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ComEd Energy Efficiency Program

Illinois EPA Public Water Infrastructure Program Webinar Series | Marcello Pibiri

Presentation Hosts



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Agenda

1. ComEd Energy Efficiency Program Overview
2. Energy Efficiency Opportunities and Incentives for Wastewater Treatment Facilities
3. Application Process
4. Questions and Answers

ComEd Energy Efficiency Program Overview



FREE Assessments

- » Whole facilities
- » Virtual walk-thru option



Incentives

- » Lighting
- » HVAC systems
- » Energy Management Systems
- » IT rooms
- » New construction
- » Compressed air
- » Variable Speed Drives



Instant Discounts

- » Point-of-sale discounts on:
 - Lighting
 - HVAC
 - Forklift battery chargers



Optimization

- » Whole-building retro-commissioning
- » Rooftop units
- » Refrigeration and cooling
- » Compressed air

ENERGY EFFECIENCY OPPORTUNITIES

Energy Consumption in Water/WWTPs

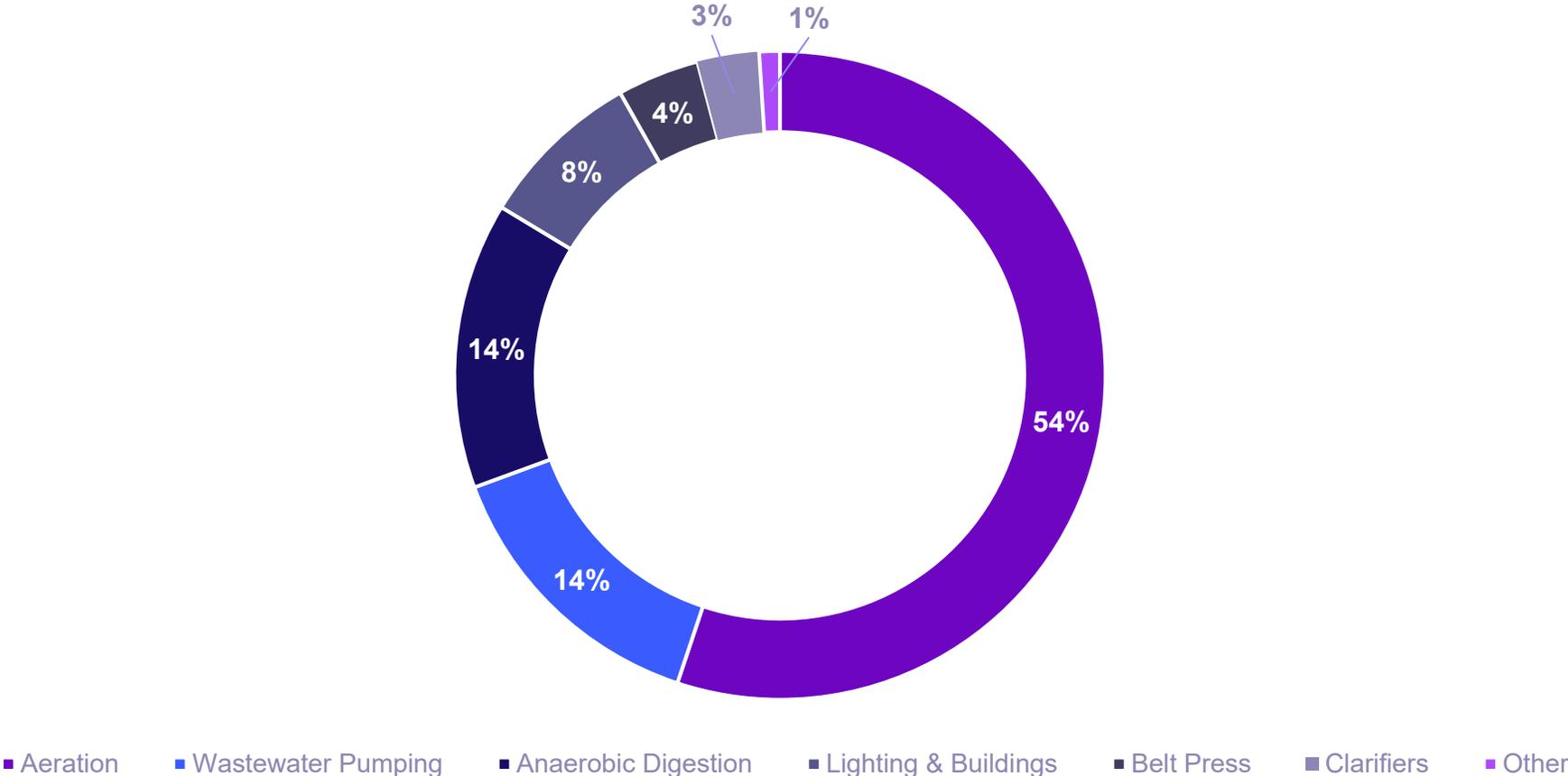
- Providing safe drinking water and reliable wastewater services requires a substantial amount of energy
- There is potential to reduce energy use without compromising quality standards
- Shorter paybacks than industrial counterparts can be realized due to longer hours of operation

