



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

December 31, 2020

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 2020 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.

Cordially,

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

John J. Kim
Director

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Illinois EPA's 2020 Annual Report on Executive Order 2017-03

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 preserving 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 energy efficiency and clean energy technologies focused on reducing the energy burden for Illinois consumers. As the Office of Energy matures at Illinois EPA, energy programming continues to expand protections of the environment and natural resources and reduces 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 transferred from DCEO to Illinois EPA. The purpose, mission, and activities of the Illinois EPA complement Illinois energy policy and provides 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, two full-time staff persons, and a Graduate Public Service Intern.

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 finalize a close-out of the program that formally closed on December 31, 2018.

Illinois EPA Office of Energy is investing U.S. Department of Energy (DOE) State Energy Program (SEP) funds from FY 2018 (extension) and FY 2020 through FY 2022 in 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 FY 2020 Illinois EPA received appropriation from the Renewable Energy Resources Trust Fund (State Fund 564) and Energy Efficiency Trust Fund (State Fund 571). The state fund for Renewable Energy Resources Trust Fund provides the Illinois EPA Office of Energy with an opportunity to collaborate with the Illinois Green Economy Network (IGEN) and support the expansion of energy programming at Illinois Community Colleges. The Energy Efficiency Trust Fund allows 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.

Office of Energy Programing

Since its establishment at the Illinois EPA on July 1, 2017, the Office of Energy has been actively working to improve energy equity by investing in the following programs that support energy efficiency and new clean energy technologies. The program descriptions provided below highlight significant partnerships, energy accomplishments, and positive impacts on Illinois energy consumers.

Energy Efficiency at Illinois Municipalities

Together with SEDAC and ISTC, the Office of Energy is providing energy efficiency assessments to publicly-owned wastewater treatment plants (WWTP) statewide and offering energy efficiency WWTP operator training through workshops hosted in areas of Illinois with high energy burdens. Since March 2018, a total of 88 WWTPs have been assessed and provided final energy assessment reports through the program resulting in identification of 35,846,259 kWh in annual energy savings and \$2,656,334 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 the water treatment process.

In addition to funding energy efficiency assessments, the Office of Energy released a second Notice of Funding Opportunity (NOFO) to provide competitive grant dollars to Illinois municipalities that have received an energy assessment within the previous 5-year period. The two NOFOs, released in December 2018 and December 2019, resulted in grants totaling nearly \$2.5 million of SEP funds to eight Illinois municipalities. Cumulatively, these projects will save 10,146,404 kWhs of energy annually and a recurring total annual cost savings of \$556,910.

To further support efforts to reduce energy use at WWTPs and improve water treatment processes, the Office of Energy and our 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 numerous industry partners. Since March 2020, SEDAC has transitioned in-person workshops to virtual trainings and conferences. Participation has grown exponentially from 38 participants in 2019 to more than 330 in 2020.

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 of high energy burden. A total of 21 in-person and 9 online workshops and trainings have educated over 4,146 construction and energy industry professionals. In addition, webinars and online, on-demand trainings have educated over 843 professionals. The Energy Code Technical Support Center responds to the needs of industry professionals such as architects, engineers, and 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 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 create Illinois cleantech jobs. 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 island mode of the Solar + Storage system allows for long-term evolution (LTE) communication modules to sustain cellular communication for the SIU police department, the Carbondale police department, and the Carbondale fire department in the event of power disruption. The solar panels are to be installed on the roofs of the SIU Engineering Complex and the battery storage component is to be installed adjacent to the same building. The project is expected to be fully functional by July 2021.

Energy Curriculum

The Office of Energy is collaborating with the Office of Environmental Education at Illinois EPA and the Office for Mathematics, Science, and Technology Education (MSTE) at the University of Illinois Urbana-Champaign to develop an Energy specific curriculum for Illinois 5th and 6th graders. This will be the third unit update to the Environmental Pathways curriculum (2000) following units covering surface water/algae and food waste. The proposed energy unit will follow a storyline model allowing students to drive the lesson with their questions and will focus on energy generation, energy efficiency, and consumer energy choices. The curriculum will be aligned to Next Generation Science Standards (NGSS) for easy classroom use and will also be available to nonformal educators. A tentative timeframe of Spring 2021 has been established to pilot the curriculum in several classrooms.

Legislation

Since 2018, Illinois EPA has sought legislation to codify the reorganization detailed in Executive Order 2017-03. We will file another proposal for the Spring 2021 session as required by the Executive Reorganization Implementation Act. 15 ILCS 15/10 (2020). At this time, Illinois EPA does not recommend additional new legislation related to the reorganization.