

Solar Power For Agricultural Producers

Presented by



TIGERSOLAR

Net Metering - What Is It?

- Normally, your electric meter runs forward as you consume energy - this is logged on your power statement as kilowatt-hours (kWh)
- Solar production feeds your power loads instantly
- Excess is sent out to the grid, resulting in your power meter running in reverse
- Reverse movement of your meter generates energy "credits" to be used in the future
- As long as your meter runs forward (pulling from the grid) as much as it runs backward (feeding power to the grid) each year, you will be a net-zero purchaser of energy!

What Will My Power Bill Look Like With Solar?

- Net metering with solar can offset some or all of your kWh usage - resulting in reduced or no kWh charges on your statement
- kWh charges typically account for the majority of electric bill costs
- Certain fees will remain - typically utilities charge a set amount per month to be connected to their grid. This is not based on kWh usage. This is usually the first itemized charge line on an electric bill
- Certain rate schedules pay "demand" charges, which are not based on kWh usage. Depending on the nature of your power usage, solar may or may not have an effect on these charges

Typical Utility Charges

- Homes and small farms usually pay between nine and twelve cents per kWh with no demand charges
- Larger farms and many businesses usually pay between six to twelve cents per kWh
- Lower kWh charges are often accompanied by demand charges. If your large farm pays in the 10-12 cents per kWh range, you most likely are not paying a demand charge
- Demand charges are based on kilowatts (kW), not kWh. These can vary widely from \$1-\$6 per kW of demand
- Utilities have kWh and kW charges hidden in various "riders" that may not be apparent at first glance
- Make sure that your solar consultant is familiar with YOUR billing schedule and does

Sample Power Bill

Electricity Consumption Data

Meter Number	Current Reading	Reading Date	Previous Reading	Number of Days	Multiplier	KWH/KW Used
	3266	01/15/18	3096	31	40	6800

Electricity Service Charges

Total Previous Balance	\$534.57
Payments received since last billing date <i>Thank You</i>	-\$534.57
Balance Forward	\$0.00

Current Charges (Schedule A-11-Residential)

Basic Consumer Charge	\$13.76
Variable Distribution Charge	\$186.26
SVEC Distribution Charges	\$200.02

Power and Energy Charge	\$498.85
Billing Factor (\$0.00074-/KWH)	-\$5.03
SVEC Electricity Supply Charges Subtotal	\$493.82

Rockingham Co Utility Tax	\$2.00
VA Consumption Tax	\$7.97
Sales & Use Surcharge	\$0.56
Total Current Charges	\$704.37

Total Amount Due ▶ \$704.37

Financial Incentives

- 1. Federal Income Tax Credit (ITC)** - 26% for projects in year 2022
Reduces to 22% for projects in year 2023
ITC is credited to your federal income taxes for the year in which the solar system is installed
- 2. Depreciation (state and federal)** - based on your tax bracket
Just like purchasing any equipment for your business
Half of the ITC is depreciable. For 2022, this is 13% (half of 26%). Thus, for a fully commercial solar system, the depreciation basis is 87% of the total project cost
- 3. REAP Grants** - USDA's "Rural Energy for America Program"
NOT guaranteed, like depreciation and the ITC
REAP Grants, if awarded, can pay for up to 25% of total project cost
Money awarded for these grants is taxable income
Can take many months to be awarded or denied from time of application submittal
- 4. SREC's** - "Solar Renewable Energy Certificates"
Purchased by utilities to meet their Renewable Portfolio Standards (RPS)
1 SREC = 1,000 kWh of energy produced, regardless of destination
Does not affect net metering arrangement between producer and utility
Double-dipping! Getting paid to produce your own power on top of saving on electric bills

Total Savings With Incentives

An aerial photograph of a farm with a large barn. The barn's roof is covered with a grid of solar panels. In the background, there are other farm buildings, silos, and fields under a clear sky.

- Using the ITC plus state and federal depreciation, many solar customers see a net reduction in total project costs by about 50%
- Add in REAP Grants, and the net costs can be as much as 75% lower than the sticker price
- SREC's are relatively new to Virginia solar producers. Payment goes directly to the producer in the form of a check or direct deposit from an SREC broker
- "Payback" times for farmers are typically in the 6-10 year timeframe
- At this point, your initial investment value has been reached in the form of avoided costs. After this, your system truly is producing FREE POWER and will continue to do so for many more years
- Modern solar panels are warrantied for 25 years

Franjilou Farms – Rockingham County, VA

- 61.18 kW ground-mounted solar array. Yearly production of over 80,000 kWh
- Investment fully realized in year five




Fuller Dairy – Augusta County, VA

- 53.76 kW roof-mounted array. Yearly production of over 69,000 kWh
- Investment fully realized in year five (without SREC's counted in)



Five Great Reasons To Explore Solar

1. Make a long-term investment in your farm/business that will pay itself off many times over. Comparable returns to top financial indexes without any of the volatility
 2. Operating costs are huge expenses for business owners. Solar can reduce or even eliminate one of the highest operating costs that your business needs to survive - electricity!
 3. Take advantage of the ITC while it's high. In 2023, it will be reduced to 22% and in 2024, down to 10%
 4. Set the next generation of farm operators up for success by providing them with free power
 5. Protect yourself from rising utility costs - you are the owner of your own clean power plant!
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- An aerial photograph of a farm with a large barn. The barn's roof is covered with a grid of solar panels. In the background, there are other farm buildings, a silo, and rolling hills under a clear sky.

Thank You!



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