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The Changing Solar Landscape in the Southeastern US

Elise B. Fox

Savannah River National Laboratory

Aiken, SC 29808

The Southeastern US is not typically synonymous with aggressive renewable energy strategies, but several factors over the past several years are changing the trajectory. For one, the cost of solar is rapidly declining. If we take South Carolina for example, see Figure 1, the average cost of a residential PV system fell from $4.40/W to $3.44/W, or roughly $1/W, in a two-year period. For a home owner installing a 9 kW system, this equates to a $8640 savings.

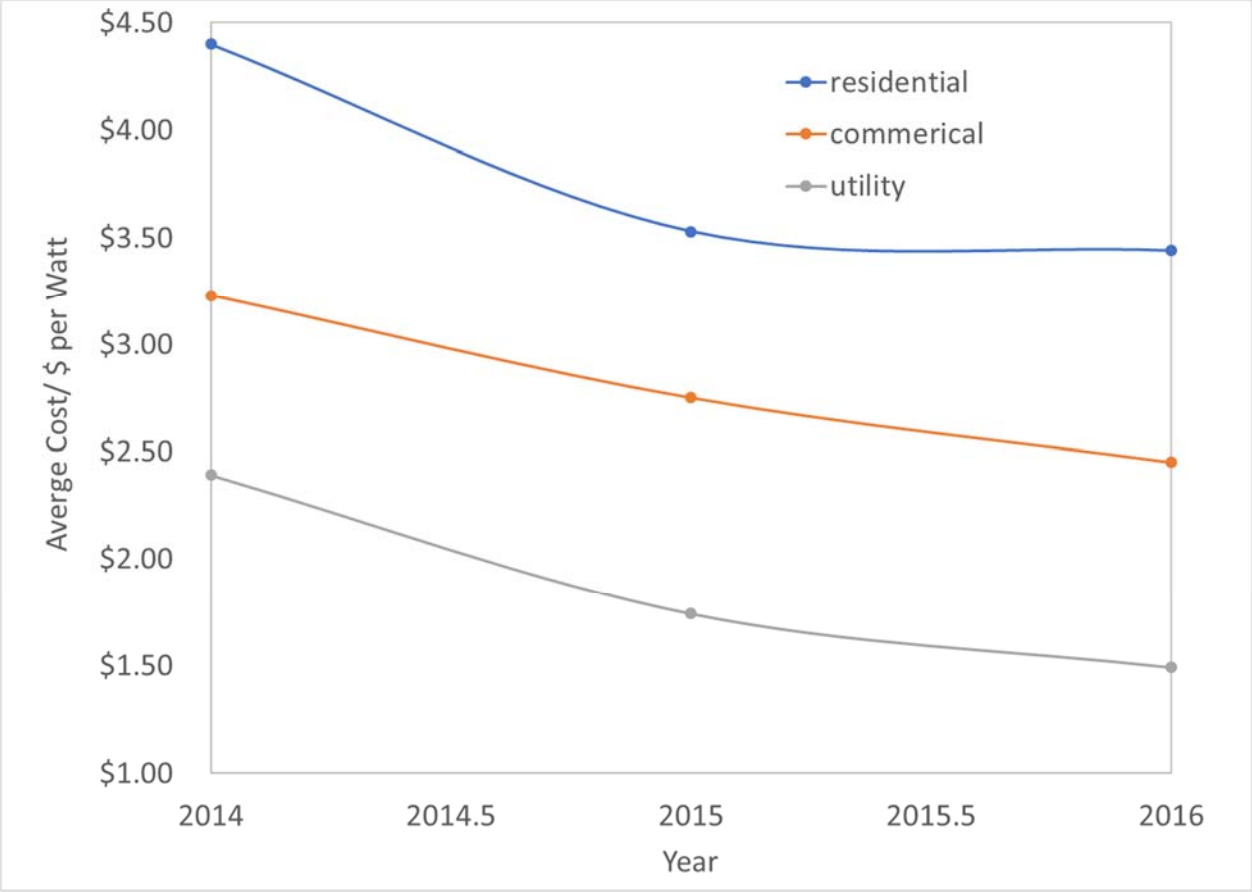

Figure 1. The average cost in $/W for system type based on installer supplied data.

While costs are falling, adoption rates are not uniformly increasing in Southern states. South Carolina, has increased the total capacity of residential systems from about 3.6 MW in 2014 to over 65 MW this year. This equates to a statewide increase from close to 580 individual distributed systems to over 6000. That is tremendous growth in a short period of time. South Carolina's nearest neighbors, Georgia and

North Carolina, are the two Southeastern states we typically hear about for growth of the solar industry. However, SC has double the residential solar of NC and thirteen times that of GA. It also won't be long before the state, which has half the population of its neighbors, catches up in utility scale solar. A quick look at interconnection filings, shows over 1 GW of utility scale solar in the queue for SC.

So, what's going on in SC that makes this possible? That would be Act 236. This landmark law established a voluntary target of 2% solar by the state's IOUs by 2021. What sets this apart from a traditional RPS like NC's is the designation that half be utility scale and half be distributed scale, which has an additional carve out of 0.25% for systems smaller than 20 kW. This, along with enabling third party leasing and some favorable incentives from the IOUs, has allowed the residential market to take off at astonishing rates. In 2016, nearly 40% of the residential systems in the state were leased.

This doesn't mean that all is rosy in the solar industry in SC. Net metering caps are quickly approaching faster than anyone anticipated and must be addressed soon to avoid disrupting the market. In addition, a vast majority of these distributed systems are installed in IOU territories. Most leasing companies will not install in the Cooperative and Santee Cooper territories which limits the accessibility of solar for rural and lower income communities.

Act 236 has shown the power of what carefully crafted solar legislation to do for the economy and renewable energy adoption rates. The next big challenge is to find meaningful ways to continue to grow the solar economy as the energy landscape changes at rapid rates and to enable adoption in states that lack comprehensive net metering legislation. such as Alabama and Tennessee. Act 236 can serve as an initial template to help the residential solar economy grow and prosper.