



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

December 31, 2019

The Honorable JB Pritzker
Governor of Illinois
207 Statehouse
Springfield, IL 62706

Honorable Members
Illinois General Assembly
Statehouse
Springfield, IL 62706

Dear Governor Pritzker and Members of the General Assembly:

I am pleased to submit to you the Illinois Environmental Protection Agency's Office of Energy 2019 Annual Report. This report fulfills the directive under Executive Order 2017-03 addressing the transfer of the Office of Energy and Recycling program to the Illinois Environmental Protection Agency.

Sincerely,

A handwritten signature in blue ink, appearing to read "John J. Kim".

John J. Kim
Director

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Illinois EPA's 2019 Annual Report on Executive Order 17-03

Illinois EPA Office of Energy

On July 1, 2017, the Department of Commerce and Economic Opportunity (DCEO) Office of Energy and Recycling was transferred to the Illinois Environmental Protection Agency (Illinois EPA) as a result of Executive Order 2017-03.

The Illinois EPA's mission is to protect, restore, and enhance the quality of air, land, and water resources to benefit current and future generations. It is responsible for safeguarding environmental quality, consistent with the social and economic needs of the State, and to protect health, welfare, property, and the quality of life for all Illinoisans. The Illinois EPA is responsible for safeguarding the State's natural resources from pollution and providing a healthy environment for its citizens.

The Illinois EPA Office of Energy strives to achieve energy equity by investing in projects that focus on energy efficiency and new clean energy technologies to reduce the energy burden for Illinois consumers. As the Office of Energy matures at Illinois EPA, it continues to expand energy programming aimed at protecting the environment and natural resources and reducing the impact of energy use by Illinois residential and commercial consumers.

Effects

As ordered on July 1, 2017, the functions, employees, property, and funds of the Office of Energy and Recycling were ordered transferred from DCEO to Illinois EPA. The purpose, mission, and activities of the Illinois EPA complement Illinois energy policy and provide additional benefits to Illinoisans by eliminating redundancy, simplifying the Executive Branch organizational structure, improving accessibility and accountability, providing a more efficient use of specialized expertise and facilities, realizing savings in administrative and overall costs, and sharing of best practices and state-of-the-art technology. Currently, the Office of Energy is operating with a full-time manager and two full-time staff persons.

The only non-mandated program that moved to the Illinois EPA Office of Energy as a result of Executive Order 2017-03 is the USDA Biofuel Infrastructure Partnership (BIP). The BIP grant program was designed to increase the availability and consumption of ethanol blended fuels in Illinois. Illinois EPA Office of Energy is actively working with USDA to close-out the program that ended on December 31, 2018.

Illinois EPA Office of Energy is investing U.S. DOE State Energy Program (SEP) funds from FY19 (extension) and FY2020 through FY2022 in energy programming through state university partners, including University of Illinois entities Smart Energy Design Assistance Center (SEDAC) and Illinois Sustainable Technology Center (ISTC) and the Southern Illinois University College of Engineering; and the Illinois non-profit organization Clean Energy Trust (CET). The Office of Energy continues to operate the federal SEP program as mandated, as well as actively participating in ongoing public policy dialogue regarding Illinois' energy future.

Additionally, in FY2020 Illinois EPA received appropriation from the Renewable Energy Resources Trust Fund (State Fund 564) and Energy Efficiency Trust Fund (State Fund 571). The Illinois EPA Office of Energy and the Illinois Green Economy Network (IGEN) use the Renewable Energy Resources Trust Fund to support the expansion of energy programming at Illinois Community Colleges. Illinois EPA Office of Energy has worked closely with IGEN in shaping how the Renewable Energy Resources Trust Fund grant is invested at Community Colleges. IGEN should have receipt of the grant money in the first weeks of 2020.

Additionally, the Energy Efficiency Trust Fund requires the Illinois EPA Office of Energy to promote residential energy efficiency for low-income households in Illinois, allowing for energy savings to be reinvested into low-income communities. The Office of Energy aims to reach low-income households in Environmental Justice communities with an Energy Efficiency Trust Fund grant investment in the first half of 2020.

