Going Solar for Duke Energy Carolinas/Progress Customers in 2018

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Speakers

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RESOURCE CONSERVATION AND DEVELOPMENT

energy CAP
WESTERN NORTH CAROLINA
energy cost-share assistance program

SUGAR HOLLOW SOLAR
Sweetening the current

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USDA Rural Development

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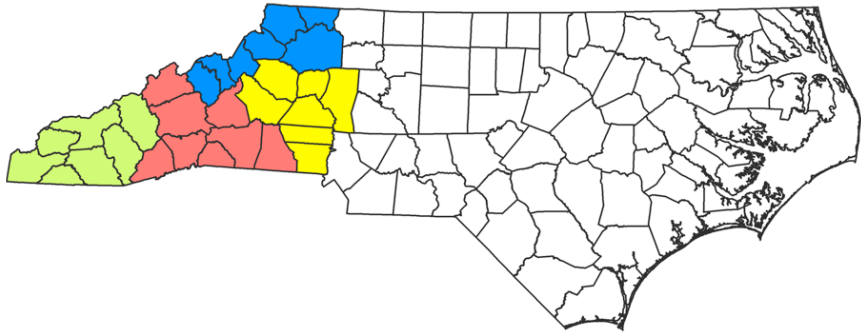
BLUE RIDGE RESOURCE CONSERVATION & DEVELOPMENT

Southwestern NC Resource Conservation & Development Council



What we will cover:

- Who's going solar and why?
- What's this new Duke solar program about?
- Does going solar make sense now for me?

send questions to info@energycap.org

Who goes solar?

Wesley and Anna Sleight
Sleight Family Farm
McDowell County

$1,400/year in savings on electric bill

$28,000	Up-front cost
-$8,400	Federal Tax Credit
-$5,000	Duke Rebate 2018
-$7,000	TTFC AgEnergy grant
-$7,000	USDA REAP grant
-$5,600	MACRS (Accelerated business depreciation)

