

# THE VALUE IN MONITORING ENERGY USAGE

Jake Gardner | Programs Coordinator

**M**onitoring energy usage is an essential part of testing the efficiency of your water or wastewater system. Another department may receive, process, and pay your system's utility bills, but it is important to take a couple minutes each billing cycle to review the bill yourself. The amount of energy your system consumes can offer a glimpse into how well your system is operating and small changes can lead to large reductions in cost and consumption.

## UNDERSTANDING YOUR BILL:

Your bill is split into two parts: delivery and supply. The delivery portion of your bill is your utility suppliers charge for delivering the utility to your system. This is a charge for the poles, transformers, meters, and lines your supplier uses to get the electricity to you. Also, for commercial customers, there is a separate charge in this section for demand. Demand is a charge for the peak flow of electricity into your facility at any given point over the billing period. If you run large motors that operate for a short period of time, this may be the largest part of your bill.

The second half of your bill are supply charges. This is the fee assigned for the amount of energy your system uses. It is calculated by multiplying the amount of Kilowatt Hours (Kwh) that your system drew by the price of a Kwh assigned by your supplier.

## EVALUATING SYSTEM PERFORMANCE

There are a number of ways to evaluate how efficiently your system is treating water, but a simple way is to compare your utility usage to the amount of water your system is treating. Dividing the amount of water you treated (in kGal) by the amount charged in the supply portion of your bill will give you a quick look at how much it cost you to treat 1000 gallons of water.

## EQUATION:

$$\text{Treated Water (kGal)} / \text{Supply Charge (\$)} = \text{Cost to treat 1000 gallons of water (\$/kGal)}$$

## WHAT THIS NUMBER MEANS:

The average we have seen while conducting Energy Efficiency Assessments has been: \$0.10 to treat 1000 gallons of drinking water and \$0.25 to treat 1000 gallons of wastewater.

By comparing the amount of water you treat to the amount of energy you used to treat it, you can start to gain an idea of how well your system is operating. Tracking this figure over time will

show trends and alert you to changes in your treatment system's performance.

If your system is treating water above or below the averages that we have seen, we would love to hear about it. If your system is treating water more efficiently than the average, we would like to learn what your system is doing that sets it apart. If your system is treating water less efficiently than the average, we would like to help.

New York Rural Water is able to provide free and confidential energy assessments to our municipal member systems with populations below 10,000 people. Our assessments are aimed at identifying how your system is consuming energy and determining ways you can achieve greater energy/cost efficiency.

If you would like to schedule an assessment: call us at (518) 828-3155 ext. 120 or send an email to [gardner@nyruralwater.org](mailto:gardner@nyruralwater.org) 💧💧