



Santee Cooper Colleton Solar Farm & Green Power Program

For
SCAMPS
June, 2014



The mission of Santee Cooper is to be the state's leading resource for improving the quality of life for the people of South Carolina.

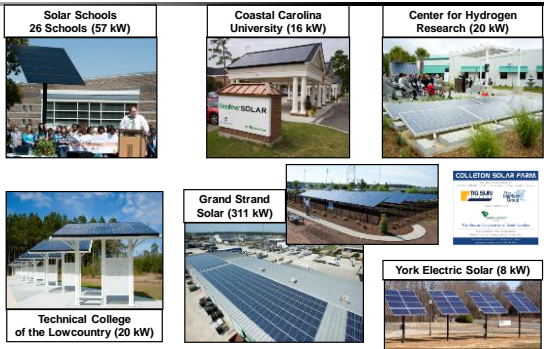
Santee Cooper Renewables

- Biomass
 - Landfill: 28 MW
 - Woody Biomass: 74 MW
 - Digester/Biogas: 27 MW
- Solar 3.4 MW
- Wind 4.8 kW

Total: 132 MW



Solar Projects



Colleton Solar Farm



- Operational since December, 2013
- Largest in state, 3 MW-AC
- Tracking (40%) and Fixed (60%)
- 16 acres



Fixed Tilt Array



Tracking Array



Project Monitoring



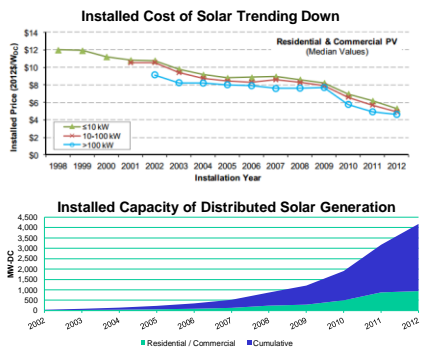
- http://live.deckmonitoring.com/?id=Colleton_Solar_Farm

Solar Farm Data - Uses

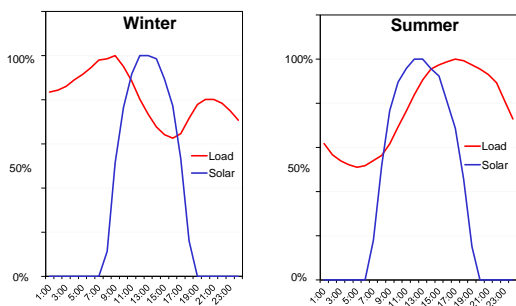


1. What are the patterns of energy production with respect to other generation types?
2. Does solar have a practical effect on reserve requirements?
3. How well can the 3MW solar output be forecast? What will be needed to improve this?
4. What value might be assigned for the capacity associated with 3MW solar?
6. How could the solar generation be located on the system to improve performance of the overall utility system?
7. How can we prepare our system for widespread solar PV integration?
8. How could rates be adjusted to compensate the co-ops or Santee Cooper for the critical role of balancing and operating a functional and reliable grid?

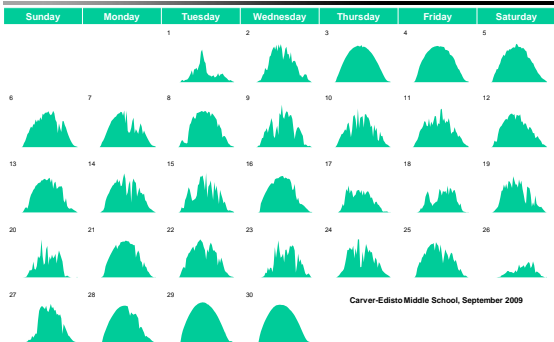
Solar Market Growth



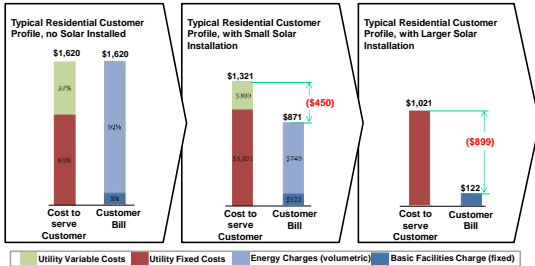
Solar Generation



Solar School Data



Rate Impacts



Sources: adapted from *Distributed Energy Resources Report, EAC, Jan. 2014* and *Net Energy Metering, Zero Net Energy, and the Distributed Energy Resource Future, Rocky Mountain Institute, 2012.*

Net Billing Rate



- Santee Cooper opted for Net Billing instead of Net Metering
- Introduced in 2007
- Customer Charge and Demand Charge energy
- Customer compensated based on energy rate
- Current Rate RB-14

Charge		On-Peak	Off Peak
Demand	(\$/kW)	11.34	4.85
Summer Energy	(cent/kWh)	4.065	3.546
Non-Summer Energy	(cent/kWh)	3.970	4.031

Santee Cooper Distribution



- Solar PV systems installed on Santee Cooper distribution system:

Ownership	Count	Capacity
Residential	31	128 kW
Non-Residential	3	14 kW
Santee Cooper	4	<u>331 kW</u>
		473 kW

- Net Billing Rate: 2 participants

Green Power Program



- Voluntary program launched in 2001
- Available to residential, commercial and industrial customers
- All 20 electric cooperatives and the City of Georgetown participate.
- National Accreditation from Center for Resource Solutions (CRS) in San Francisco, California



Green Power Program (cont.)

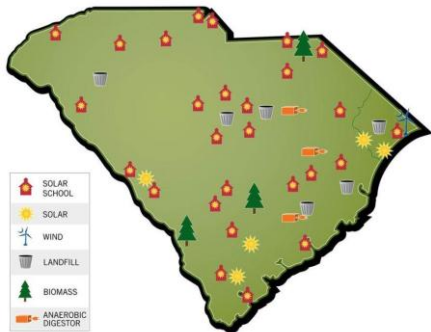


- In 2013, about 5,300 customer purchased a total of about 22,500 MWh's.
- Blocks & Pricing:

<u>Customer</u>	<u>Block Size</u>	<u>Price</u>
Residential	100 kWh	\$3 /block
Commercial	200 kWh	\$6 /block
Industrial	1,000 kWh	\$30 /block
Tags	1,000 kWh	\$30 /tag

- Funds collected are used to devolve and promote renewable energy projects.

Santee Cooper Renewables





Thank You!

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