Payback depends on credits and grants

How You Get Paid

A Quick Intro/Refresher on Net Metering – DAYTIME

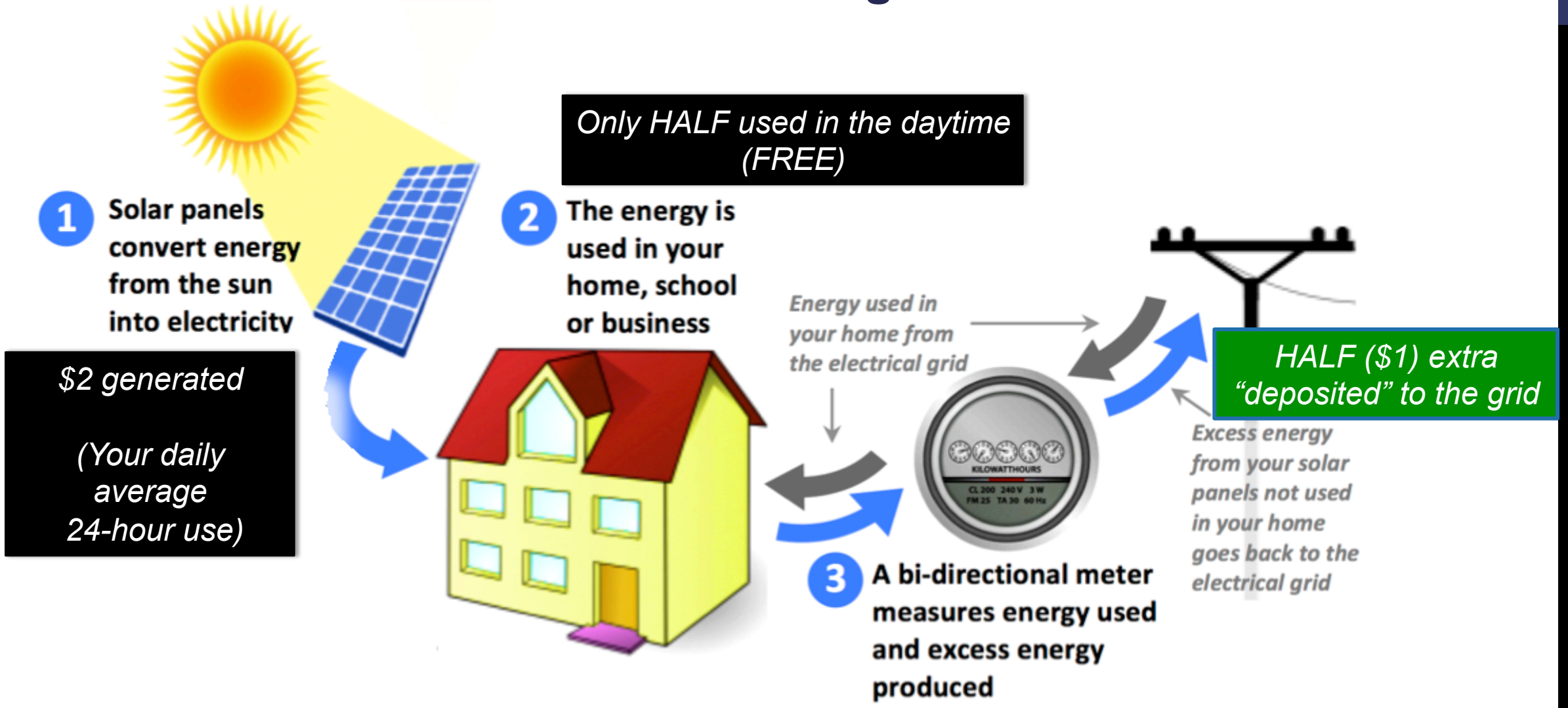


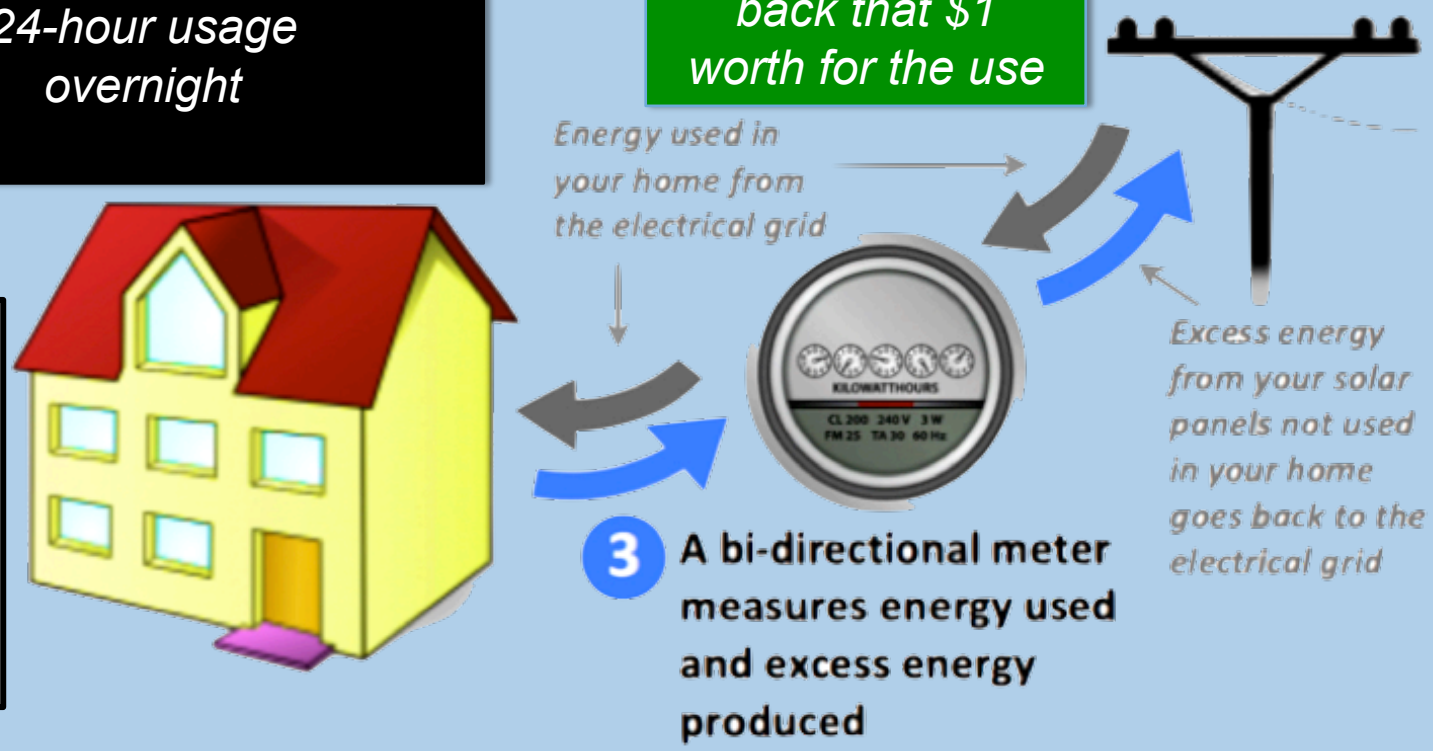
Image retrieved from Summa Energy: http://www.summaenergy.com/netmetering.php

