



# Solar Energy Development Opportunities: Tax Implications

For some landowners, renting their land for use as solar farms has emerged as an intriguing alternative to renting for agricultural or recreational uses. Here, we present research and resources on the potential tax implications to help you plan strategically and avoid surprises at tax-time.

## What gets taxed?

In addition to the rent itself, the net of property taxes, insurance and any maintenance costs are counted as “ordinary” income, which is reported on federal and state income tax returns.

## Will my taxes go up?

Under the Present Use Value (PUV) property tax program, property tax on agricultural land most likely will change when renting to a solar operation. That’s because the predominant income-generating activity may now be deemed “commercial” rent, which is not an agricultural activity. If this is the case, the three-year rollback (recovery of deferred property tax), plus interest, will be an additional near-term cost for the landowner. Payment of these rollback property taxes and interest can be negotiated with the solar developer, which may agree in the negotiated land lease agreement for solar development to pay these costs on behalf of the landowner. Landowners can contact the county assessor’s office to determine the total of the rollback taxes and interest.

## What if I also use the land for agricultural purposes?

If local and state legislation, regulation and rules allow for the bifurcation of activities upon the land, then the landowner may be able to retain agricultural PUV by constructing solar panels in a way that allows a qualifying agricultural activity like livestock grazing to occur underneath. The land may then be eligible to continue in agricultural PUV, because the landowner may then meet the income requirements. Each case stands on its own merits, to be evaluated on a case-by-case basis. However, a solar farm developer leasing the land may restrict access to the solar facility, thus disallowing any agricultural use. If the lease contract is set up for the solar developer pays the real estate portion of the property tax bill, then agricultural production to maintain PUV is moot.

## What’s the bottom line?

Landowners considering whether to engage in a long-term lease with a solar power company should consult their county assessor’s office about property tax consequences that result from converting agricultural land to an alternate use such as a solar farm.



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## For Business Owners

Businesses that wish to engage in solar energy production may qualify for income tax credits at the federal level.

The Federal Energy Tax Credit is an investment income tax credit of up to 30% of the cost basis of the equipment (Internal Revenue Code (IRC) § 48.) This credit, at the 30% level, was extended by the Protecting Americans from Tax Hikes Act of 2015 (Pub. L. 114-113). New solar farms can now be constructed and benefit from this credit. Businesses are able to deduct expenses:

Capital expenses via depreciation Modified Accelerated Cost Recovery System depreciation is at 200% declining balance. IRC Section 179: This type of expensing typically won't be applicable because the investment cost of project is greater than investment limit.

## \$10-\$15 Million

Typical investment limit costs are report for ~30 acres.

IRC Section 168(k): This deduction (bonus depreciation) is available through December 31, 2019, with declining percentages.

- a. 50% for 2015-2017
- b. 40% for 2018
- c. 30% for 2019

## Ordinary Business Expenses

Business will be subject to property tax on the business plant:

Designated solar equipment at 20% of appraised value.

# Solar Generation Property Taxation

There are two ways that commercial businesses like utility-scale solar energy facilities contribute to local property taxes in North Carolina:

1. Real estate property taxes and rollback taxes due to change in use of the land
2. Personal property taxes relative to the solar equipment

The owners of the various solar facility components are taxed on their respective property. The owner of the land rented to the facility is responsible for the property tax on real estate. The personal property taxes due on the solar facility (panels, cables, switches, etc.) are the responsibility of the solar facility's owner. Most lease contracts can be negotiated such that the solar facility owner also pays the landowner's property tax.

The equipment installed at utility-scale solar energy facilities in North Carolina constitutes personal property, which in North Carolina is appraised each year as of January 1 at its true value in money. The personal property owner (i.e. the solar farm owner/operator) should list his or her personal property with the correct county during the regular listing period in January.

North Carolina counties use a trending method to appraise personal property. Counties request taxpayers to list their property at original cost by year of acquisition, then trend the original cost up to reach current replacement cost new and apply a straight line depreciation schedule to reach market value. Most of the counties use trending schedules developed by the North Carolina Department of Revenue (NCDOR – please identify on pg. 3 Exhibit A).

The appraised value of any personal property may be appealed to the local county board and then to the North Carolina Property Tax Commission.

## Personal Property Tax on Solar Electrical Systems

The Taxation of Solar Electric Systems law (G.S. 105-275(45)) designates solar energy electric systems used directly and exclusively for conversion of solar energy to electricity as a special class of property. The law excludes 80% of the appraised value of the solar systems from personal property taxation. (Effective for taxes imposed for taxable years beginning on or after July 1, 2008; SB 1878, s.5, S.L. 2008-146.)

