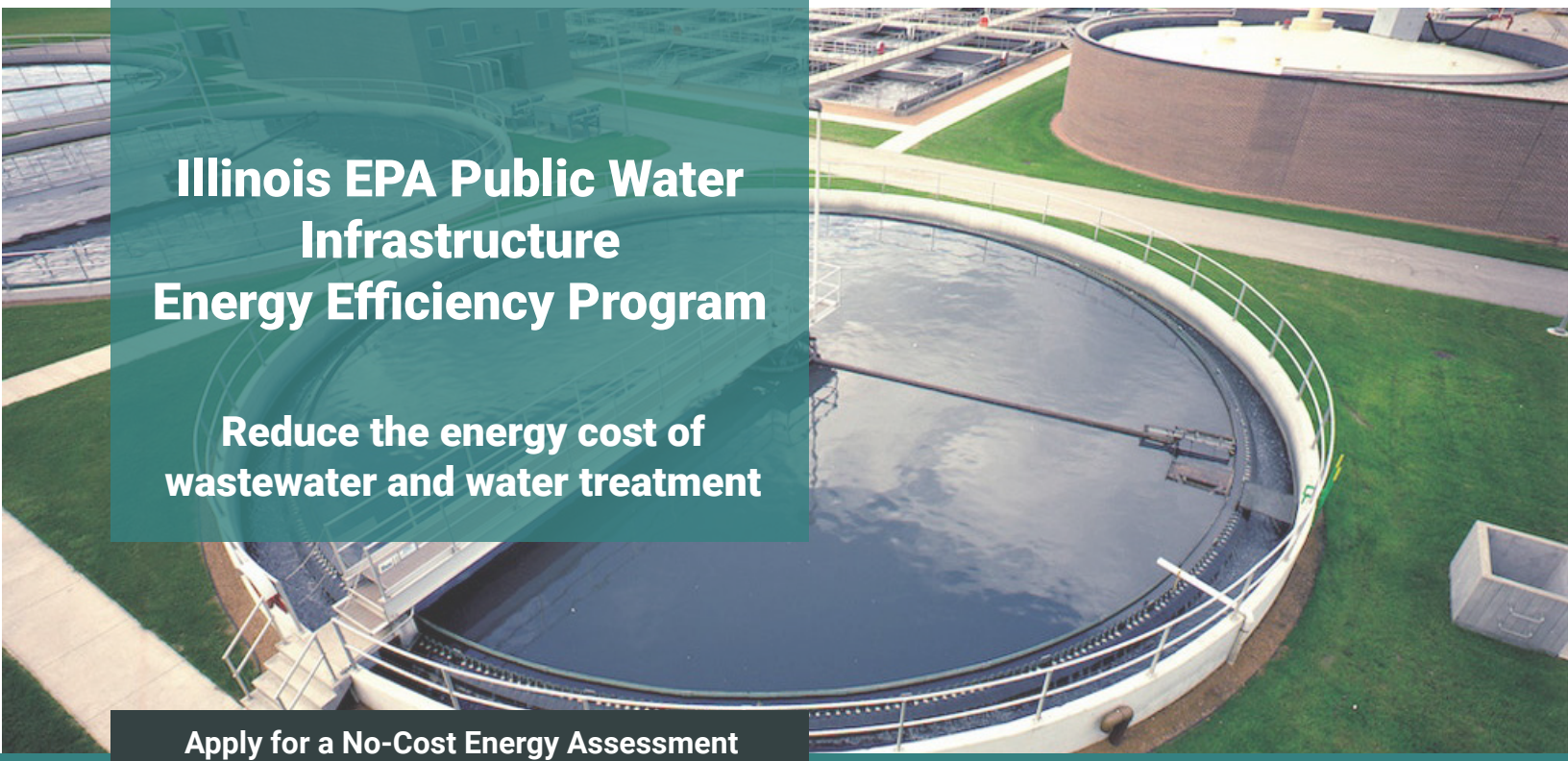
SEDAC
SMART ENERGY DESIGN ASSISTANCE CENTER



Illinois EPA Public Water Infrastructure Energy Efficiency Program

Reduce the energy cost of wastewater and water treatment

Apply for a No-Cost Energy Assessment
https://smartenergy.illinois.edu/water/
800.214.7954

The Illinois EPA Office of Energy, in partnership with the Smart Energy Design Assistance Center (SEDAC) and the Illinois Sustainable Technology Center (ISTC), is helping local municipalities reduce the cost of wastewater and water treatment. For a limited time, receive a no-cost energy assessment, a $6,000 to $12,000 value.

What is an energy assessment?

An energy assessment provided by SEDAC or ISTC will include a facility walk-through, utility bill analysis, and an assessment report with:

- Projected energy and cost savings
- Estimated incentive totals and funding sources
- Energy recommendations
- Projected capital cost and payback time

Top 3 Energy Savings Opportunities

For WASTEWATER:

1. Aeration. Use automation, VFDs, and high-efficiency diffusers to reduce aeration energy.

2. Pump VFDs. Install VFDs on lift station and plant pumps to provide better process control.

2. Blower Optimization. Upgrade blower systems to properly sized, high-efficiency units with proper staging for plant flows.

For WATER:

1. VFDs. Install variable frequency drives (VFDs) so pump speeds can be adjusted to match demand.

2. Pumping Optimization. Use the smallest, lowest speed pumps possible to reduce demand charges and energy consumption.

3. Filtration Optimization. Reduce backwash water loss and pumping energy with improved filters and controls.

U.S. DEPARTMENT OF ENERGY
Energy Efficiency & Renewable Energy

Funding provided in whole or in part by the Illinois EPA Office of Energy. This program is in partnership with the U.S. Dept. of Energy Sustainable Wastewater Infrastructure of the Future (SWIFt) Accelerator for energy efficiency in wastewater and water treatment.
Illinois EPA: http://bit.ly/WWTP-EE

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Realized Savings at Assessed Facilities

City of Caseyville WWTP

1,858,000
Estimated kWh savings/yr

$112,000
Estimated cost savings/yr

VFDs on digester and reactor blowers & LED lighting upgrades and controls

$177,000
Estimated incentives

0.35 yrs
Simple payback

Average Flow: 2.62 MGD

Sangamon County Water Reclaimation Diststrict - Spring Creek WWTP

335,000
Estimated kWh savings/yr

$46,000
Estimated kWh savings/yr

VFDs at pumping station and gas detection sensors

$71,000
Estimated incentives

2.7 yrs
Simple payback

Average Flow: 27 MGD

Identified Savings at Assessed Facilities

Village of Heyworth WTP

45,900
Estimated kWh savings/yr

$3,700
Estimated kWh savings/yr

Outdoor lighting manual control, High service low-flow pump

$8,200
Estimated incentives

4.4 yrs
Simple payback

ILLINOIS SUSTAINABLE TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE

Apply for a No-Cost Energy Assessment
Illinois EPA website: http://bit.ly/WWTP-EE
https://smartenergy.illinois.edu/water/ | 800.214.7954 | sedac-info@illinois.edu
Smart Energy Design Assistance Center, 1 St. Mary's Road, Champaign, IL 61820

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