Office of Energy Programing

The program descriptions provided below highlight significant partnerships, energy accomplishments, and positive impacts on Illinois energy consumers. In September 2019, the Office of Energy published a metrics dashboard on its homepage on the Agency website. The dashboard displays facts, figures, and infographics to inform the public of the office's work and partnerships:
<https://www2.illinois.gov/epa/topics/energy/Pages/default.aspx>

Energy Efficiency at the Energy/Water Nexus

Together with SEDAC and ISTC, the Office of Energy is providing energy efficiency assessments to publicly-owned wastewater treatment plants (WWTPs) statewide and offering energy efficiency WWTP training through workshops hosted in areas of Illinois with high energy burden. Energy burden is defined as the percent of a person's income spent on energy such as electricity, home heating, and transportation. Since March 2018, a total of 62 WWTPs have been assessed and provided final energy assessment reports through the program resulting in identification of 27,392,202 kWh in annual energy savings and \$1,958,910 in annual cost savings. The final energy assessment reports identify opportunities for the WWTP to implement energy, cost, and emission savings through infrastructure improvements, while improving or maintaining the water treatment process.

In addition to funding energy efficiency assessments, the Office of Energy has created a competitive funding opportunity to award grant dollars to publicly-owned wastewater treatment plants that have participated in an energy assessment within the previous 5-year period. The first notice of funding opportunity, released in December 2018, resulted in four municipalities receiving a total of \$2.1 million of SEP funds. Cumulatively, all four funded projects will save 6,610,274 kWhs of energy annually and a recurring total annual cost savings of \$408,000. The most recent funding opportunity was posted December 9, 2019, with the grant applications due February 2020 and award notices anticipated for April 2020.

To further support efforts to reduce energy use at WWTPs and improve water treatment processes, the Office of Energy and its partners have hosted three Energy Efficiency at Wastewater Treatment Plants workshops in areas of Illinois with high energy burdens. To date, workshops have been held in Carbondale (October 2018), Peoria (October 2019), and Effingham (November 2019). The workshops provided certified wastewater treatment operators, government officials, Agency personnel, and other stakeholders an introduction to energy efficiency measures, incentives available for energy efficiency projects, and success stories from nearby facilities with presentations from several industry partners.

Energy Code Support for Local Governments and Building Trades

The Office of Energy and SEDAC have established an Energy Code Training and Technical Support Program to benefit Illinois building code officials and construction industry professionals. The Illinois Energy Conservation Code (IECC) sets a standard for all commercial and residential buildings and protects the environment by reducing energy consumption, reducing air pollution, and stabilizing energy costs for buildings. The Energy Code Training and Technical Support program has focused on expanding energy code training to all areas of the State, especially those with high energy burden. A total of 14 in-person workshops and trainings have educated over 850 public code officials and construction industry

professionals. In addition, webinars and online, on-demand trainings have educated over 400 professionals. The Energy Code Technical Support Center has answered approximately 80 questions since July 1, 2019, from architects, engineers, and public code officials regarding residential and commercial energy codes. SEDAC utilizes its extensive experience analyzing and applying the IECC to improve the availability of training on the IECC and to diversify IECC education opportunities for public code officials and construction industry professionals.

Investment in New, Clean Energy Technologies

Established in 2016 with financial support from SEP, the Illinois Clean Energy Innovation Fund (Fund) is administered by the Clean Energy Trust (CET) in collaboration with the Office of Energy to support innovative entrepreneurship and to foster Illinois cleantech sector jobs growth. As an Illinois non-profit, CET works closely with the Office of Energy to evolve and align the Fund with the clean energy economy in Illinois and the Midwest by making direct investments in high-potential, early-stage, Illinois-based cleantech companies. The Office of Energy re-asserted the State's role in administration of the Fund in FY2018 and will continue the partnership with CET to provide critical grant funding to Illinois entrepreneurs through a revolving investment structure.

Innovative Solar + Storage Project at Southern Illinois University – Carbondale

The Southern Illinois University (SIU) Solar + Storage project is a scalable, replicable renewable energy system to be installed on the College of Engineering campus in Carbondale. The project consists of photovoltaic (PV) solar panels generating electricity and battery storage units functioning as an auxiliary power source during utility power disruption. The solar panels will be installed on the roof of the SIU Engineering Complex and the battery storage component is to be housed inside the same building.

The SIU Solar + Storage project reduces SIU's demand on the grid; serves as an educational asset for the College of Engineering; and provides resiliency to the utility and communications infrastructure of SIU and the City of Carbondale's first responders. In the event of a power disruption, the power system will be capable of operating in islanded mode with power from the battery storage. The island mode of the power system will allow for solar powered long-term evolution (LTE) communication modules to sustain cellular communication for the SIU police department, the Carbondale police department, and the Carbondale fire department. As the first investment of its kind by the Illinois EPA Office of Energy, the SIU Solar + Storage project is designed to serve as a model for other educational institutions and communities to address electric grid resiliency coupled with energy savings.

Legislation

Illinois EPA will be filing legislation to codify the reorganization in Spring 2020.