Award of Continued Excellence Winning Utilities

2018 Silicon Valley Power, California
Silicon Valley Power (SVP), has been a member of the DEED program since its inception in 1980. It continues to be an active participant in electric utility research and supports its staff's participation on the DEED board. Over the years, SVP has been awarded six DEED grants to test emerging technologies and evaluate their impact at scale or in market contexts, providing insights that are transferable to other public power utilities. SVP has also conducted studies in conjunction with other prestigious public organizations, such as Pacific Northwest National Laboratory (PNNL). Additionally, SVP supports workforce development through DEED-funded internships and DEED research grants to sponsor students and encourage careers in public power.

2017 Lincoln Electric System, Nebraska
LES developed a model to evaluate various implementation scenarios for the Environmental Protection Agency's Clean Power Plan in Nebraska, sharing it with all public power utilities across the state. Following a demo of that model, the American Public Power Association engaged LES to develop a national version to allow any public power utility to run analyses. By utility and state/region, the new tool calculates baseline emission levels; energy production and capacity levels, rate-based compliance position, and mass-based compliance position. In 2016, APPA made the model available free of charge via the APPA Product Store for any association member utility to use.

In 2009-2010, LES explored Smart Grid and Advanced Meter Infrastructure technologies, partnering with EPRI, outside consultants and vendor partners to develop a plan to replace all revenue meters with advance two-way meters, explore time of use rates, install In Home Displays for participating customers, as well as leverage the communication infrastructure to deploy a number of distribution automation technologies. The timing for this project and business case did not meet all expectations. The work done during this exploration later developed into the Mobile Meter Reading project that LES completed in 2016.

In conjunction with Honeywell and EPRI, LES completed its smart thermostat field study with 400 residential customers. LES' active participation in the study garnered one of EPRI's 2016 Technology Transfer awards.

In cooperation with the city of Lincoln, LES installed LED streetlights in portions of the city center as a demonstration and installs new LED streetlights in all new and replacement applications.

2016 River Falls Municipal Utility, Wisconsin
River Falls Municipal Utilities joined the DEED program in 1986. Considering its small size, just over 6,000 total customers, it has made tremendous strides in the promotion of renewable energy and energy efficiency, and it has been quick to share results with other public power utilities.

As part of the DEED program, RFMU has provided two scholarships to students attending the University of Wisconsin – River Falls. In 2012, the utility worked with a student who studied the implications of land use change on soil organic carbon and sequestration opportunities in western Wisconsin. The research developed strategies to curb carbon emissions by way of improved agricultural practices. Currently, RFMU is working with a student to investigate the effectiveness of sustainable housing models by performing cost analysis of net-zero homes in the city's Habitat for Humanity Eco Village when compared to conventionally constructed homes.

2015 Burlington Electric Department, Vermont

BED has been a leader in energy efficiency and renewable energy for four decades. Nearly one-third of BED's renewable power comes from hydro, one-third from biomass, and one-third from wind and solar. BED joined the DEED program in 1983. Since then it has conducted four DEED-funded energy efficiency projects — a generation weatherization program for multi-family housing, a Green Schools program at Burlington High School, a guidebook on implementing a Property Assessed Clean Energy program, and a project to test the impact of in-home energy information devices powered by the smart grid.

BED is implementing multiple community solar projects, including a 500 KW installation at the Burlington International Airport and a 130 kW installation at its headquarters. BED was the first utility in Vermont to develop a standard contract offer that allowed third-party developers to obtain a 20-year power purchase agreement for solar generation, and has nearly three MWs under contract. BED is promoting solar generation through utility ownership as well as net metering to shave peak demand.

2014 Cuyahoga Falls, Ohio, Electric System

A DEED member for fifteen years, the Cuyahoga Falls utility earned a 2004 DEED Energy Innovator Award for its Building Energy Efficiency Leadership in a New Energy Era program, which promoted energy efficiency, renewable energy, and conservation in the community. It also facilitated a 2008 DEED scholarship for photovoltaic research, and in 2013 was awarded a $50,000 DEED grant to improve its system's reliability by way of feeder automation.

