Federal Tax Guide for Solar Energy

Version 9.0

September 2018

About SEIA

The Solar Energy Industries Association (SEIA®) is the driving force behind solar energy and is building a strong solar industry to power America through advocacy and education. As the national trade association of the U.S. solar energy industry, which now employs more than 250,000 Americans, we represent all organizations that promote, manufacture, install and support the development of solar energy. SEIA works with its 1,000 member companies to build jobs and diversity, champion the use of cost-competitive solar in America, remove market barriers and educate the public on the benefits of solar energy. For additional information, visit www.seia.org

Acknowledgments

This report benefited from the expertise of Keith Martin, Co-head, Projects Group, Norton Rose Fulbright US LLP.

This manual has been prepared by Norton Rose Fulbright US LLP and is brought to you by the Solar Energy Industries Association and was produced expressly for SEIA member companies. If you are not a member of SEIA, please join us at **www.seia.org/join** to gain authorized access to this guide.

Edition 9.0

The U.S. tax code is a perpetually moving target, and future changes in the U.S. tax code by Congress, future rulings and decisions by the IRS and the courts may alter the interpretation of the law. We endeavor to ensure that this document is up to date at the time of printing; make sure that you have the latest copy.

1.0 – Released January 27, 2006

Initial interpretation of the U.S. tax code is based on legislative language and intent and existing precedent, especially for the commercial tax credit. Includes existing tax forms as a guide only.

1.1 – Released March 10, 2006

Includes improved explanation of acquisition vs. construction for solar equipment.

Incorporates new state taxation office interpretation of commercial solar installations under the Hawaii state tax credit.

Includes new discussion of model homes.

Typographical correction in Commercial Tax Credit Section 11, Example # 3

1.2 – Released May 26, 2006

Reflects new legislative changes to the Hawaii state tax credit.

Reflects new information on utility eligibility for credits.

2.0 - Released October 21, 2008

Reflects first comprehensive update of the original guide.

Broadens focus beyond tax credits also to cover depreciation.

Adds new sections about how tax benefits are "monetized" by developers who cannot use them.

Reflects changes to the tax code as a result of the "Emergency Economic Stabilization Act" in October 2008.

3.0 - Released May 21, 2009

Reflects changes to the tax code made by the "American Recovery and Reinvestment Act" in February 2009.

Adds new sections on the section 1603 Treasury program payments in lieu of tax credits, tax credit bonds, federal loan guarantees, a new investment tax credit for manufacturing facilities and answers to a list of frequently-asked questions.

4.0 - Released September 8, 2009

Updates added to reflect the latest information about the section 1603 Treasury program, federal loan guarantees, financing strategies for developers who cannot use tax benefits, tax-exempt bonds and the manufacturers' investment tax credit.

4.1 - Released September 11, 2009

Corrects the date of the preliminary application deadline for the manufacturers' tax credit to September 16, 2009.

Corrects figure in "State Tax Considerations" example for calculating the effective combined state and federal credits to 46.25 percent.

5.0 - Released March 1, 2011

Updates added to address developments since September 2009, including further guidance from the U.S. Treasury about what it means to start construction in order to qualify for section 1603 Treasury payments, extension of the deadline to start construction, enactment of a 100-percent depreciation bonus for property placed in service after September 8, 2010 through December 2011, various IRS rulings involving solar facilities and further evolution of the federal loan guarantee program for renewable energy projects administered by the U.S. Department of Energy.

6.0 - Released April 5, 2012

Updates added to address developments since February 2011, including further guidance from the U.S. Treasury about what had to happen in 2011 for a project to be considered under construction, when transferring equipment or a project company led to ineligibility for a section 1603 payment, how much the Treasury was prepared to pay in section 1603 payments on solar projects, and various IRS rulings on the ability to claim investment tax credits on membranes that double as the roof under rooftop solar panels, batteries and step-up transformers and related equipment.

7.0 - Released September 9, 2013

Updates added to address developments since March 2012, including sequestration haircuts, basis disputes and litigation involving the section 1603 program, when tax credits can be claimed on batteries and growing interest in REITs (real estate investment trusts) and securitizations as a way of raising capital more cheaply for solar projects.

8.0 - Released August 6, 2016

Updates added to address developments since September 2013, including a multi-year extension of the investment tax credit and residential solar tax credit and a 50-percent depreciation bonus, a decision by Congress to require owners of commercial projects merely to have started construction rather than to have completed projects by the tax credit deadline, various IRS rulings about solar issues, litigation surrounding the section 1603 program, evolution in financing strategies for solar projects, and a new solicitation for DOE loan guarantees.

