



# Increased North Carolina County Tax Revenue from Solar Development



**NC SUSTAINABLE  
ENERGY ASSOCIATION**

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## About North Carolina Sustainable Energy Association

North Carolina Sustainable Energy Association (NCSEA) is a 501(c)3 non-profit advocacy organization driving policy and market development to create clean energy jobs, economic opportunities, and affordable energy. NCSEA has served as a respected, trusted, and collaborative resource to North Carolina and beyond since 1978. Our goal is to cultivate a robust clean energy system and energy economy that unifies and benefits all market actors: consumers, businesses, the clean energy industry, and utility energy providers.



## Overview

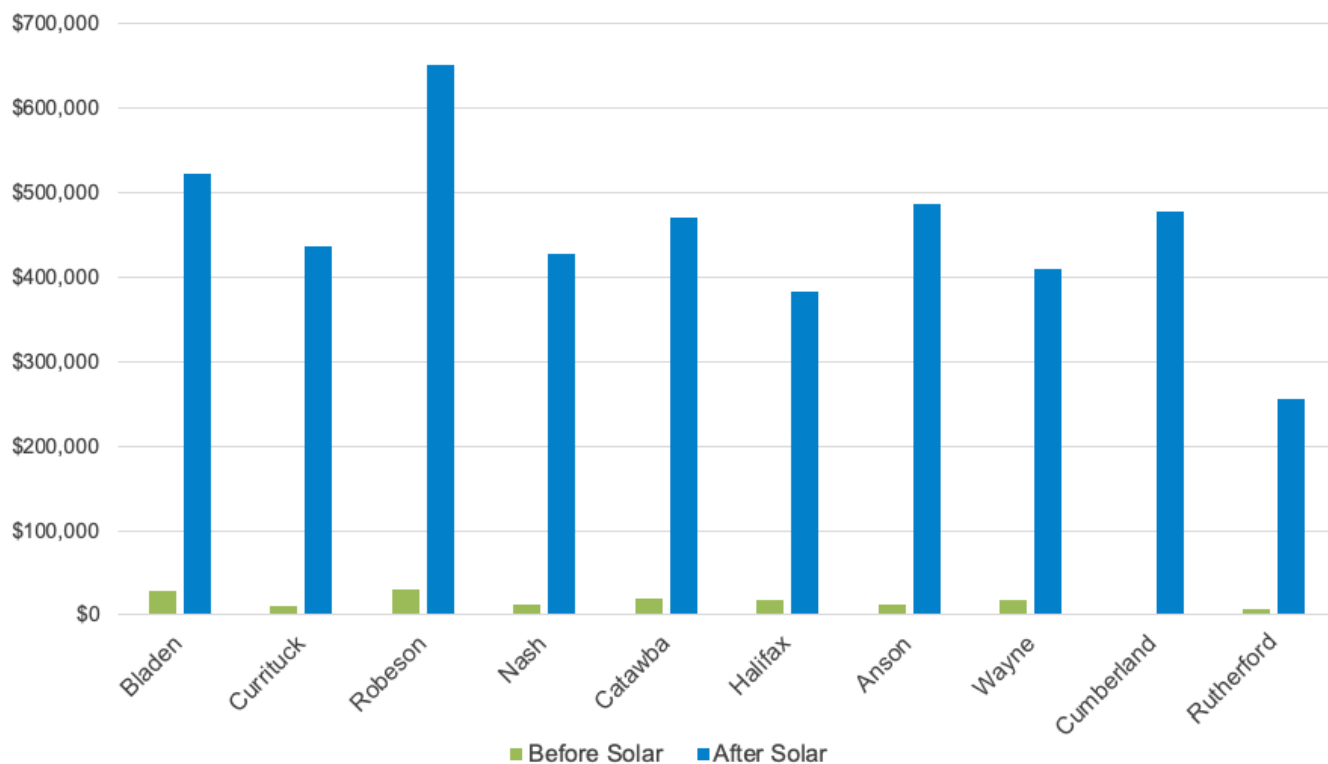
Over the past decade, North Carolina has been a national leader in solar energy deployment. Most of the solar energy capacity built in North Carolina has come from utility-scale facilities constructed and financed by private solar companies, which have created thousands of jobs and have directly invested a combined \$11.6 billion, mostly in economically-challenged (Tier 1 and Tier 2) rural counties across the state.<sup>1</sup>

Increased property tax revenue due to solar development is an economic benefit to counties across North Carolina. Using publicly available property tax data from 50 North Carolina Counties, this report quantifies the tax revenue increase on properties that NCSEA identified as having solar developed on them through 2017. Overall, the properties with solar facilities paid almost \$10.6 million in property taxes in the year after the facilities were developed compared to only \$513 thousand in the prior year; **a nearly 2,000 percent increase**. Chart 1 highlights the experience of 10 counties, showing the total property taxes collected on parcels where solar facilities were built, in the year prior to and year after construction. Tax data for the 50 counties included in this study is in Appendix 1.

### Chart 1. Annual Property Taxes Paid on Real Estate Parcels with Solar Projects

\*Data represents taxes collected in the year before and after a large solar project was built.

