



**SOLAR ENERGY
TECHNOLOGIES OFFICE**
U.S. Department Of Energy

PORTFOLIO REVIEW

2018



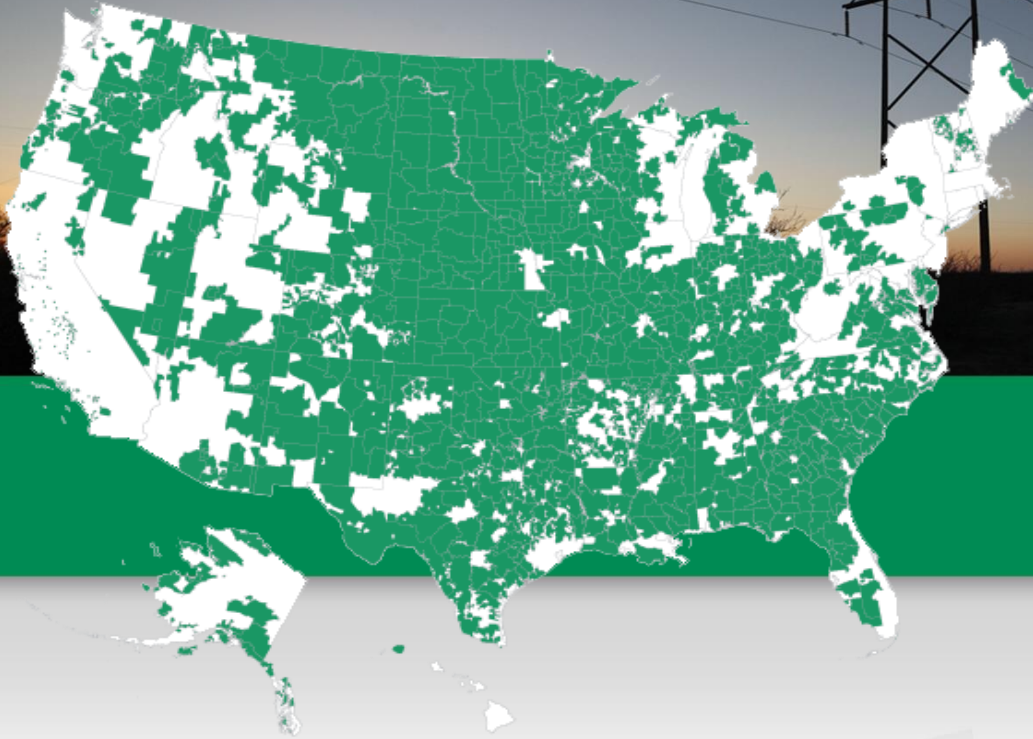
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2018 SETO Portfolio Review

America's Electric Cooperative Network

Debra Roepke
National Rural Electric Cooperative Association

America's Electric Cooperative Network



Over 900 Co-ops

Serves 42 Million Americans in 47 States

Covers 75% of Nation's Land Mass

Owns 42% of all Distribution Lines

Totals 2.4 Million Line Miles

Powered by 55,000 MW

Delivers 178 Billion kWh of Generation Annually

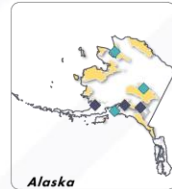
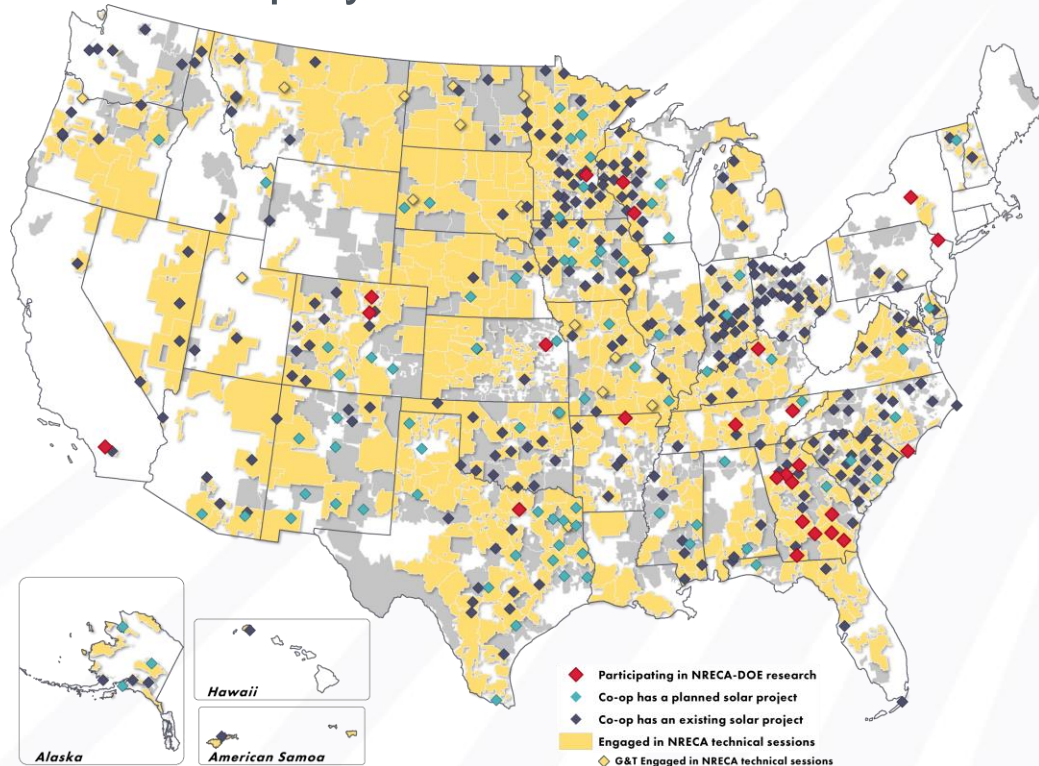


