



2018 Accomplishments & DEED Completed Projects

2018 Accomplishments

- **960** public power utilities support R&D through public power's DEED program, pooling resources and ideas that move public power – and the electric industry – forward. Membership in 2018 rose to 940, and shot up to 960 in early 2019.
- DEED awarded **\$1,318,889** to fund 21 new utility projects and **\$143,000** to support 34 new educational scholarships, internships, and research grants, totaling a record-breaking **\$1,461,889** in project funding. 72 percent of grant proposals received funding in 2018.
- Reports, white papers, webinars, tools, template materials, and other useful resources are available from 18 grant projects and 19 scholarship projects, completed in 2018. Visit the key-word searchable DEED Project Database so you may learn from and replicate innovative projects and programs of interest to your community. See the reverse side for a list of projects completed in 2018.

DEED members saved \$151,026 on DEED products and complimentary webinars. The APPA Store sold 541 DEED products and 336 members took advantage of 9 DEED webinars. DEED publications and webinars are still available at the APPA Store; you can:

- Learn how a small utility can cost-effectively replace and maintain its own diesel emissions monitoring system to comply with the EPA's Rice-NESHAP rule.
- Learn how your utility may benefit from mobile contact voltage testing on your distribution system
- Get an overview of the key points covered in a Public Power Legal Primer developed for small utilities.
- Learn about DSTAR's "Secondary Electrical Design Software" available for members' use and hear the results from the DSTAR project Changing Nature of Loads: Power Control Devices for Distribution Feeders.

Four utilities received recognition with DEED awards:

- Silicon Valley Power, CA, earned the 2018 Award of Continued Excellence.
- Energy Innovator Awards were earned by CPS Energy, TX; Braintree Electric Light Department, MA; and New York Power Authority, NY.

2018 DEED Membership Survey Results

- Energy efficiency, distributed generation, electric vehicles, grid modernization and storage were identified as the five topics of greatest interest to DEED members, respectively.
- 74 percent of utilities were satisfied or very satisfied with their DEED membership.
- DEED benefits rated "very useful" by the most respondents were complimentary DEED webinars, grants up to \$125K for innovative utility projects, and the DEED Project Database.

2018 Completed Grant Projects

G-377 Measuring the Benefits of Contact Voltage Testing, City Utilities of Springfield, MO

G-378 Implementation and Best Practices for Unmanned Aircraft Systems (UAS) for Utility Operations, Huntsville Utilities, AL

G-379 DSTAR Project 9-5 Economic Overhead Conductor Software (EOCS), DSTAR/DEED

G-380 DSTAR Project 10-4 Transformer Owning Cost Software (TOCS), DSTAR/DEED

G-381 DSTAR Project 7-3 Transformer Scrap/Repair Decision Software (TSRDS), DSTAR/DEED

G-382 DSTAR Project 2-4 Ferroresonance Guidelines for Modern Transformer Appl., DSTAR/DEED

G-383 DSTAR Project 5-2 Floating Wye-Delta Overhead Bank Overvoltages, DSTAR/DEED

G-384 DSTAR Project 8-10 Transformer Seasonal Loading Analysis Guidelines, DSTAR/DEED

G-385 DSTAR Project 12-7 Current Limiting Fuse Application Guidelines, DSTAR/DEED

G-386 DSTAR Project 12-6 Changing Nature of Loads and the Impact on Utilities, DSTAR/DEED

G-387 DSTAR Project 14-9 Guide to Best Practices for Improving Distribution Reliability, DSTAR/DEED

G-388 DSTAR Project 14-10 Cable Electrical Parameters Software (CEPS) Enhancements, DSTAR/DEED

G-389 Calibrated Modeling of Energy Savings of New High-Efficient Residential Window Coverings, Silicon Valley Power, CA

G-390 Engaging Communities for Energy and Water Savings: Improving Measurement and Effectiveness of Energy/Water Audits for Low Income Neighborhoods, Gainesville Regional Utilities, FL

G-391 Energy Efficient Air Management in Small Data Centers through the Use of Liquid Cooling Servers, Silicon Valley Power, CA

G-392 A Tool for Mining AMI Data to Model Customer Loads for Small Public Power Utilities, Algona Municipal Utilities, IA

G-393 DSTAR Project 16-6 Evaluation of Control Devices for Distribution Feeders, DSTAR/DEED

G-394 Floating Solar Array Study Evaluation, Braintree Electric Light Dept., MA

2018 Completed Scholarships

S-225 Internship for Developing Short Energy Efficiency & Electrical Safety Educational Videos; Silicon Valley Power; Trevor Phillips, San Jose State University, CA

S-226 Create Primer on Electric Utility Operating and Legal Issues for Municipal Utility Lawyers; Missouri River Energy Services; Amanda Siefken, University of South Dakota, SD

S-227 WISE-DEEP Community Information Expert; Hominy Electric Department; Connor Edwards, University of Central Oklahoma

S-228 Renewable Energy Engineering Intern; Austin Energy; Megan Dawkins, Texas A&M University, TX

S-229 Project Lead on AMR to MilSoft Windmill Circuit Model Data Sharing Project; Lodi Electric, CA; Richard Ruan, Sacramento State University, CA

S-230 Engineering Intern; Bryan Municipal Utilities; Hunter Gerken, Northwest State Community College, OH

S-231 Energy Efficiency Projects & Database Development; American Public Power Association

S-232 DEED Program Intern; American Public Power Association

S-233 Energy Efficiency and Renewable Energy Analyst; Colombia Water & Light, MO; Mason Brobeck, University of Missouri – Columbia, MO

T-14 Braintree Electric Light Department Battery Storage Simulation; Braintree Electric Light Dept.; Andres Vasquez (lead), Boston University, MA

S-234 Austin Energy Student Internship - Economic Modeling; Austin Energy; Arjun Chimote, University of Texas – Arlington, TX

S-235 Optimization of the Thermal Energy Storage System; UNC, Charlotte; Zahra Razzaghpanah, University of North Carolina, Charlotte, NC

S-236 Identifying Component Failure Type by Waveform Analysis on Relay Recordings; Bryan Texas Utilities; Peter Cheng Qian, Texas A&M University, TX

S-237 Risk-Aware Testing and Management of Synchrophasor Systems in Electric Power Grids; Bryan Texas Utilities; Tamara Becejac, Texas A&M University, TX

S-238 Engineering Intern - A; Independence Power & Light, MO; Shivan Mehta, University of Missouri – Columbia, MO

S-239 Engineering Intern - B; Independence Power & Light, MO; Tyler Bartholow, University of Missouri, MO

S-240 Cyber Security Intern; Northern California Power Agency, CA; Joel Cahill, California State University – Sacramento, CA

S-241 Reduction of Harmonic Distortion of Distributed Generation Units in Power Systems; Silicon Valley Power; Younes Sangsefidi, Washington State University, WA

S-242 Senior Power Analyst Intern (Third Summer); Emerald People's Utility District; Alex Churchman, Oregon State University, OR