Source: County Tax Offices, North Carolina Utilities Commission and NCSEA Renewable Energy Database



1. RTI International. *Economic Impact Analysis of Clean Energy Development in North Carolina—2019 Update*. May 2019.

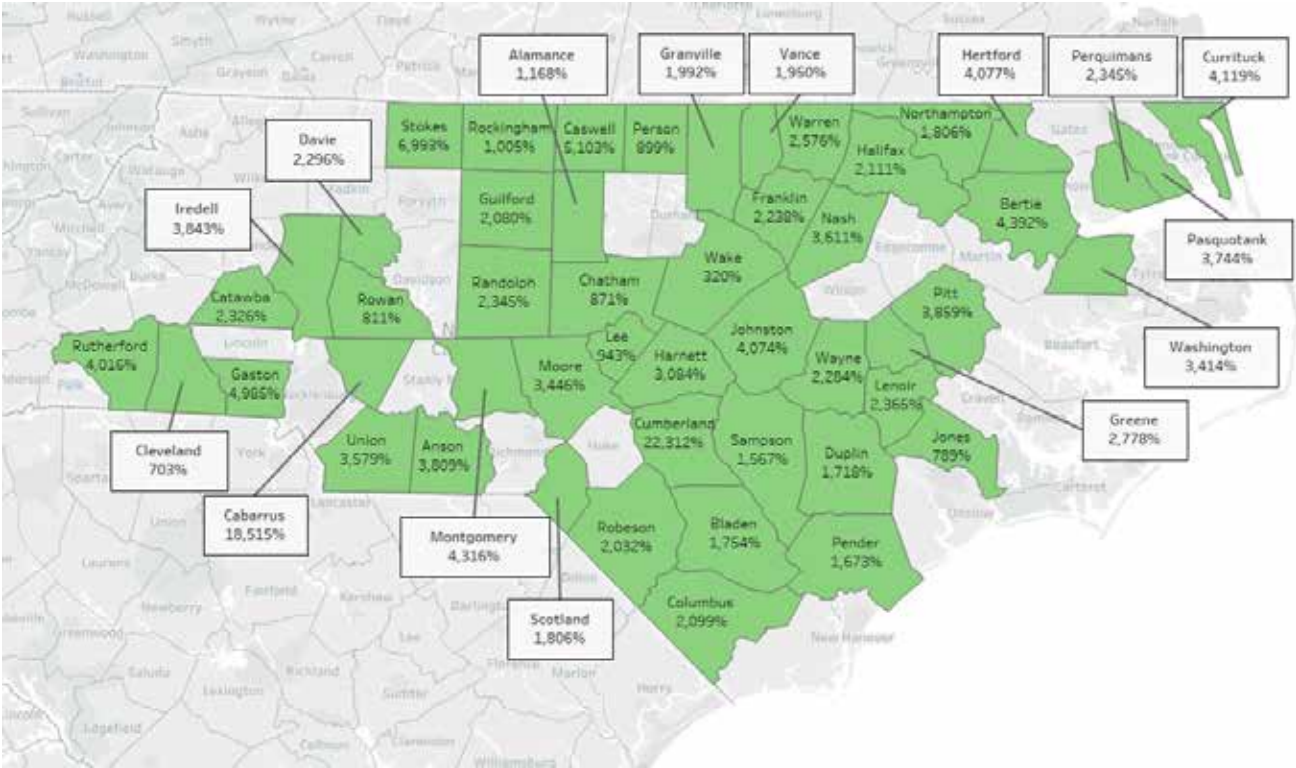
## North Carolina Property Taxes and Abatements Primer

In North Carolina, real estate taxes are the responsibility of counties and cities. The taxes are based on a valuation of all property in a county/city. The taxes consist of two parts - 1) real property taxes, consisting of land and buildings, and 2) personal property taxes, consisting of equipment such as trucks, machinery, and solar equipment. Solar systems increase both real property and personal property taxes (Map 1). Solar increases the real property taxes paid on a parcel of land by classifying the land as having a “commercial” use, which increases the assessed real property taxes. Solar increases personal property tax revenue because valuable new solar equipment is installed on the property. Often, solar systems additionally pay a roll back tax that reclaims three back years of real property tax if the property formerly had a 75 percent tax reduction for agricultural use. In almost all cases, the private owners of the solar facilities, and not the rural landowners, pay all three of these taxes.

Discussions of eliminating North Carolina’s personal property tax abatement for solar energy have claimed that solar costs the counties instead of benefiting them. This study makes clear that this is not the case because even though the personal property tax on the new solar equipment receives an 80 percent reduction in valuation (N.C. G.S. § 105-275 section 45), the personal property tax collected after solar has been developed is significantly more than what was previously collected. Furthermore, the real property taxes are still assessed at a 100 percent valuation.

As one of the 35 active property tax exemptions in the state under North Carolina General Statute § 105-275, the personal property tax abatement for solar energy is clearly attracting new development across the state and providing significantly more property tax revenue than counties received prior to solar installation. These new tax dollars can be used on schools and local services and are an effective economic development tool for otherwise struggling rural parts of the state.