9.0 - Released September 24, 2018

Comprehensive rewrite of the guide to incorporate new IRS guidance since the last update (including construction-start rules for solar projects, various private letter rulings to solar companies and final regulations on what parts of a solar project qualify as "real property" for REIT purposes), reflect the effects of the "Tax Cuts and Jobs Act" enacted at the end of 2017 (including a new 100-percent depreciation bonus, new limits on interest deductions, changes in the tax treatment of prepaid power contracts and government grants, a new base erosion anti-abuse tax that could affect tax credits, new rules for carrybacks and carryforwards unused tax benefits), add new sections on opportunity zones and special types of customers and customer arrangements (such energy savings performance contracts and "virtual" corporate PPAs) and update other parts of the guide (including on solar securitizations, Treasury cash grant litigation, DOE loan guarantees and US Export-Import Bank financing).

Executive Summary

The U.S. government encourages investment in new solar equipment by offering tax credits, accelerated depreciation allowances, loan guarantees, low-interest loans and grants. Homeowners installing solar equipment qualify potentially for a tax credit. Businesses qualify potentially for both a tax credit and the ability to deduct most of the equipment cost in the year the solar equipment is put in service. For businesses, the tax benefits are worth as much as 44 percent to 46 percent of the cost of the equipment. For homeowners, the tax benefits are worth 30 percent.

The **SEIA Federal Tax Guide for Solar Energy** provides detailed information about the potential tax benefits and deal structures for solar energy projects. Key considerations in calculating the tax benefits for any given project include:

- The types and amounts of incentives;
- On what parts of a solar project an investment credit may be claimed;
- What must happen before a solar project is considered under construction in time to qualify for tax credits, which is important because the tax credits start to phase out after 2019;
- What must happen before a solar project is considered "placed in service," which is important because the tax benefits are claimed starting in the year that equipment goes into service;
- Timing issues arising because the tax credits and some depreciation benefits are not permanent;
- The ownership, financing and offtake arrangements for the project, which are important because the tax benefits can only be claimed by the owner, and some financing and offtake arrangements can lead to a reduction in tax benefits; and
- The effect of rebates, state tax credits and other subsidies on the federal tax benefits.

The *Guide* distinguishes between projects that a solar company or other business puts to business use and projects that an individual puts to personal use. The former are referred to as commercial projects and the latter as residential projects. Examples of commercial projects are a utility-scale solar array that a solar company uses to sell electricity to a utility and a rooftop solar system that a solar company owns and leases to a homeowner on whose roof the system is mounted. An example of a residential project is a rooftop solar system that a homeowner has acquired by direct purchase.

Most solar companies are not in a position to use the tax benefits directly and must enter into transactions to "monetize" the tax benefits, or convert them into cash that can be used to help pay the project cost. There are many misconceptions in the market about who is an appropriate counterparty for such a monetization transaction. For example, passive loss and at-risk rules in the U.S. tax code make it hard for individuals or smaller corporations to use the tax subsidies. They are not usually an appropriate counterparty.

Care must be exercised when entering into transactions with schools, municipal utilities, some electric cooperatives, government agencies, Indian tribes, charities and other tax-exempt organizations. Solar equipment cannot be leased to such entities and still qualify for the full tax benefits. However, a developer can sign a power contract to supply electricity to such an entity. Care should be taken to make sure that what looks in form like a power contract is in fact one in

substance. The IRS has rules for treating some arrangements as leases even though they are documented to look like power contracts.

Commercial projects that qualify for a tax credit had the option during the period 2009 through 2011 to forego the tax credit and receive the cash value from the U.S. Treasury instead. This option to trade in tax credits for cash was a temporary measure meant to help keep renewable energy development on track during a period when the economy was expected to remain weak. The option remained available through December 2016 for projects that were considered under construction by December 31, 2011. The amounts paid by the Treasury were less than the amounts for which some solar companies applied, principally due to disputes about the appropriate "basis" to use for calculating the amount of investment tax credit for which a project would have qualified. These issues are now working their way through the courts.

There may be tradeoffs for solar companies that take advantage of tax-exempt financing. Such financing will adversely affect the depreciation that can be claimed on a commercial project. There are tradeoffs to take advantage of new pools of money that are available for projects in rural and other low-income areas called "opportunity zones."

This manual is organized in six sections. The first section covers general project issues, as well as issues that are unique to the tax credit for commercial projects. The second section covers issues specific to the tax credit for residential projects.

At the end of these first two sections, the guide provides workbook examples for calculating the value of the investment tax credit and residential solar credit under different project conditions.

The remaining sections address tax credit bonds, loan guarantees, low-interest loans and grants that may be available for some types of commercial solar projects through U.S. government agencies, a tax credit that encourages construction of new factories to make solar energy equipment and other components for renewable energy projects, and state tax considerations.

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