

EXECUTIVE BRIEF

ELECTRIC UTILITY MEETING

AGENDA DATE: March 30, 2021

TITLE:

First Amendment to the Purchase Agreement with ABB DE Inc., for magnetically actuated 38kV outdoor vacuum circuit breakers

SUMMARY:

First Amendment to the Purchase Agreement authorizes ABB DE Inc., to provide magnetically actuated 38kV outdoor vacuum circuit breakers for use at the City's substations at a cost not to exceed \$300,000 for Fiscal Year 2021.

BACKGROUND AND JUSTIFICATION:

The City issued a Request for Proposal (RFP 18-213) seeking proposals from qualified manufacturers to provide magnetically actuated 38kV circuit breakers that will include one breaker rated at 2000 Amps and four breakers rated at 1200 Amps, with an option to purchase additional units in the future for use at the City's distribution substations. ABB DE Inc., was determined to be the highest ranking, responsive and responsible respondent. The term of the initial Agreement was for two years with two additional single-year renewal options. The City is requesting to extend the terms of the Agreement for an additional year with the terms and conditions remaining the same.

The magnetically actuated 38kV vacuum circuit breakers will be installed in the City's to-be-constructed substations, including the upcoming new 6th Ave South substation and the Canal distribution switching station and substation, both included in the City's System Hardening and Reliability Improvements Program (SHRIP). The breakers serve as electric system protection devices on the 26.4 kV feeders and sub-transmission loops in order to increase service 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.

MOTION:

Move to approve/disapprove First Amendment to Agreement with ABB DE Inc., to supply magnetically actuated 38kV outdoor vacuum circuit breakers at a cost not to exceed \$300,000 for Fiscal Year 2021.

ATTACHMENT(S):

Fiscal Impact Analysis
First Amendment to Agreement with ABB DE - 38kV Breakers

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

| Fiscal Years | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---------------|-------------|-------------|-------------|-------------|
| Capital Expenditures | \$300,000 | 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 | \$300,000 | 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. 421-6034-531-63.15.

| Account Number | Account Description | Project Number | FY21 Budget | Current Balance | Agenda Expenditure | Balance |
|--------------------|---|----------------|--------------|-----------------|--------------------|--------------|
| 421-6034-531-63.15 | Improve Other/than Build/Infrastructure | Multiple | \$32,782,286 | \$30,892,550 | -\$300,000 | \$30,592,550 |