NRECA

A Touchstone Energy® Cooperative 

Co-op Solar, SUNDA Impact

Solar Utility Network Deployment Acceleration



Alaska



Hawaii



American Samoa

SUNDA Team

State	Classification	Participating Co-ops
Arkansas	Distribution	North Arkansas Electric Co-op
California	Distribution	Anza Electric Co-op
Colorado	Distribution/G&T	Poudre Valley REA/Tri-State G&T
Georgia	Renewable arm G&T	Green Power EMC/ Oglethorpe Power Corporation
Kansas	G&T	Kansas Electric Power Co-op
Kentucky	Distribution G&T	Owen Electric Co-op/ East Kentucky Power Co-op
Minnesota	G&T Distribution	Great River Energy/ Wright Hennepin CEA
New Jersey	Distribution	Sussex Rural Electric Co-op
New York	Distribution	Oneida-Madison EC
North Carolina	Distribution Distribution	Brunswick EMC Sandhills Utility Services
Tennessee	Distribution Distribution	Appalachian Electric Co-op Middle Tennessee EMC
Texas	Distribution	CoServ Electric
Vermont	Distribution	Vermont Electric Co-op
Wisconsin	Distribution	Eau Claire Energy Co-op



Partners

SunShot

CFC

Federated

PowerSecure

NRECA Team

Craig Miller

Doug Danley

Paul Carroll

Deb Roepke

Tracy Warren

TJ Kirk

Kaley Lockwood

Mike Casper

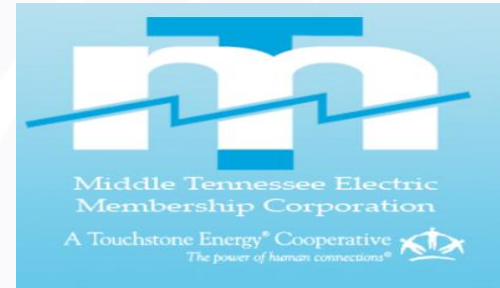
Andrew Cotter

Community Solar Deployments



Eau Claire Energy Cooperative

Your Touchstone Energy® Partner 



Co-op Solar at Military Installations



G&T Led Deployments: GRE



2013: \$4.50/W

GREAT RIVER ENERGY® 
A "TruSource Energy" Cooperative 



2016: \$1.74/W

G&T Led Deployments: Green Power EMC

Participating Co-ops	MW
Altamaha EMC	.038
Grady EMC	2
Greystone Power I	1
Greystone Power II	3
Irwin EMC	1
Jackson EMC	2
Middle Georgia EMC	1
Okefenokee EMC	2
Satilla EMC	1
Snapping Shoals EMC	2.7
Tri-County EMC	1

Initial plan: 1MW
Actual deployment: >16MW
Average Cost/Wdc: \$1.35



SUNDA Deployments

Goal: 20MW

Planned: 23MW

Actual: >30MW +
>60MW at
SUNDA
“Associates”

Phase I (Y1 & Y2: 10/13 - 9/15)	State	MW	
CoServ Electric I	TX	2	2.874
Great River Energy - 1	MN	0.25	
Sussex REC	NJ	0.624	
Phase II (Y3: 10/15 - 9/16)			
Anza Electric Co-op	CA	2	12.9
Brunswick EMC	NC	1.2	
Eau Claire Energy Cooperative	WI	0.75	
Great River Energy - 2 (Wright Hennepin)	MN	2.25	
Green Power EMC - 1 (4 projects)	GA	6.7	
Phase III (Y4: 10/16 - 9/17)			
Appalachian REC	TN	1.373	14.711
Green Power EMC - 2 (7 projects)	GA	10.038	
Kansas Electric Power Co-op	KS	1	
Middle Tennessee EMC	TN	0.8	
Poudre Valley/TriState G&T	CO	1.5	

SUNDA Products

The Road to Solar



Community Solar Playbook



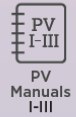
Solar Decision Guide



Online Training Modules



Quick Start Guide



PV Manuals I-III



Cost & Finance Screening



Communicator's Toolkit

America's electric cooperatives are working together and accelerating solar PV adoption across the United States. NRECA's SUNDA project is creating tools to help co-ops on the journey.