Water/Wastewater Industry Energy Consumption

- **3% to 4%** of total U.S. energy consumption is used for drinking water and wastewater services
- **35%** of a typical municipal energy budget is for water and wastewater treatment
- **25-40%** of a typical WWTP operating budget is spent on electricity

Source: U.S. EPA, 2012b and NYSERDA, 2008

Breakdown of Energy Use in WWTPs



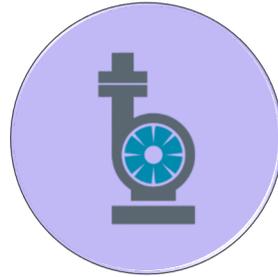
Source: Water Environment Energy Conservation Task Force - Energy Conservation in Wastewater Treatment

Energy Efficiency Opportunities



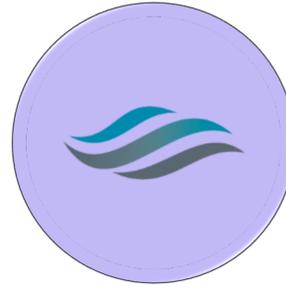
Aeration Upgrades

- Fine bubble diffusers
- Variable blower air flow rate
- Automatic aeration control
- Blower technology options



Wastewater Pumping

- Variable frequency drive applications
- Correctly sized motors
- Avoid pump discharge throttling



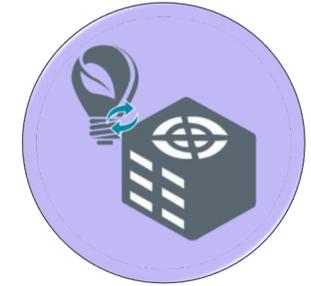
Mixers and Agitators

- Vertical linear motion mixing
- On/off mode
- Multiple impellers



Upgrades for Nitrogen Removal

- Nitrite shunt
- Anammox and Deammonification



Lighting and HVAC

- LED, Lighting Controls
- High Efficiency HVAC units

Efficiency Opportunities for Water/WWTPs

- **Aeration Upgrades**
 - Fine bubble diffusers
 - Variable blower air flow rate
 - Automatic dissolved oxygen control
 - Blower technology options
- **Custom Upgrades (not for aeration)**
 - Variable frequency drive applications
 - High efficient bio solids mixers
 - Ultraviolet (UV) lamp controls and upgrades
 - Combined Heat and Power (CHP)
- **Standard measures such as:**
 - Lighting, HVAC, Laboratory Equipment
 - Comed.com/WaysToSave/ForYourBusiness/Pages/FactSheets/StandardIncentives.aspx
- **Distributed Generation Rebate: \$250/kW**

Measure		Incentive Rate	Incentive Payment Limits
High Efficiency Aeration Systems	With dissolved oxygen controls	\$0.21 per kWh saved annually	Up to 100% of project cost
	Without dissolved oxygen controls	\$0.12 per kWh saved annually	
Custom Projects (Not for aeration) (Includes CHP)		\$0.12 per kWh saved annually	Up to 100% of project cost
Standard Measures		Variable	Up to 100% of project cost

CUSTOM APPLICATION PROCESS

Custom Project Flow

- **Submit Custom Project Screening Form**
 - If the team determines you are eligible for custom incentives, you may proceed with filling out a pre-application
- **Submit a custom pre-application**
 - All custom projects require pre-approval
 - A reservation letter will be issued
 - Wait for the reservation letter before removing equipment and starting your project
- **Purchase and Install New Equipment**
- **Submit a custom final application**
 - Submit the required measurement and verification (M&V) data when requested

Applying For Custom Incentives

- Download: ComEd.com/Applications
 - Screening Form
 - Application Form

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CUSTOM INCENTIVES APPLICATION

January 1 through December 31, 2022

The ComEd Energy Efficiency Program offers their equipment. Receive custom incentives for their equipment. Receive custom incentives for their equipment. For example, new LED lighting fixtures are eligible for custom incentives.

