

Farm Energy Fact Sheet Series

Financial Considerations of On-Farm Renewable Energy

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Introduction

There are many reasons an individual or business might consider installing renewable solar energy, but for most people the decision will revolve around financial feasibility. There are many factors that influence the feasibility of an on-farm solar project and the anticipated payback period of the system. This fact sheet will focus on the current rules, regulations, and pricing of the various components that need to be included in calculating the financial feasibility of an on-farm solar system. The components include the value of the electricity generated, federal investment tax credit, system depreciation options, the sale of the solar renewable energy credits, and other considerations.

Federal Investment Tax Credit

The investment tax credit (ITC) is a tax credit for solar systems constructed and operated on both residential and commercial properties. This tax credit is equal to 30% of the total cost of an alternative energy system (equipment and installation costs) installed on the property (SEIA, 2014). Qualified systems include solar electric and solar hot water systems as well as wind turbines. According to the IRS (2013), if the credit is more than the amount of tax owed by the person or company, the credit can be carried back one year and, if not completely used, forward for the next twenty years and the amount carried forward deducted from future tax returns until completely deducted (26 USC sec. 38).

The full value of the ITC is earned in the year after the property is placed in service. There is a five-year compliance period to retain the full credit. The ITC is subject to recapture if, during the five-year period:

1. The property ceases to be a qualified energy facility, or
2. A change in ownership occurs.

During the first year after the facility has been placed in service, the recapture is 100%. The rate declines by 20% each year thereafter until the end of the fifth year. There is no recapture of the ITC after the fifth year.

Recapture is not triggered if the transfer of the property is caused by:

1. Death,
2. Transfer to a spouse in a divorce,
3. A transfer to another entity where no gain is recognized (i.e. sec. 381 applies relating to carry-overs in corporate acquisitions).

Merely filing for S-corporation status does not trigger recapture, but recapture can be triggered if there is a transaction where a shareholder's shares of an S-corporation are diminished. (Code Sec. 50).

Tax laws continually change. However, this tax credit was established by The Energy Policy Act of 2005 and further defined by the Energy Improvement and Extension Act of 2008, which extended the tax credit to systems put in place through December 31, 2016. Alternative energy manufacturers have recognized this window of opportunity and have developed long-term investment strategies making alternative energy, including solar energy equipment, more economical to purchase (SEIA, 2014).

Depreciation Considerations

If the solar equipment is on business property, there are a few considerations that must be considered for the investment. Qualifying solar energy equipment is eligible for a cost recovery period of five years using the Modified Accelerated Cost Recovery System (MACRS) as the depreciation deduction method.

However, for equipment on which the 30% Investment Tax Credit (ITC) is claimed, the owner is required to reduce the project's depreciable basis by one-half the



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value of the ITC (SEIAa, 2014). Subtracting one-half of the 30% ITC, or 15%, leaves a value of 85% of the initial investment as the tax basis for the business. This 85% tax basis in the energy property then is depreciated using the available methods.

Alternatively, people investing in energy property for business use may want to examine the accelerated depreciation options available to them. The Internal Revenue Service (IRS) defines energy property as equipment that uses solar energy to generate electricity, to heat or cool a structure, to provide hot water for use in a structure, or to provide solar process heat, except for equipment used to generate energy to heat a swimming pool (IRS, 2013). Solar energy property does not qualify for the Section 179 expense deduction under current IRS rules. However, qualifying equipment that was placed in service through December 31, 2012, was eligible for the 50 percent accelerated first year bonus depreciation option. This means that in the first year of service, companies could elect to depreciate 50 percent of the basis while the remaining 50 percent would be depreciated under the normal MACRS schedule. If Congress extends or creates another accelerated first year depreciation program, owners of new energy equipment may be eligible to use this alternative depreciation schedule.

Renewable Energy Credits (SRECs)

Renewable energy credits are tradable commodities that represent the green attributes that come from renewable energy sources, such as wind, solar or water. One renewable energy credit (REC) is generated every time one megawatt hour of electricity is produced. A renewable energy credit that is created by solar is known as a Solar Renewable Energy Credit (SREC).

Many states have passed legislation that requires energy suppliers to produce a certain percentage of electricity from renewable energy sources. In Ohio, energy suppliers are required to produce 25% of their electricity from alternative energy sources by 2025. Of the 25% alternative energy resources targeted by the year 2025, at least half, or 12.5%, of that alternative energy requirement must be generated from renewable energy resources (Romich, 2010) and 0.5% must come from solar energy. To meet these standards, the energy supplier can develop their own renewable energy sources, or they can purchase renewable energy credits from others that own renewable energy facilities. Markets have been established that allow the purchase and sale of both RECs and SRECs.

Since building their own facilities can be very costly, energy suppliers often choose to purchase solar renewable energy credits from homeowners and businesses that have certified facilities. As a result, a market has

developed where a business or homeowner can sell their SRECs to a utility. Third party entities have emerged that purchase the SRECs from individuals and aggregate the credits to sell to the utility if the individual does not want to manage the transaction personally.

Income Tax Implications

The sale of an SREC is a taxable transaction and the sale proceeds will be taxed as ordinary income.

Several steps are required before an SREC can be sold. First, the solar system must be installed and in operation. The amount of electricity generated by a solar energy system is tracked in an electronic database. When you complete the Public Utilities Commission of Ohio (PUCO) application for certification as an eligible Ohio renewable energy generating facility, you will select which tracking system you have or intend to register with. The two tracking systems you can choose from are the Generation Attribute Tracking System (GATS) and the Midwest Renewable Energy Tracking System (M-RETS). The most common system used in Ohio is the Generation Attribute Tracking System (GATS). The GATS collects and tracks information regarding the attributes of generation supplied and sold within the regional wholesale market. The design is an “unbundled” tracking system using GATS Certificates. This means that the attributes or characteristics of the generation are separated from the megawatt hour (MWh) of energy and recorded onto a GATS Certificate after the MWh of energy is produced. A Certificate will be issued only after one megawatt hour of energy is produced and registered in GATS.

There is one GATS Certificate, with a unique serial number representing the attributes of the generation for each megawatt hour of energy produced. Its value comes from the fact that it can be traded separately from the actual megawatt hour of energy in a voluntary, bilateral market. In essence, for income tax purposes, the sale of the Certificate is the taxable transaction with the amount of reportable income being the revenue received from the sale of the Certificate on a regional wholesale market.

You are advised to always consult with a tax specialist to determine the proper reporting of income for tax purposes.

Other Tax Issues

The other tax issues that should be considered are Ohio sales and use tax, personal property tax, corporate franchise tax, and real property tax. Under current Ohio law, there is a 100% exemption from personal property tax, state sales and use tax, and corporate franchise

tax for equipment purchased for energy conversion (Energize Ohio, 2013). The sales tax exemption on purchased solar equipment saves producers 6.5% to 8.0% depending on the county of residence making the overall investment of the energy facility lower.

Since the investment is considered an investment in equipment and is not considered real property for the purpose of property taxes, there is no increase in property taxes from the investment. Specific definitions of exempt facilities can be found in the Ohio Revised Code (ORC 5709.20) and the process for applying for exempt facility status in order to receive the tax exemption can be found in the Ohio Administrative Code (OAC 5703-1-06).

Summary

Producers interested in on-farm application of alternative energy need to work through the tax implications, depreciation benefits, and the sale of the renewable energy credits to determine if the investment is financially feasible. In addition to crunching the numbers, producers need to estimate future energy prices and use levels to determine the payback period on the investment.

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