Map 1. Percentage Increase in Annual Property Tax Revenue After Solar



**Methodology**

All tax data in this report is publicly available from county tax offices. Data was collected March through June 2019. NCSEA used its Renewable Energy Database and county GIS maps to identify parcels corresponding to solar installations. Tax data for each parcel was collected from either a county’s online tax bill search or by contacting the county tax administrator. The tax data is not from a single tax year. Rather, “Before solar” tax payments are from the year before a solar installation went online, and “after solar” data was taken one year after a solar installation went online. The one-time rollback tax payment is included in the “after solar” data in Appendix 1 and Map 1.

This data does not include business personal property tax paid on public utility-owned solar equipment. Public utilities are taxed by the North Carolina Department of Revenue, which passes tax dollars back to the counties. The counties receive this tax as a lump sum and do not have visibility to the amount of tax paid on a specific public utility asset. There are eight solar projects (166 MW combined), including four projects larger than 5 MW, not included in this report. This significantly underreports tax revenue since business personal property tax increases with solar project size. For example, the 65 MW Warsaw Solar Facility in Duplin County, which is owned by a public utility, is not included in this report. A project of the same size, Shoe Creek Solar in Scotland County, paid over \$160,000 in tax on solar equipment alone in the year after installation.



## Appendix 1. Tax Revenue Increase Before and After Solar in 50 Counties

PV Capacity Rank	County	Capacity (MWac)	# of Solar Projects	Total Property Tax Paid on Participating Parcels Before Solar	Total Property Tax Paid on Participating Parcels After Solar	Percent Increase	County Economic Tier
1	Bladen	216	9	28,226	523,232	1,754%	1
2	Currituck	140	3	10,326	435,656	4,119%	3
3	Robeson	111	24	30,586	652,176	2,032%	1
4	Nash	106	19	11,518	427,430	3,611%	1
5	Catawba	105	13	19,371	469,902	2,326%	2
6	Halifax	104	7	17,334	383,195	2,111%	1
7	Anson	104	6	12,440	486,299	3,809%	1
8	Wayne	93	23	17,197	409,953	2,284%	1
9	Cumberland	93	6	2,135	478,497	22,312%	1
10	Rutherford	91	6	6,228	256,343	4,016%	1
11	Cleveland	82	21	51,837	416,183	703%	1
12	Scotland	80	12	20,476	509,218	2,387%	1
13	Duplin	78	20	18,595	338,076	1,718%	1
14	Johnston	66	15	9,053	377,889	4,074%	3
15	Northampton	65	12	13,102	249,725	1,806%	1
16	Vance	56	12	12,539	257,050	1,950%	1
17	Columbus	53	18	12,546	275,945	2,099%	1
18	Hertford	50	8	6,101	254,834	4,077%	1
19	Lenoir	48	11	10,235	252,322	2,365%	1
20	Pasquotank	43	3	3,446	152,157	4,316%	1
21	Bertie	42	3	2,629	118,093	4,392%	1
22	Montgomery	35	4	3,446	152,157	4,316%	2
23	Wake	35	11	58,913	247,624	320%	3
24	Rowan	34	8	14,024	127,797	811%	2
25	Franklin	33	8	7,995	186,898	2,238%	2
26	Granville	33	7	7,346	153,633	1,992%	2
27	Pitt	32	12	3,801	150,454	3,859%	2
28	Lee	32	7	15,454	161,230	943%	2
29	Harnett	31	7	1,989	70,519	3,446%	2
30	Rockingham	30	6	15,328	169,418	1,005%	1
31	Alamance	28	5	5,900	74,816	1,168%	2
32	Moore	27	5	1,989	70,519	3,446%	3
33	Warren	26	6	4,217	112,825	2,576%	1

PV Capacity Rank	County	Capacity (MWac)	# of Solar Projects	Total Property Tax Paid on Participating Parcels Before Solar	Total Property Tax Paid on Participating Parcels After Solar	Percent Increase	County Economic Tier
34	Chatham	25	7	12,123	117,660	871%	3
35	Randolph	23	6	3,610	88,274	2,345%	2
36	Guilford	22	6	5,697	124,177	2,080%	2
37	Sampson	21	6	6,715	111,972	1,567%	1
38	Washington	21	2	2,434	85,532	3,414%	1
39	Union	20	4	2,993	110,104	3,579%	3
40	Jones	20	4	2,424	75,053	2,997%	1
41	Davie	15	3	3,208	76,841	2,296%	3
42	Person	15	5	7,270	72,603	899%	2
43	Caswell	15	3	1,366	71,077	5,103%	1
44	Greene	14	4	2,258	64,994	2,778%	1
45	Pender	10	2	2,711	48,054	1,673%	3
46	Perquimans	10	2	2,809	24,983	789%	1
47	Gaston	10	2	736	37,424	4,985%	2
48	Cabarrus	5	1	255	47,533	18,515%	3
49	Iredell	5	1	385	15,165	3,843%	3
50	Stokes	4	1	173	12,272	6,993%	2
	<b>Total</b>	<b>2,457</b>	<b>396</b>	<b>513,484</b>	<b>10,585,781</b>	<b>1,962%</b>	