfolio-Standards.pdf>.

²⁰ See District of Columbia's Solar Renewable Energy Credits as an example of SREC's, <http://www.dcpsc.org/electric/renewable.asp>.

²¹ *Id.*

²² SEIA, *Solar Industry Data* (last visited April 16, 2015), <http://www.seia.org/research-resources/solar-industry-data>.

²³ <http://www.seia.org/policy/finance-tax/third-party-financing>.

²⁴ Depending on the terms, a lease may span up to 25 years, <http://www.seia.org/policy/finance-tax/third-party-financing>.

²⁵ Michael Mendelson, *Impact of Financial Structure on the Cost of Solar Energy*, <http://www.nrel.gov/docs/fy12osti/53086.pdf>.