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CITY COUNCIL AGENDA ITEM

ACTION REQUESTED:

Receive the update on the Renewable Energy Program (Item 1 of 2)

DEPARTMENT: Electric Utility

SUBMITTED BY: Brian Groth, Director

BOARD/COMMISSION REVIEW:

N/A

BACKGROUND:

In 2004 the Naperville City Council approved the creation of the Renewable Energy Program (REP) as a way for Electric Utility customers to monetarily support renewable energy.

Various changes to the program have occurred over the past 17 years including an increase in purchases of Renewable Energy Certificates (RECs) and adding energy efficiency grants for commercial and residential properties to the program. A significant turning point in the program occurred in March of 2020 when the City Council and Public Utilities Advisory Board (PUAB) approved expanding the program to include residential energy efficiency programs such as window and attic insulation upgrades. At that time, the solar incentive provided to residential customers wishing to install solar panels was increased from a flat \$1000 per installation to \$300/kilowatt (kW) with a maximum grant of \$3000 for a homeowner installing a 10kW system. Finally, those customers installing Level 2 or Level 3 electric vehicle chargers could qualify for a \$500 grant if the participant agreed to charge their vehicle between the hours of 11 p.m. and 7 a.m.

The changes made in March of 2020 were targeted at lessening the load on the electric grid by improving the efficiency of customers' homes. The increase in solar incentive dollars was expected to increase solar power system installation in the City while reducing the REP fund balance which had

accrued over the years. In 2021, REC purchases were formally discontinued so that funds could be utilized solely to support local projects.

In 2022, program participation increased by 10%, it now has just over 3,000 participants with annual revenue of approximately \$260,000. The fund’s cash balance is \$311,275 as of December 5, 2023.

Year	Customers Enrolled	Revenues	Expenses	Renewable Energy Fund Cash Balance
2019	2,885	\$257,990	\$272,618	\$1,694,507
2020	2,960	\$248,925	\$626,485	\$1,291,867
2021	3,105	\$262,321	\$842,332	\$800,383
2022	3,392	\$273,646	\$449,267	\$572,149
2023	3,421	\$253,933	\$522,046	\$311,275

DISCUSSION:

The City Council implemented changes to the REP in March of 2020 with the goals of making meaningful progress in community-generated renewable energy and increasing the energy efficiency of homes while reducing the large REP fund balance that had accrued. Significant progress has been made on these goals to date. The REP budget as well as current spending (since March of 2020) can be seen in the chart below.

Rebate Type	2020	2021	2022	2023 (*YTD)
Commercial Solar	\$50,000	\$0	\$0	\$0
Commercial Energy Efficiency	\$0	\$0	\$0	\$0
Residential EVCS	\$4,198	\$21,435	\$30,423	\$15,808
Residential Window Replacement	\$67,352	\$218,079	\$134,425	\$71,969
Residential Attic Insulation	\$78,544	\$173,528	\$186,542	\$65,905
Residential solar	\$245,890	\$412,885	\$117,900	\$182,820
Residential Furnace Blower Motor Upgrade (\$100 per applicant)			\$100	\$0
Air Conditioning Unit Tune-Up (once every three years - \$25 per applicant)			\$300	\$50
Total	\$445,984	\$825,927	\$469,690	\$336,552

*Data as of 11/9/2023 for residential and non-residential rebates

As is shown in the data above, the highest number of projects and grant dollars were awarded in 2021. Project quantity as well as total spending are down in 2022. Supply chain constraints as well as overall economic conditions are believed to be the driver for this decline. In 2022, staff worked with the City’s sustainability coordinator and NEST to include A/C tune-up and blower motor upgrades to the program as well as offering rebates for heat pumps. Staff will continue to monitor and promote these programs with an emphasis on air sealing of homes. Air sealing is already covered as part of the insulation rebate program but as discussed in the Utility’s meeting with NEST, this is likely one of the best upgrades a homeowner can make related to energy efficiency.

Changes to the program in 2024:

Due to the declining balance in the Renewable Energy Fund and 4.6% participation in this program, the Electric Utility, in coordination with NEST, suggest the following changes to the program to support the same quantity of projects:

Rebate Type	Current	Proposed change	2024 Budget
Residential Attic Insulation	\$1 per square foot/\$3,000 maximum rebate	\$1 per square foot/\$2,500 maximum rebate	\$70,000
Residential Single-Pane Window Replacement	The grant amount is \$300 per window, with a \$3,000 maximum award	The grant amount is \$250 per window, with a \$2,500 maximum award	\$65,000
Residential Solar	Limited to 10 kW AC and will not exceed \$3,000 (\$300/kW AC rated at AC Inverter)	Limited to 7 kW AC and will not exceed \$1,750 (\$250/kW AC rated at AC Inverter)	\$113,000
Commercial Solar	Max of \$50,000 per commercial project	Max of \$15,000 per commercial project	\$30,000
City of Naperville Funded Residential EVCS	\$700 (\$200 from IMEA EE program + \$500 from Naperville REP)	\$500 from the IMEA EE program	\$0
Residential Furnace Blower Motor Upgrade	\$100	\$100	\$500
Air Conditioning Unit Tune-Up	\$25 per unit- once every 3 years	\$25 per unit- once every 3 years	\$1,500
TOTAL			\$280,000

In addition, the Utility recommends changing the minimum participation in the program from 2 years to 5 years to be eligible for the EE & RE rebate programs.

Recommendation:

It is expected that the program will be over budget for 2023; however, sufficient cash balance exists in the Renewable Energy Fund to continue offering grants and rebates through the end of the year. The Utility recommends increasing the budget for the Renewable Energy Fund by \$90,000 to continue offering grants and rebates to residents through the end of 2023. This will require an amendment to the 2023 budget.

The Utility also recommends changes to the REP for 2024 which include changes to grant award amounts, as well as required years of program participation after a grant is awarded, as noted above. In 2024, the Utility will work with staff in the Communications Department to update the program website when grant disbursement milestones have been met and the program will close to new applications when funding has been exhausted.

FISCAL IMPACT:

The recommended budget amendment increases the Renewable Energy Grant Program budget by \$90,000 for 2023. Increasing the program’s budget by \$90,000 will bring the total 2023 Renewal Energy Grant Program budget to \$365,000.

Additionally, the Utility made three payments in 2023 totaling \$214,088 that were expensed to the Renewable Energy Fund. These expenses were related to the installation of a fixed-axis solar photovoltaic system at the Springbrook Substation. This work was initially budgeted and planned for 2022, however, due to delays, the work and expenses associated with it were pushed into 2023. As a result, the total value of the budget amendment is \$337,046, resulting in a new budget for the Renewable Energy Fund of \$617,046.

A sufficient cash balance exists in the Renewable Energy Fund to accommodate the recommended budget amendment.