2013 Columbia, Mo., Water & Light

Since joining DEED, in 1983, Columbia has received multiple DEED grants—as well as a scholarship—and assisted its customers in advancing energy efficiency and renewable energy programs. Columbia has done marketing research in the area of solar feed-in tariffs, worked on collaborative biomass projects, and been a leader in Missouri in the areas of residential and commercial energy efficiency. This is Columbia's second ACE. The utility also won the award in 2005. In 1985, Columbia Water & Light won an Energy

Innovator Award for its Cooperative Energy Management/Conservation Office program, which was designed to help local government offices manage energy use.

2012 Iowa Association of Municipal Utilities
A DEED member since 1988, IAMU received a DEED grant in 2004 for a project to help its members in advancing energy efficiency and renewable energy in Iowa. The grant was used to develop five case studies of energy efficiency and renewable energy technologies in use at water and wastewater plants. A second grant was used to develop an energy audit software tool for water and wastewater plants.

Also in 2004, IAMU received a DEED grant to perform emissions testing when using biodiesel in utility-scale generators. This project resulted in the Iowa Department of Natural Resources changing its rules to allow municipal utilities to use diesel with up to a 2% biodiesel content in generators.

In 2010, the association also received a grant for its Whole Town Audits program. This grant helped 11 small Iowa municipal utilities (communities with under 1,500 residents) leverage funding from the Iowa Power Fund and the federal Energy Efficiency Conservation Block Grant program to pursue comprehensive energy analysis and improvements. Other grants have included the development of an HVAC equipment sizing program and development of an LED streetlighting design handbook.

2011 Cedar Falls, Iowa, Utilities
Cedar Falls Utilities in Iowa, CFU has shown a sustained commitment to energy innovation and support of research and development projects aimed at improving energy efficiency and promoting renewable resources. In 2010, CFU invested more than $1 million in energy conservation programs. CFU Energy Services staff conducts free energy audits and offers cash rebates to businesses and consumers who install energy efficient heating, cooling, lighting, appliances and insulation.

In 2000, CFU received a DEED grant for a project titled “Public Power Wind Generation Project Technology Transfer.” The grant funds were used to create a report to share knowledge of wind demonstration projects with other public power utilities interested in installing wind turbines to generate electricity and/or in participating in future wind turbine verification projects. CFU staff members also assisted with a DEED Grant project administered by the Iowa Association of Municipal Utilities in 2006 and 2007. The project was titled “HVAC Equipment Sizing Pilot Program.” The project consisted of two training workshops and a training primer aimed at helping utilities develop their own HVAC equipment sizing networks or programs.

CFU first launched energy-saving incentive programs for Cedar Falls residents more than 30 years ago. In addition, the Utility has been a long-time supporter of alternative energy, first investing in a wind farm in 1996

Award of Continued Excellence Winning Utilities

2010 New York Power Authority (NYPA)
The New York Power Authority, which supplies power to more than 50 municipal and rural cooperative utilities in New York State, is the 2010 recipient of the DEED Award of Continued Excellence. The ACE award recognizes a utility's commitment to the DEED program and its ideals, including increased energy-efficiency, investigation/use of renewable resources, research, development and demonstration, and support of public power.

A 19-year member of DEED, NYPA has remained committed to research, development and demonstration through its many memberships and partnerships, including DEED, the Electric Power Research Institute, the Canadian Energy Association, National Hydrogen Association, Solar Electric Power Association, U.S. Green Building Council, New York State Energy Research and Development Authority, and the Hydrogen Utility Group.

NYPA also invests $100 million annually in energy-efficiency projects with its customers, resulting in the annual elimination of 750,000 tons of greenhouse gases. Seventy-five percent of NYPA's generation mix is clean, renewable hydro power and the agency continues to expand its solar photovoltaic program with 24 installations to date, with a combined capacity of more than 630 kW.

