What Role Do HOAs Play?

The standards, rules, and requirements adopted by HOAs can have a major impact on local solar development.

North Carolina's solar access law prevents HOAs from creating restrictions that prohibit or effectively prohibit the installation of solar PV. This law can be seen as a starting point from which HOAs have the authority to create regulations that are supportive of solar, rather than simply not restrictive.

Before creating these policies and regulations, HOAs should take the time to learn about the technical aspects of solar PV in order to understand how their rulemaking affects the performance of a PV system. Specific factors important for HOAs to understand and consider when creating regulations involving solar include array size, array orientation, array tilt, and system shading.

The best practice is for HOAs to be clear and unambiguous in their standards. An example of standard language that supports solar is as follows: *"Once a solar system is approved, adjoining neighbors may not build or plant structures that will obstruct solar collection, without prior approval from [the] neighbor owning the solar collectors"*.

3 Cherry Creek Springs Homeowners Association. 2010. *Architectural Committee Policy 17: Renewable Energy Generation Devices and Energy Efficiency Measures.*

How Can HOAs Support Solar In Their Communities?

1) Understand North Carolina's solar access law. The full text of the law is available here: www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByArticle/Chapter_22B/
2) Advance community education on solar energy.
3) Clearly define what is permissible and what is not regarding solar PV in your community. This can be done by incorporating solar-specific standards into community guidelines. It is best to bring as many stakeholders to the table as possible when creating these standards. The U.S. DOE's SunShot Solar Outreach Partnership is able to provide cost-free technical assistance to help HOAs in this area. For more information, visit

SOLAR OUTREACH PARTNERSHIP

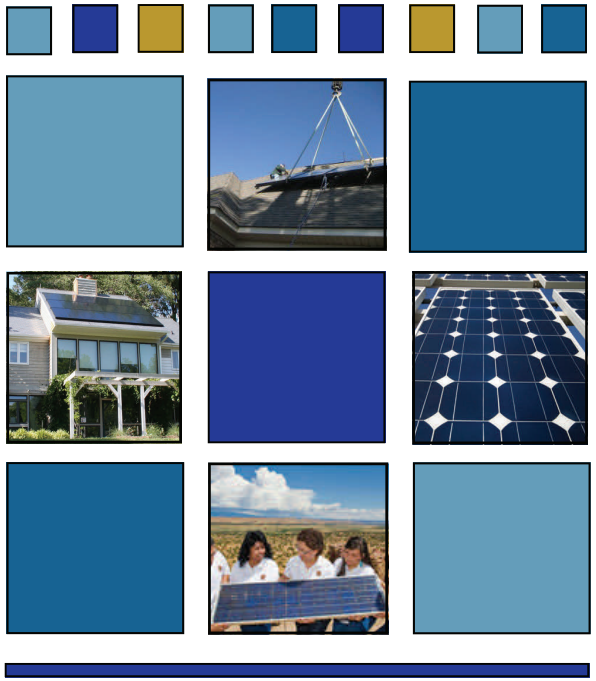
U.S. DEPARTMENT OF ENERGY SUNSHOT SOLAR OUTREACH PARTNERSHIP

www.solaroutreach.org

SunShot U.S. Department of Energy

THE BENEFITS OF GOING SOLAR

A Resource for North Carolina Homeowners' Associations



Benefits of Residential Solar PV

Save Money

There are three primary ways a home can use the power generated by a photovoltaic (PV) system:

1) Using the electricity on-site and selling any excess back to the utility via net metering (this is the most popular option)
2) Selling all the electricity and renewable attributes produced via NC GreenPower
3) Using the PV system to supply an energy storage system (such as a battery backup system).

Each of these options saves a homeowner money on their monthly electric bill. As the upfront costs of solar are going down and electricity prices are rising, these savings are becoming even greater.

Typical monthly savings for a 4 kW net-metered system in Duke Energy Progress or Duke Energy Carolinas territory range from $50-$55 (savings averaged over PV system life).

With current state and federal tax credits (worth 35% and 30%, respectively), the upfront cost of a PV system is greatly reduced. Depending upon the final upfront cost of an individual's system, he or she can see savings well in the thousands over the PV system's life.

Reduce CO_2 Emissions

North Carolina ranked 15th in the nation for CO_2 emissions and generated most of its power from coal in 2011 (U.S. EIA). When it's producing electricity, solar PV is an emissions-free energy source with great potential to reduce North Carolina's total CO_2 emissions.

A single homeowner has the potential to reduce North Carolina's annual CO_2 emissions by an average of 3.89 metric tons by installing solar panels.[1] If just 100 North Carolina households install solar, it has the equivalent impact of taking 82 cars off the road!

And Other Environmental Impacts

In addition to reducing CO_2 emissions, solar reduces emissions of other air pollutants, such as SO_2, NO_X, ozone, and particulate matter. These air pollutants are all hazardous to human health and the environment.

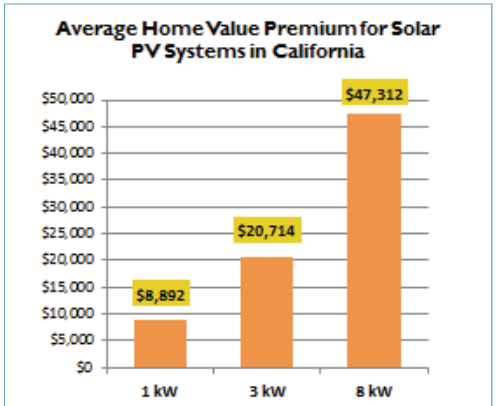
Rooftop solar also reduces land use impacts of power generation by taking advantage of space that's already been built upon.

[1] Figure was calculated using U.S. EPA regional emissions data and NREL PV Watts data for Raleigh, NC.

[2] California has a high level of PV penetration, providing sufficient data for such a study. Results can be reasonably extrapolated to other states.

Raise Property Values...

According to Lawrence Berkeley National Laboratory, solar PV systems are associated with increased property values in California.[2] The larger the system size, the greater the increase in property value. Also, the older the system is, the smaller the property value premium is. The average property value premium of a PV system of average size (3.7 kW) and average age (2.9 years) in California is $24,851 (LBNL, *Exploring California PV Home Premiums*).



Source: LBNL, *Exploring California PV Home Premiums* (2013)

...Without Increasing Property Taxes

While a PV installation has been shown to increase property value, North Carolina law prevents the addition of a PV system from increasing a homeowner's property taxes (provided the system is not used to generate income).