Custom and New Construction Project Screening Form
application. Wait for a reservation letter.

Use This Application to Apply for Custom Incentives
Your incentive is based on actual kWh saved, final application is submitted.

(Please note: Use the water treatment plant if the combined heat and power incentive work should be submitted using the Specialty New Construction Project Screening Form.)

- 1. Submit Custom and New Construction Project Screening Form**
 - Download the [Custom and New Construction Project Screening Form](#) at Business Efficiency Program team at Business Efficiency Program team.
 - If the team determines you are eligible.
- 2. Submit Custom Incentives Application**
 - Download the [Calculating & Documenting Energy Savings](#) measuring the energy savings associated with your project.
 - You will need to provide specification.
 - If you need assistance calculating the energy savings, contact BusinessEE@ComEd.com or call 855-433-2700.
- 3. Receive Approval and Reservation Letter**
 - Wait until you receive an incentive reservation letter. The reservation letter will include the total incentive reserved.
- 4. Purchase and Install New Equipment**
 - The incentive reservation allows 90 days to purchase and install new equipment. Contact the program team if you think your project may not be completed within this time frame.
- 5. Resubmit Custom Incentives Application**
 - Resubmit the custom incentives application if you are unable to complete the project within the 90-day period.
 - You will need to provide specification done with this project.
 - Submit the required measurement at the end of the project.
- 6. Receive incentive payment**
 - When your final application is approved by the Energy Efficiency Service Provider (EESP), ComEd cannot issue certain incentives if the measures were self-installed by the customer or installed by an installer certified by the EESP.

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CUSTOM AND NEW CONSTRUCTION PROJECT SCREENING FORM

January 1 through December 31, 2022

Directions: Please save a copy of this form to your computer by selecting "File/Save As" before entering text and numbers. Then fill in your information electronically and select "Save." Note that this form requires Adobe Reader® version 11.0 to function properly. Download the most recent version of Adobe Acrobat Reader DC® at <http://get.adobe.com/reader>.

Before you begin:
The energy efficiency team will use this form to determine your eligibility for either Custom or New Construction offerings.

Once you submit this form, the energy efficiency team will evaluate your project description and either send you a Custom Incentives Application or a New Construction Incentives Application so you can apply for incentives. You can email your completed form to BusinessEE@ComEd.com or call 855-433-2700 for assistance.

Customer / primary contact name:	Customer / primary contact title:	Organization/company name: <small>Noth Shore Water Reclamation</small>
Customer / primary contact email:	Customer / primary contact phone number:	

Building Information

PROJECT NAME	
ACCOUNT NUMBER (IF APPLICABLE)	BUILDING AREA (FOR NEW CONSTRUCTION OR LARGE RENOVATION)
ADDRESS	CITY STATE ZIP
ESTIMATED DESIGN COMPLETION DATE	ESTIMATED PERMIT DATE
ESTIMATED PROJECT START DATE	ESTIMATED PROJECT COMPLETION DATE
NATURAL GAS UTILITY FOR BUILDING (SELECT ONE)	
<input type="checkbox"/> Nicor Gas <input type="checkbox"/> Peoples Gas <input type="checkbox"/> North Shore Gas <input type="checkbox"/> Other	
CERTIFICATION BEING SOUGHT (I.E. LEED®, ENERGY STAR®, ETC.)	PRELIMINARY DRAWINGS OR SCOPE OF WORK DOCUMENTS AVAILABLE?
	<input type="checkbox"/> Yes <input type="checkbox"/> No

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The screenshot shows the ComEd website interface. At the top, there's a navigation bar with the ComEd logo and 'AN EXELON COMPANY'. Below that, a secondary navigation bar includes 'My Account', 'Outages', 'Ways to Save' (highlighted), 'Smart Energy', 'Safety & Community', and 'Marketplace'. The main content area is titled 'Applications & Worksheets' and features a list of application categories with expandable options (indicated by '+' and '-' signs). The categories include 'For Your Home', 'For Your Business', 'Facility Assessments', 'Incentives', 'Building Optimization', 'Energy Management', 'Public Sector', and 'Business Types'. A sidebar on the right contains a 'Standard App' section with a 'Get Started' button and a 'Commercial Kitchen Equipment' section with a '+' sign. The footer of the page includes the URL: <https://www.comed.com/WaysToSave/ForYourBusiness/Pages/ResourceCenter.aspx>.