Environmental stewardship is critical to NYPA. Recently, it completed a program to retrofit more than 1,400 New York City school buses with pollution-reducing diesel oxidation catalyst mufflers. This was part of a larger program to offset the emissions of several small power plants in the New York City metropolitan area.

2009 Gainesville, Fla., Regional Utilities (GRU)
GRU has been an active member of DEED and a recognized contributor to energy innovation and research efforts for nearly thirty years. GRU has been a pioneer in energy efficiency developments, making notable strides in demand-side management and green energy. Over the years, GRU has been awarded several DEED grants, covering topics including: commercial lighting; environmental compliance; low-income customer energy; efficiency; and asphalt surface solar domestic water heating.

GRU has taken a leadership role in renewable energy development. It is the first municipality in the United States to implement a solar feed-in tariff (FIT) and has plans to develop the largest biomass generation plant in Florida, as well as supporting projects as diverse as hydroelectric generation and energy from biosolids. GRU was the first utility in the state to offer a green energy program with its Solar Share program.

In its operational divisions GRU has implemented programs in alternative energy, utilizing electric and multi-fueled fleet vehicles, installation of solar panels on the Operations building, and even maintaining a number of bicycles for travel to local meetings. Gainesville is the first city in the state of Florida to create a Forest

Stewardship incentive plan for biomass fuel, has adopted the Kyoto plan for carbon reduction, and has created a winning strategy to help reduce global warming.

2008 City of Riverside, Calif., Public Utilities (RPU)

For more than 20 years, RPU has been an active member of DEED and a recognized contributor to energy innovation and research efforts. Since 2002, RPU has given more than $1.2 million in research grants to electric-related projects. They plan to continue to aggressively dedicate resources to improving and expanding energy efficiency initiatives for the good of their community and the nation. Over the years, RPU received several DEED grants and scholarships for projects aiming to:

- Provide clean automated electric power, heating and cooling from urban waste;
- Control nitrogen oxides, sulfur oxides and particulate matter in biological filters;
- Combine flexible solar cells and battery complexes as self-charging battery units using sunlight; and
- Convert restaurant-generated grease wastewater into methane gas for electric power.

2007 Rochester, Minn., Public Utilities

RPU has supported DEED since the very beginning in 1980. They contribute employee time towards APPA conferences and on the DEED Board of Directors. RPU funds research that promotes innovation and improved efficiencies for public power customers. RPU has sponsored or co-sponsored a number of grants and scholarships through the DEED program, such as the *APPA Environmental Compliance Manual* in 1988. It is currently working on a grant and scholarship for its *Hybrid Energy System Study Project,* exploring the application of fuel cell in conjunction with a geothermal source/sink system. Beyond DEED RPU has supported other research programs such as the Electric Power Research Institute (EPRI). They even have their own research studies on price-based demand response, broadband communication over power lines (BPL), and a trial installation of a radio-based meter-reading network. RPU also sponsors education classes on geothermal technologies and participates in trade shows. RPU promotes investment in renewable energy through the SolarChoice Program, which encourages the installation of solar electricity systems by making solar energy cost-effective.

2006 City of Palo Alto Utilities, California

The City of Palo Alto has been a supporter of the DEED program from the very beginning, in 1980. From 1986 until 1990, its assistant director of utilities, Kenneth J. DeDario, served on the DEED board of directors. Over the years, the utility has completed six grants and two scholarship projects that have covered a range of subjects. Its most recent scholarship project helped CPAU better understand customers who choose to participate in green power programs. A recently completed grant project resulted in a guidebook called *Best Practices in Marketing Utility Green Pricing Programs*. The other grants it received included subjects such as fuel cells, thermal energy storage, and energy conservation. CPAU has received eight Energy Innovator

Awards. CPAU is also a member of other organizations, such as: Northern California Power Agency, Public Renewables Partnership, E-Source, California Alliance for Distributed Energy Resources, U.S. Environmental Protection Agency's Combined Heat and Power Partnership, and EPA's Green Lights Program.