How You Get Paid

A Quick Intro/Refresher on Net Metering – NIGHTTIME

House uses other HALF of its daily 24-hour usage overnight

Utility "credits" back that $1 worth for the use



You have sold $1 to Duke
You have paid $1 to Duke
$0 for $2-worth of energy

- Daily/monthly changes, but credit rolls over.
- You still pay a monthly base charge.

Image retrieved from Summa Energy: http://www.summaenergy.com/netmetering.php

The State of Solar in NC in 2018

Residential solar prices have dropped three-fold since 2009.

NC currently ranks **2nd** in the nation for total installed solar. (1st is California.)

95% of the the solar installed in NC comes from **big solar farms**.

	Number of systems installed	Percentage of installed capacity
Residential	**4,667**	**1%**
Commercial	**753**	**4%**
Utility (Greater than 2MW)	**425**	**95%**

But Duke is now offering incentives that will help Residential and Commercial customers in 2018…

Source: NCSEA's Renewable Energy Database which uses data from NC Utilities Commission and other sources (current through July 2017)

So what's new with Duke in 2018?

The Competitive Energy Solutions for NC Act

Rebates	*Active program as of Jan. 2018*	(best for investing in solar and earning a return)
Leasing Community Solar	*Details coming later this year*	(best for renters and those without ability to finance a system completely)
Green Source Advantage New bidding rules for utility-scale solar farms	*Applies only to very large (multi-acre) facilities*	
Battery storage study		

e.g. 10 KW System
@ $2.50/W = $25,000
60¢/W = $6,000 Rebate

Rebates in 2018

	RESIDENTIAL	BUSINESS	FARM	NONPROFITS
Duke Energy Rebate	$0.60/W	$0.50/W	$0.50/W	$0.75/W
Effective Cost Savings	**~25-30%**	**~25-30%**	**~25-30%**	**~30-33%**
Maximum Rebate Amount	$6,000 max	$50,000 max	$50,000 max	$75,000 max
DUKE'S GOAL: **Duke's target # of systems per year to receive rebate (each year for 5 years)**	~1,000	100-150		100-150
CURRENT REALITY: **Current (2017) cumulative # of systems installed**	4,600	800		?

Incentives Overview

	Incentive Amount	Eligibility: HOME	BUSINESS	FARM	NON-PROFITS	Talk to:	For more:
Federal Tax Credit - No incentive limit - Leftover credit can be used in following tax years 30% through 2019, then decreases each year	30%	✔	✔	✔		Your accountant	
Duke Energy Rebate	20-35%	✔	✔	✔	✔	Installers and Duke	energycap.org/installers energycap.org/duke
MACRS Recover costs on 5-year depreciation schedule with 40% first-year bonus depreciation in 2018	~20%		✔	✔		Your accountant	
USDA-REAP Grant Renewable Energy & Energy Efficiency	25%		✔ (rural businesses only)	✔		energyCAP	energycap.org/reap
energyCAP AgEnergy Grant Renewable Energy & Energy Efficiency Funded by NC Tobacco Trust Fund	25%			✔ (WNC only)		energyCAP	energycap.org/agenergy

(NC State Tax Credit of 35% expired in 2015)

Calculate YOUR savings

Example:

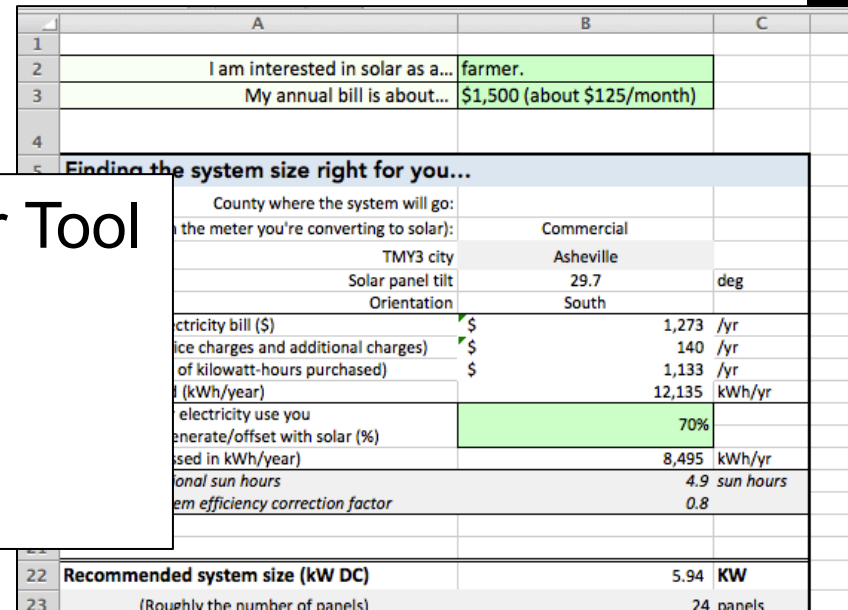
$20,000 cost *before* incentives

8 KW system (30 panels)

$1,000 per year in savings

9,600 kWh per year generated by solar system

Incentives bring down the up-front cost, and annual savings stay the same.



	A	B	C
1			
2	I am interested in solar as a...	farmer.	
3	My annual bill is about...	$1,500 (about $125/month)	
4			
5	**Finding the system size right for you...**		
	County where the system will go:		
	the meter you're converting to solar):	Commercial	
	TMY3 city	Asheville	
	Solar panel tilt	29.7	deg
	Orientation	South	
	ctricity bill ($)	$ 1,273	/yr
	ice charges and additional charges)	$ 140	/yr
	of kilowatt-hours purchased)	$ 1,133	/yr
	(kWh/year)	12,135	kWh/yr
	electricity use you	70%	
	enerate/offset with solar (%)		
	sed in kWh/year)	8,495	kWh/yr
	onal sun hours	*4.9*	*sun hours*
	em efficiency correction factor	*0.8*	
22	**Recommended system size (kW DC)**	5.94	**KW**
23	(Roughly the number of panels)	24	panels

WNC energy CAP

Use our WNC Solar Savings Calculator Tool to play with the numbers yourself!

(coming soon… email us if you want it)

www.energycap.org/duke

Financing Options

Blue Wave Solar Home Loans

- 6%, 11-year loan
- 18-month interest-only period
- Can realize incentives then refinance
- Minimum FICA score of 681
- Can pay off anytime with no penalty
- Secured by materials of the system (not on home/property)

Other Home Solar Loans Installers (Medallion, Admirals Bank, Dividend Solar)

Self-Help Credit Union

Carolina Farm Credit

United Community Bank (Commercial)

National Community Investment Fund (Commercial)

More…

What's the first step?

Check out **Duke's Energy Efficiency Programs** for

Free Home Improvement Audits and Rebates
(Insulation, HVAC, Heat Pump Water Heater, more)

Up to 80% in rebates paid by Duke up front.

https://www.duke-energy.com/home/savings

https://www.duke-energy.com/business/savings

Other Resources (especially for outside of Duke territory): appvoices.org/energysavings/

OK, then what are the next steps?

(Will be posted on energycap.org/duke)

1. **Call installers** for a custom quote
   - Visit energycap.org/installers for research and guidance

2. Use your chosen installer's quote to **apply for rebates/incentives/financing**
   - Ask installers if they will help you with applications
   - WNC energyCAP can help you understand your options

3. **Wait for award contracts** from incentives you need before moving forward

4. **Sign installer contract** and submit deposit

5. Finished design and **construction by installer**. Interconnect to Duke with their assistance. Finish inspections and turn system on.

6. Use final receipts to **claim grants/rebates/tax incentives**
   - You can refinance loans after these come in

Questions and comments

Email us now (or anytime) at info@energycap.org

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