Screening Form

- First step of the application process
 - Customer and Building Information
 - Project Description
 - Project Scope

CUSTOM AND NEW CONSTRUCTION PROJECT SCREENING FORM

January 1 through December 31, 2022

Project Description

Please provide the following information about your project to the best of your ability. You do not have to complete every field, but the more information that you share with us, the better we can assist you with your project.

Was this project identified in a ComEd Energy Efficiency Program facility assessment or study? Yes No

Assessment / study completion date:

Anticipated application submission date:

Probability the project will happen (%):

What is the current phase of your project?

Pre-design Schematic design Design development

Construction documentation Equipment purchased

If in design development phase, how complete is your design? (%):

Project Scope:

Provide an overview of the project you are working on. Detail specifics like what equipment is being replaced and/or installed, construction or renovation plans, or any other relevant details, as applicable. Please provide as much information about your project as possible for our screening review team. The more information that is provided, the better we can assist you with your project.

Application Form

- Use for pre-application and final application
 - Estimated Project Cost
 - Include only cost for EE equipment
 - Internal labor costs not eligible
 - Installer Information
 - ICC Certification
 - Worksheet
 - Use *Custom (includes CHP)* column
 - Customer signature
 - Two options

CUSTOM INCENTIVES APPLICATION

January 1 through December 31, 2022

The ComEd Energy Efficiency Program offers incentives to help facilities save money by improving the efficiency of their equipment. Receive custom incentives for energy efficiency improvements not included in the standard offering. For example, new LED lighting fixtures are covered under standard incentives, but large industrial mixers are eligible for custom incentives.

Custom and New Construction Project Screening Form required; submit form before filling out this application. Wait for a reservation letter before starting your project.

Use This Application to Apply for Custom Incentives

Your incentive is based on actual kWh saved, as verified by the ComEd® Energy Efficiency Program team after the final application is submitted.

(Please note: Use the water treatment plant incentive worksheet to apply for water treatment plant projects and use the combined heat and power incentive worksheet for combined heat and power projects. Custom lighting projects should be submitted using the Specialty New Construction Lighting Incentives Worksheet.)

1. **Submit Custom and New Construction Project Screening Form**
 - Download the [Custom and New Construction Project Screening Form](#) and submit it to the Energy Efficiency Program team at BusinessEE@ComEd.com.
 - If the team determines you are eligible for custom incentives, you may proceed with filling out this application.
2. **Submit Custom Incentives Application with Requested Documentation**
 - Download the [Calculating & Documenting Energy Savings](#) guide for information on calculating and measuring the energy savings associated with your project.
 - You will need to provide specification sheets for the equipment you will be installing.
 - If you need assistance calculating the energy savings or completing this application, email BusinessEE@ComEd.com or call 855-433-2700.
3. **Receive Approval and Reservation Letter**
 - Wait until you receive an incentive reservation before removing equipment and starting your project. It will include the total incentive reserved.
4. **Purchase and Install New Equipment**
 - The incentive reservation allows 90 days to complete your project and submit the final application. Contact the program team if you think your project will require more than 90 days.
5. **Resubmit Custom Incentives Application and Supporting Documentation for Incentive**
 - Resubmit the custom incentives application form as soon as your project is completed.
 - You will need to provide specification sheets for the equipment you installed, as well as the invoices for all work done with this project.
 - Submit the required measurement and verification (M&V) data when requested.
6. **Receive incentive payment**
 - When your final application is approved by the program team, an incentive check will be mailed to you or your Energy Efficiency Service Provider (who must be in good standing to receive incentive payments).
 - **ComEd cannot issue certain incentives or rebates unless it is provided with: 1) certification that measures were self-installed by the ComEd customer, or 2) evidence that applicable measures were installed by an installer certified with the Illinois Commerce Commission.**

Additional Documentation

- **Specification sheets** for the equipment you will be installing
- **Invoices** for all work done with this project
 - Only for final applications
- **Measurement and verification (M&V)** data when requested
 - For Projects with incentives higher than \$25,000

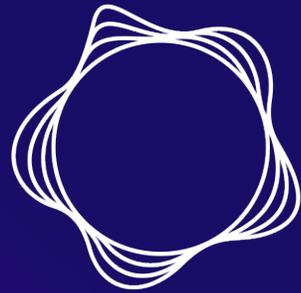
Questions and Answers



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Thank you



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