2005 Columbia Water & Light, Missouri

Columbia Water & Light joined the DEED Program in 1983. Since then they have supported a wide range of university and utility projects promoting energy conservation, energy efficiency and alternative power technologies. In 1985 they won a DEED EIA for improving the efficiencies of two government-funded programs. In 2004 CW&L sponsored a student team from the University of Missouri through a DEED scholarship exploring the development of higher efficiency heating, ventilation, and air conditioning system for residential use through a direct-contact heat exchanger process.

2004 Moorhead Public Service (MPS), Minnesota

As a founding member of the DEED Program, MPS has supported a range of university and utility projects that promote energy conservation, energy efficiency, and alternative power technologies over the years. MPS has been an active member in DEED's grant and scholarship program by pursuing utility scale projects as well as sponsoring university students doing energy related research projects. MPS is known for its two other notable programs, "Lighten Up" and Capture the Wind. The former is an energy efficient lighting program and the latter is their wind turbine project. As a member of other organizations and partnerships within Minnesota and the Midwest region that promote energy efficiency and improvements to the environment, MPS has shown its continued commitment to the ideals of the DEED program.

2003 Wisconsin Public Power Inc. (WPPI)

Wisconsin Public Power Inc. (WPPI) has been a dedicated member of the DEED program since 1986. Recognizing the value of the DEED program, WPPI pays DEED dues on behalf of its members, which enables them to enjoy the full benefits of the program. Since joining DEED, WPPI has participated in a large number of DEED grant and scholarship projects, which have benefited many DEED members by providing information on how to improve efficiency and service. Beyond their DEED membership, WPPI promotes energy efficiency and the use of renewable resources through their membership in and sponsorship of many state and regional organizations supportive of these issues. WPPI's commitment to R&D is evident by their involvement in DEED and their participation in other research organizations such as EPRI.

2002 Silicon Valley Power

Silicon Valley Power has been a dedicated member of DEED since the program's inception in 1980. During that time they have won four Energy Innovator Awards and have been honored with several awards from other power organizations for their innovative, energy efficient programs involving cogeneration, solar heating, fuel cells, commuter transportation, and small commercial customers. Silicon Valley Power is a

strong promoter of energy efficiency and the use of renewable resources. During the 2000-2001 fiscal year alone, 26% of the power Silicon Valley sold to retail customers was 'eligible renewable' e.g. geothermal, wind, small hydroelectric, and solar, with an additional 47% of the power sold produced from large hydroelectric plants.

2001 Platte River Power Authority

Platte River Power Authority in Colorado is a charter member of the DEED program, joining in 1980 when the program was formed. As a DEED member, they have been very active, sponsoring 11 scholarships and 4 grant projects. In addition, Mr. Bill Emslie, from Platte River served on the DEED Board of Directors, serving as chair for part of that time.

Beyond their DEED membership, the utility has strongly promoted new technologies and innovation through research and development. They have been active members of EPRI (the Electric Power Research Institute), E-Source and WEST Associates, supporting conservation, renewable energy and energy efficiency through these organizations.

Over the years, Platte River has shown unwavering dedication to public power, innovation, and research and development. They are actively involved in showing that public power has many advantages and can be in the forefront of new technologies and innovation. They also have demonstrated that public power utilities can support each other and share results and experiences so that all may learn from the experience of others.

2000 Waverly Light and Power

Waverly Light and Power has been a member of the DEED program for 17 years and was instrumental in DEED's partnership with EPRI (a nonprofit research consortium that creates technology solutions for the global energy and energy services industry), enabling small public power utilities to access EPRI benefits at a discount.

A strong advocate of energy efficiency and the use of renewable resources, Waverly was the first public power system in the Midwest to own and operate a wind generation system. Four percent of the utility's annual energy requirements are now met by wind energy—among the highest in the world—and the data from this effort continues to aid numerous public power and private wind generation initiatives throughout the region.

Waverly has been recognized by the U.S. Department of Energy for its energy-efficient and renewable energy initiatives. It has also received APPA's Golden Tree Award and is a three-time winner of APPA's Energy Innovator Award.