



CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: 04/25/2023

REQUESTER: Steven Hardeman; Norman Water Reclamation Manager

PRESENTER: Steven Hardeman; Norman Water Reclamation Manager

ITEM TITLE: CONSIDERATION OF ADOPTION, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF RESOLUTION R-2223-128: A RESOLUTION OF THE NORMAN UTILITIES AUTHORITY APPROPRIATING \$110,000 FROM THE WATER RECLAMATION FUND BALANCE TO BE USED TO COVER THE COST OF ELECTRICITY FOR THE REMAINDER OF FYE 2023.

BACKGROUND:

The Norman Water Reclamation Facility (NWRF) began operation in 1944. Currently, the NWRF treats on average 11.5 million gallons per day (MGD) from approximately 44,000 customers and is designed to treat up to 17 MGD during peaking events. The facility has undergone seven upgrades to date with the largest having been completed in 2018: Phase II project with a cost of over \$63 million dollars. The facility employs 21 full-time employees with a 24hour/7 days per week operation.

The Norman Wastewater Reclamation Facility (NWRF), is the second largest user of electricity for the City of Norman. As the facility improved its processes over the years, the amount of electrical consumption rose. Most of the consumption occurs in the pumping of air used in the activated sludge process. Six aeration basins combined with four centrifugal 350 horsepower (HP) blowers, and two turbo blowers remain the single largest consumers of electricity at the facility. Another large consumer of electricity is the ultraviolet light (UV) disinfection process.

In 2011, the U.S. Department of Energy (DOE) was issuing grants for “shovel ready” energy reduction projects. The Norman WRF had a shovel ready project, with a total cost of \$2.9 million dollars with \$1 million coming from DOE grants. The DOE grant-funded project was used to rehabilitate aeration basin blowers, anaerobic digester boilers, and Supervisory Control and Data Acquisition (SCADA) systems. The aeration blower system’s voltage was reduced from 4160 volts to 480 volts, and variable frequency drives were installed to reduce peak demand surges at the facility. This project was very successful, saving the facility over \$130,000 per year on surge demand electrical cost.

Since 2013, the NWRF has done other small energy reduction projects such as purchase energy efficient motors and gearboxes, changed some operational protocols to run equipment more efficiently, and designed energy efficiency into future projects. The facility just completed a

massive solar array project that is projected to save the facility close to 30% in electrical usage in the future (with these cost savings dedicated to repaying the cost of installing the solar energy generation facilities).

These cost saving initiatives will help keep the cost to our ratepayers as low as possible. Currently the City of Norman utility rates are the lowest in the state among similar populations. Our mission is to “Produce the Highest Quality Effluent at The Lowest Cost to the Ratepayers”.

DISCUSSION:

Over the past three years, energy consumption has increased about 11% and the cost of electrical services for the facility has increased about 40% per kilowatt hour. In fiscal year 2020-2021 (FYE21), the NWRf consumed over 7 million kilowatt hours (KWh) of electricity; in FYE22 7.6 million kWh; and in FYE23 projected use is over 7.8 million KWH. The original budget for FYE23 was \$539,829 and as of April 1, we have spent approximately 90% of that budget. With three months left, we have a balance in the account of \$51,718. Our average monthly bill is \$53,430. With this said WRF will have a shortfall of approximately \$110,000. Other budgeted allocations are not sufficient to cover this significant cost.

In order to pay for the increase in electrical services, staff proposes to appropriate \$110,000 from the Water Reclamation Fund balance (account 32-29000) to the Wastewater Reclamation Division, Utility Service-Electricity account (32955246-44310).

RECOMMENDATION:

Staff recommends adopting Resolution R-2223-128 to appropriate \$110,000 from the Wastewater Reclamation Fund balance (account 32-29000) to Utility Service-Electricity account (32955246 44310).