America's electric cooperatives provide safe, affordable and reliable electric service to **42 million consumer-members**.

The National Rural Electric Cooperative Association (NRECA) is the trade association for the more than **900 not-for-profit, member-owned cooperatives**.

1 Understanding Costs & Options



2 Planning



3 Communication & Education

4 Making the Commitment



5 Designing & Financing



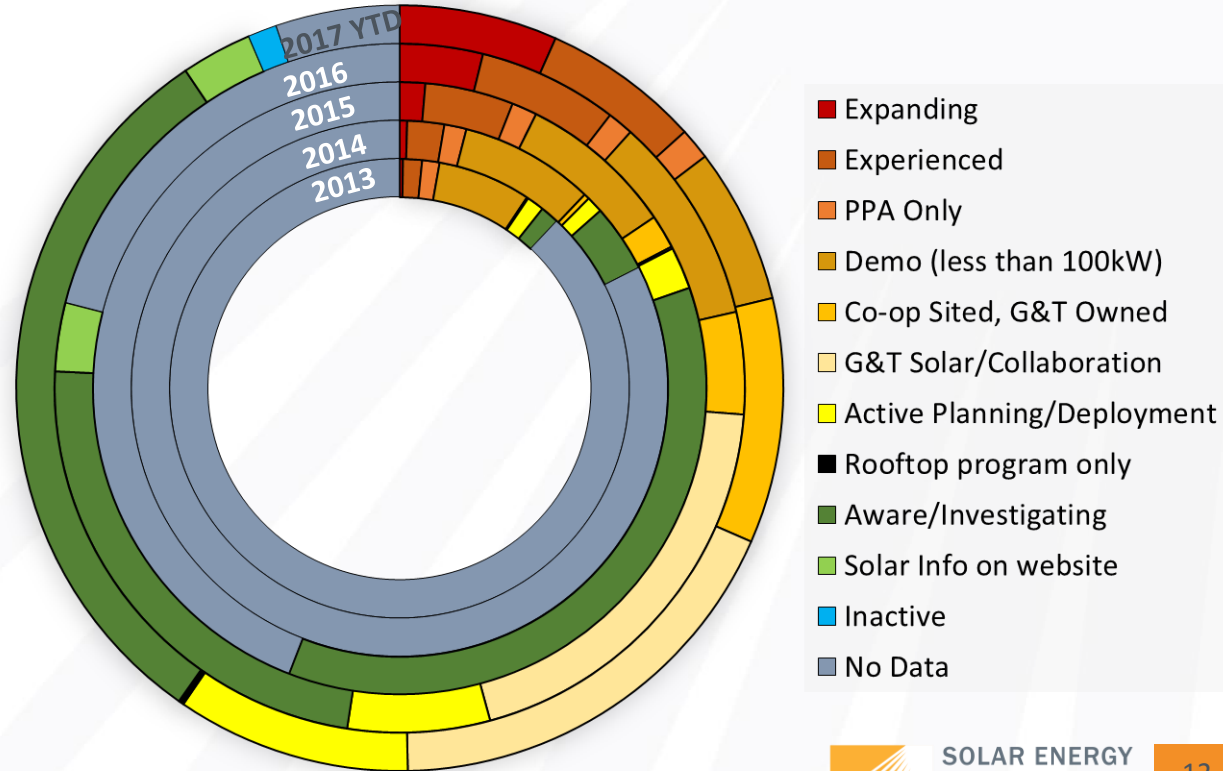
6 Building & Deployment



7 Operations & Maintenance

SUNDA Accomplishments

- Reached 852 co-ops
 - 17 participating co-ops
 - 237 members of SUNDA mailing list
 - 433 participated in SUNDA webinars
 - 113 additional co-ops represented in a class with SUNDA content



SUNDA Success Factors

- Member-focused team structure
 - Designed to grow and be flexible
- Uniqueness of co-op model and culture (co-ops cooperate)
- Iterative learning process
- Carefully guided transformation through real time sharing of information and learning
 - Decision making to include resourcing and financing
 - Process and Project Management
 - Technology Implementation
 - Member Engagement