## Case Study

### Farm A: 30 Acres

#### Under the PUV program

Landowner's property tax is \$6 per acre  
 Deffered Portion of property tax is \$44 per acre  
 Annual deffered tax on 30 acres is \$44 per acre

#### Then

Cost of solar facility is 15,000,000  
 Deffered real estate property tax bill \$94 per acre  
 Total due:\$12,030: \$11,280 of deffered tax plus \$750 interest



#### What's a landowner to do?

The landowner could negotiate with ABC Solar to have this deffered tax bill be paid by ABC Solar as part of the lease agreement. Additionally, ABC Solar pays the annual real estate property tax into the future as part of the long-term lease.

#### Personal Property: Solar Facility Property Tax

If ABC Solar installs a solar farm at a cost of **\$15 million**, 20% of which is subject to personal property taxation under G.S. 105-275(45), **\$3 million** is subject to personal property tax with a depreciable life of 18 years using NCDOR Schedule T as found in Exhibit A.

Schedule T uses a trending factor, which may lead to an increase in valuation of the current replacement cost new in later years (see note on Schedule T).

For illustrative purposes, straight-line was used. In reality, the solar personal property may continue to generate property tax revenue beyond year 18.

Annual depreciation is \$166,667 (\$3,000,000 / 18), assuming the mill levy is 75 mills.

Electric Energy Generation Equipment	Page	Schedule	Life
<b>Hydroelectric Generating Equipment</b> .....	27.....	T.....	50
<b>Natural Gas-Fired and Combined Cycle Electrical Generating Equipment that does not also produce steam for sale</b> .....	27.....	T.....	18
<b>Photovoltaic Solar Electric Generating Equipment</b> .....	27.....	T.....	18
<b>Steam Powered Electricity Generation System</b> .....	27.....	T.....	28
<i>Includes assests used in the steam power production of electricity for sale, combustion turbines operated in a combined cycle with a conventional steam unit.</i>			
<b>Wind Powered Electricity Generation System</b> .....	27.....	T.....	18
<i>Includes wind turbines, support shafts and foundations, and ancillary lines, transformers and other equipment necessary to move electricity from the wind turbines to the utility's transmission line</i>			
<b>Biomass-Renewable Organic Matter Electricity Generating Equipment</b> .....	27.....	T.....	18
<b>Thermal Solar Electric Generating Equipment</b> .....	27.....	T.....	50

# Exhibit A

Year	Tax Value	Depreciation	Mill Levy	Personal Prop. Tax
1	\$3,000,000	\$0	0.75	\$22,500
2	\$2,833,333	\$166,667	0.75	\$21,250
3	\$2,666,666	\$166,667	0.75	\$20,000
4	\$2,499,999	\$166,667	0.75	\$18,750
5	\$2,333,332	\$166,667	0.75	\$17,500
6	\$2,166,665	\$166,667	0.75	\$16,250
7	\$1,999,998	\$166,667	0.75	\$15,000
8	\$1,833,331	\$166,667	0.75	\$13,750
9	\$1,666,664	\$166,667	0.75	\$12,500
10	\$1,499,997	\$166,667	0.75	\$11,250
11	\$1,333,330	\$166,667	0.75	\$10,000
12	\$1,166,663	\$166,667	0.75	\$8,750
13	\$999,996	\$166,667	0.75	\$7,500
14	\$833,329	\$166,667	0.75	\$6,250
15	\$666,662	\$166,667	0.75	\$5,000
16	\$499,995	\$166,667	0.75	\$3,750
17	\$333,328	\$166,667	0.75	\$2,500
18	\$166,661	\$166,667	0.75	\$1,250
				\$213,750

## Annual Depreciation

This solar project, over an 18-year depreciable life, with these assumptions would generate a total of ~\$214,000 in personal property tax revenue from ABC Solar to the county where the project is located. All other things being equal, this number would increase or decrease proportionally with a smaller or larger solar facility.

## Summary

The county coffers would have property tax revenue streams from two sources after the rollback deferred taxes were initially paid.

First, the real estate property tax — now \$3,000 per year as compared to \$180 per year under PUV.

Second, from the personal property of the solar facility, the annual average over 18 years is estimated to be \$11,875  $[(\$22,500 + \$1,250)/2]$ .

Therefore, the property tax revenue in the first year is estimated to be \$25,500 as a high, while tax revenue in the 18th year is estimated to be \$4,250. (Obviously, if changes and improvements are made over time to the solar facility, likewise changes to the property tax revenue streams may occur.)