

EXECUTIVE BRIEF ELECTRIC UTILITY MEETING

AGENDA DATE: November 30, 2021

TITLE:

Second Amendment to Agreement with ABB Inc. for the purchase of magnetically actuated 38kV vacuum circuit breakers

SUMMARY:

Second Amendment to Agreement with ABB Inc. (ABB), authorizes ABB to provide magnetically actuated 38kV vacuum circuit breakers for use at the City's electrical substations at a cost not to exceed \$450,000. The magnetically actuated 38kV vacuum circuit breakers have been identified as critical components for the City's electric utility System Hardening and Reliability Improvement Projects (SHRIP) and for which bonds were sold in November 2020.

BACKGROUND AND JUSTIFICATION:

In 2018, the City issued Request for Proposals (RFP 18-213) for the procurement of magnetically actuated 38kV vacuum circuit breakers for use on the City's electrical substations.

On, September 13, 2018, the City awarded the Agreement based on the competitive solicitation to ABB Inc. to provide magnetically actuated 38kV vacuum circuit breakers. The Term of the Agreement was for two (2) years, with two (2) single-year renewal options with a not-to-exceed value of \$200,000 per Fiscal Year for Fiscal Years 2018 & 2019.

On April 7, 2021, the City exercised its first option to renew the G&W Agreement extending the terms of the Agreement through September 13, 2021. The not to exceed value was increased to \$300,000 for Fiscal Year 2021 under this First Amendment.

The magnetically actuated 38kV vacuum circuit breakers will be installed in City's substations as they are rebuilt and updated with new, technologically advanced equipment, including the 7th Avenue North substation, which is currently in construction, the upcoming Canal 8-Bay distribution substation and the new 6th Avenue South substation. The breakers serve as electric system protection devices on the 26.4 kV feeders and sub-transmission loops in order to increase service and reliability to thousands of customers.

The ABB R-Mag breakers operate in similar fashion to breakers found in a household breaker panel. When a fault on the power line is experienced, the breaker will open and disrupt power based on voltage and current thresholds programmed in the breaker relay device. This function is critical in life-safety protection as well as protecting system equipment when a fault is experienced.

The R-MAG® is truly the next generation in medium voltage vacuum circuit breaker technology. ABB is the first to combine the unique benefits of vacuum interrupter technology with a magnetic actuator designed to exploit these capabilities. Using a flux-shifting device with integral permanent magnets, the R-MAG mechanism has only one moving part. With simple open and close coils, an electronic controller and capacitors for energy storage, the R-MAG circuit breaker mechanism is capable of 10,000 load operations. These are a few of the features that mark a departure from the conventional spring-operated mechanism, introducing new capabilities and

benefits for a smarter distribution system. To continue with the SHRIP program, the City is requesting the purchase of additional magnetically actuated 38kV vacuum circuit breakers and is requesting a not-to-exceed increase in the Agreement with ABB.

This Second Amendment to the Agreement with ABB, authorizes ABB to provide magnetically actuated 38kV vacuum circuit breakers for use on the City's electrical distribution systems and substations at a cost not to exceed \$450,000 for Fiscal Year 2022.

MOTION:

Move to approve/disapprove Agreement with ABB Inc. for the purchase of magnetically actuated 38kV vacuum circuit breakers at a cost not to exceed \$450,000 for Fiscal Year 2022.

ATTACHMENT(S):

Fiscal Impact Analysis
Second Amendment

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2022	2023	2024	2025	2026
Capital Expenditures	\$450,000	0	0	0	0
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
 Net Fiscal Impact	 \$450,000	 0	 0	 0	 0
 No. of Addn'l Full-Time Employee Positions	 0	 0	 0	 0	 0

B. Recommended Sources of Funds/Summary of Fiscal Impact: Funds have been identified in account No. 421-6034-531-6315.

Account Number	Account Description	Project Number	FY22 Budget	Current Balance	Agenda Expenditure	Balance
421-6034-531-63.15	Improve Other than Build / Infrastructure	Multiple	\$43,120,563	\$31,076,222	\$450,000	\$30,626,222

