ComEd
Energy Efficiency Program

WASTEWATER TREATMENT/ WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

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 or greater to function properly. Download the most recent version of Adobe Reader® at http://get.adobe.com/reader.

PROGRAM OVERVIEW

The ComEd® Energy Efficiency Program Wastewater Treatment/Water Supply Plant Study is available to qualifying customers within the ComEd service territory. The goals of this program are to help you identify opportunities to improve the efficiency of your facility's wastewater treatment/water supply plant and reduce energy costs while improving treatment. This is for all facilities that have a peak electric demand greater than 100 kW. In addition, ComEd provides a one-time incentive payment of $0.12 per annual kWh saved after study recommendations are properly implemented and verified. However, if aeration improvements are associated with blowers and dissolved oxygen controls, this payment amount will change to $0.21 per annual kWh saved for that measure. Eligible annual kWh savings are determined through final measurement and verification activities. The total incentive will not exceed 100 percent of the total eligible implementation costs and 100 percent of the total eligible incremental costs for improvements recommended in the study.

MINIMUM CUSTOMER COMMITMENT

As stated in the terms and conditions of the Industrial Systems Study application form, if accepted into the program, the customer agrees to:

- Provide access to the facility and provide time for facility personnel to interface with the service provider during all phases of the project.
- Provide and assist with reporting and collection of information pertaining to the operation of the plant during all phases of the project.
- Spend at least $15,000 on the implementation of measures identified through the study, that show an estimated total project simple payback of 1.5 years or less based upon energy savings and including estimated cash incentives.

The Wastewater Treatment/Water Supply Plant Study will be considered complete when the customer commitment (listed above) is met, and the mutually accepted study measures are fully installed and verified or 120 days from the customer receiving the final version of the investigation study report. The customer may submit a request for an extension if additional time is needed to complete implementation.

Energy efficiency measures recommended during the study but not implemented in the initial project may be eligible for incentives through other ComEd Energy Efficiency Program offerings. The program team is available to assist with any additional incentive paperwork.

Facility Name:

WASTEWATER TREATMENT/WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

FACILITY GENERAL DESCRIPTION

Briefly describe your facility, with details such as age, redundancy, treatment type (primary/secondary/tertiary), design capacity in million gallons per day (MGD), average and peak influent flow in MGD.

Briefly describe past energy efficiency projects or studies completed at the facility.

Briefly describe any currently planned energy efficiency, renovation or equipment replacement/upgrade projects for the facility.

Are there any scheduling issues that could affect the wastewater/water treatment plant study or subsequent measure implementation (e.g., major renovations or equipment replacements/upgrades)?

FACILITY STAFF

Please identify key individuals responsible for the operation of the facility and state how long they have held their current positions. Also indicate individuals who will act as a part of the owner's project team by indicating whether they are able to assist.

NAME	POSITION	YEARS IN POSITION	FACILITY RESPONSIBILITIES	ABLE TO ASSIST? (Y/N)

WASTEWATER TREATMENT/WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

MANAGEMENT

What are the top two barriers to improving energy efficiency at the wastewater treatment/water supply plant?

- ❑ Not enough staff time
- ❑ Lack of budget for efficiency improvements
- ❑ Capital priorities elsewhere
- ❑ Paybacks are too long
- ❑ Primary focus is on production
- ❑ Lack of accountability for system energy costs
- ❑ Lack of information about opportunities
- ❑ Lack of in-house technical expertise
- ❑ Lack of training
- ❑ Management approval
- ❑ Other:_____

Please list key system components that are currently located at your facility. Add additional pages as necessary.

AERATION BLOWERS

MANUFACTURER/MODEL	ASSOCIATED PROCESS	SIZE (hp)	CFM (If available)	BLOWER CONTROL (VFD, On/Off, Throttled, 2-speed)	BACKUP (Y/N)	AGE (Years)	ANNUAL OPERATING HOURS
1							
2							
3							
4							
5							
6							
7							
8							

WASTEWATER TREATMENT/WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

The following section concerns pumps at the facility. Please provide detail about all key pumping systems in order to capture the operable pumping at the facility. The associated pumping processes may include but are not limited to the following systems:

- Influent
- Effluent
- Dewatering
- Other

PUMPS							
MANUFACTURER/MODEL	ASSOCIATED PROCESS	SIZE (hp)	GPM/PRESSURE (If available)	PUMP CONTROL (VFD, On/Off, Throttled, 2-speed)	BACK-UP (Y/N)	AGE (Years)	ANNUAL OPERATING HOURS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

WASTEWATER TREATMENT/WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

AIR COMPRESSORS

ID NUMBER	MANUFACTURER/MODEL	SIZE (hp)	COMPRESSOR TYPE (e.g., Scroll, Screw, Reciprocating, Centrifugal)	CAPACITY CONTROL MODE (e.g., Load/ Unload,VFD, Inlet Modulation, Blow-Off)	AIR OR LIQUID COOLED	BACKUP (Y/N)	AGE (Years)	ANNUAL OPERATING HOURS
1								
2								
3								
4								
5								
6								

ULTRAVIOLET DISINFECTION SYSTEMS

	MANUFACTURER/MODEL	UV LAMP TYPE (Medium pressure/Low pressure – Low output/ Low pressure – High output)	UV CONTROL STRATEGY (Variable/Constant)
1			
2			
3			
4			
5			
6			

SUPPLY/EXHAUST FANS

ID NUMBER	MANUFACTURER/MODEL	SIZE (hp)	TYPE (Supply/Exhaust)	CFM	AGE (Years)	ANNUAL OPERATING HOURS
1						
2						
3						
4						
5						
6						

WASTEWATER TREATMENT/WATER SUPPLY PLANT STUDY WORKSHEET

January 1, 2021 – December 31, 2021

Does the plant have a SCADA system and trend data? If so, what data points are collected (e.g., dissolved oxygen, biochemical oxygen demand, temperature, flow, kW)? Are there dissolved oxygen sensors in the aeration process?

What are the permitted effluent requirement limits and actual values for dissolved oxygen (mg/l), biochemical oxygen demand, etc.?

Please describe the mixing process.

How is the influent/effluent stream controlled? Are there any equalization basins?

Describe the aeration process (surface/sub-surface). If present, what kind of diffusers exist?

Are there primary clarifiers? Is there tertiary treatment?

What type of filtration is there on site: sand bed, rotary drum or other?

What kind of digestion is there on site (aerobic/anaerobic)? Describe the dewatering equipment process.

What is the type of filtration system (sand bed or rotary disk)?