



2015 Accomplishments

DEMONSTRATION OF ENERGY & EFFICIENCY DEVELOPMENTS



APPA's DEED program, which funds research and demonstration projects, **turned 35** in 2015. Receptions, educational sessions, and a poster show highlighting innovative DEED projects were held at APPA conferences throughout the country to commemorate the occasion.

Membership has grown by more than 50 percent in 10 years. Today, **906 public power utilities** belong to DEED, pooling resources and ideas that help move public power – and the electricity industry – forward.

DEED awarded **\$597,912** for 16 utility grants and **\$91,000** for 26 student scholarships, internships, and grants. 67 percent of grant proposals received funding in 2015; 63 percent over the last 10 years.

DEED Launches New APPA Resources

- Public power energy-efficiency reporting and benchmarking will improve using the web-based *DSM Benchmark* tool and *EIA-861 Schedule 6 Reporting Guide*.
- The benefits and challenges gleaned from thirty-two public power projects are profiled in the *Smart Grid Investment Grant Projects* publication.

Reports, webinars, PowerPoint presentations, and tools from 12 newly completed grants and 20 newly completed scholarships were added to the DEED project database in 2015. The database holds information on **507 DEED-funded projects** that are a rich source of new ideas, best practices, and lessons learned.

DEED members saved \$96,076 on DEED products and webinars. The APPA Product Store sold 1127 DEED products. 256 registrants attended five DEED webinars. \$8,222 from those sales was deposited into the DEED research fund for new projects.

Five utilities were recognized with DEED awards

- **2015 Award of Continued Excellence** was awarded to Burlington Electric Department, Vermont
- **Energy Innovator Awards** were earned by: Central Lincoln People's Utility District, Oregon; The City of Tallahassee, Florida; Orlando Utilities Commission, Florida; Public Utility District No.1 of Kittitas County, Washington

2015 Completed DEED Projects

Grants:

- G-329 Interactive Tools and Training Materials to Enhance Public Power's Ability to Benchmark Energy Efficiency Performance; Santee Cooper
- G-330 Residential Thermal Energy Storage Systems; Azusa Light & Water Department
- G-331 Customer Engagement Guidebook - Smart Grid Essentials; APPA/DEED
- G-332 Solar Engagement options; APPA/DEED
- G-333 A Public Power Best Practices and Lessons Learned Report on Smart Grid; Sacramento Municipal Utility District
- G-334 Compressed Air System to Supplement Wind Generation; Lincoln Electric System
- G-335 eReliability Tracker Advancements; APPA
- G-336 Feeder Automation Using Jdiff Technology; Cuyahoga Falls Electric System
- G-337 Missouri S&T Microgrid Demonstration Employing Renewable Energy and Alternative Fuel Sources; City Utilities of Springfield
- G-338 Consumer Preferences for Alternative Electric Service Plans; TVA/EPRI
- G-339 Sustainability Reporting for Public Power Communities; American Municipal Power
- G-340 Identification of Key Drivers for Municipal Utility Performance; ElectriCities of North Carolina, Inc.

Scholarships:

- S-183 Synthesis of LiFePO₄/C Nanoparticles for Green and Long-Lasting Energy Storage Application; Rancho Cucamonga Municipal Utility sponsored: Darren Kwee
- S-184 Engineering Intern; Tullahoma Utilities Board sponsored: Andrew Gray
- S-185 Reconfigurable Solar Converters for Capacity Firming of PV Power Plants; ElectriCities of North Carolina, Inc. sponsored: Iman Mazhari
- S-186 Improving Dye-Sensitized Solar Cells: A ZnO Nanowire/TiO₂ Nanoparticle Core-Shell Photoelectrode; City of Riverside Public Utilities sponsored: Taehoon Lim
- S-187 DEED Intern #11; APPA/DEED sponsored: Brian Murphy and Andrew Garrison
- S-188 Project Engineering Intern; Lansing Board of Water & Light sponsored: Andrew Smith
- S-189 Holland Energy Financing Intern; Holland Board of Public Works sponsored: Katelyn Tooley
- S-190 Demand Side Management Program Planning and Design; City of Colton sponsored: Andrew Flores
- S-191 Modeling Heated Cooling Water Discharge in Reservoirs; Austin Energy sponsored: Margaret Cook
- S-193 DEED Intern #9 & #10; APPA/DEED sponsored: Patricia, Brian
- S-194 DEED intern #12; APPA/DEED sponsored: Andrew, Austen
- S-195 Compressed Air Assisted Wind Power Generation and Regulation; Lincoln Electric System sponsored: Jie Cheng
- S-196 Dispersed Storage and Generation; Fallon Municipal Utilities sponsored: Yacouba Mournouni
- S-197 2015 DEED Program Internship (Intern #13); APPA/DEED sponsored: Austen San Nicolas
- S-198 2015 LCPUD Summer Internship; Lewis County PUD sponsored: Conner Blake
- S-199 Renewable Energy Financing Intern; Austin Energy sponsored: Steven LaRosa
- S-200 Public Utility Career Awareness Internship; Riviera Utilities sponsored: Dominique Wright
- S-201 NCPA MDMS Analyst; Northern California Power Agency sponsored: Mohammed Jagun
- S-202 CO₂-Based Demand Control Ventilation as a Demand Side Management Technique in Commercial Buildings; Nebraska Public Power District sponsored: Alireza Behfar
- T-13 Stabilizing Electric Power Systems through Active Power Control of PV Systems; Anderson Hoke