



City Council Staff Report

From: City Manager

Report Type: CONSENT CALENDAR

Lead Department: Utilities

Meeting Date: May 6, 2024

Staff Report: 2403-2755

TITLE

Approval and Authorization for the City Manager to Execute Purchase Orders with Pre-Qualified Vendors for Electric Distribution Transformers for the Grid Modernization Project (EL-24000) in an Annual Amount up to \$4,000,000 through FY 2026, and Increasing the Total Aggregate Not-to-Exceed Purchase Order Amount for FY 2022 through FY 2026 from \$10,000,000 to \$16,000,000, with all Purchases Subject to Assigned Purchase Order and Availability of Funds; CEQA Status: Exempt under CEQA Guidelines Sections 15302, 15303 and 15183.

RECOMMENDATION

Staff recommends that Council:

1. Approve and authorize the City Manager or their designee to execute purchase orders from prequalified vendors for the purchase of electric distribution transformers, as recommended by the Utilities Department, for the Grid Modernization Project (EL-24000), for a total of \$4,000,000 annually, and
2. Increase the total aggregate not-to-exceed purchase order amount from \$10,000,000 to \$16,000,000 over the five-year period for prequalified vendors; specifically increasing the total collective not-to-exceed amount from \$6,000,000 to \$12,000,000 for the remaining three years.

EXECUTIVE SUMMARY

The Utilities Department is recommending an increase to the authorized spending amount for the purchase of electric distribution transformers from \$2,000,000 to \$4,000,000 per fiscal year with any of the prequalified vendors, increasing the total not-to-exceed amount from \$10,000,000 to \$16,000,000 over the remaining three-year pre-qualified vendor period from FY 2024 through FY 2026.

Due to supply chain shortage and extended lead times, the FY 2022 authorization enabled the City to ramp up and meet the anticipated volume of transformers needed for the City's electric infrastructure from FY 2022 through FY 2026. As supply chain shortages persists, the updated recommendation enables the City to place orders in advance for a significantly higher number of transformers that need to be replaced as part of Council's Grid Modernization for Electrification

initiative. Funds for this project are included in the FY 2024 Adopted 5-year Capital Improvement Plan.

BACKGROUND

The Utilities Department uses various types of electric distribution transformers (pole top, pad mount, and submersible) to provide electric service to customers in Palo Alto. In order to qualify to become a City supplier, manufacturers who supply transformers to the City must comply with the City's transformer specifications and industry standards. Staff issues a Request for Qualifications (RFQ) nearly every five years to prequalify transformer suppliers as per City of Palo Alto's Policies and Procedures 1 – 44/ASD, "Prequalification of Contractors." This ordering process ensures that City of Palo Alto receives competitive pricing without compromising product quality, and maintains the ability to continue providing reliable service to customers.

In November 2015, Council approved and authorized the City Manager to execute purchase orders for electric distribution transformers up to \$1,000,000 each year for five years¹. Any unspent funds are returned to the Electric Fund reserves at the end of each fiscal year.

In June 2022, Council approved and authorized the City Manager to execute purchase orders for electric distribution transformers with prequalified vendors (Staff Report ID 14342² up to \$2,000,000 annually between FY 2022 – FY 2026, in a Total Not-to Exceed Amount of \$10,000,000 over the 5 year period. At that time, staff needed to address a reduction of existing transformer stock inventory resulting from an increase in service upgrades. It was anticipated that the need to purchase more transformers would increase in the upcoming years as a result of new initiatives, projects, and replacement of existing transformers.

In June 2023, Council's FY 2024 Capital Budget included funds for the Grid Modernization for Electrification Project ("Grid Mod Project", EL-24000) to enhance grid resiliency and reliability of the electric distribution system and to accelerate the City's clean energy and decarbonization goals. This project involves replacing the existing 1,400 single phase pole top transformers rated less than 50kVA with a rating of 50kVA or larger to meet the new load forecast for electrification.

ANALYSIS

The City conducted an electrification study to evaluate the impacts of projected electrification loads on Palo Alto's distribution and substation transformers, primary/secondary distribution circuits, and to propose upgrades needed to mitigate overloads. The Grid Mod Project requires bringing online more transformers, replacing deteriorating wires and connectors, upgrading or replacing poles, and providing battery storage and solar system support to the interconnected

¹ City Council, November 30, 2015, https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2015/final-staff-report-id-6244_transformer-supplier-prequalification-process-and-authorization.pdf

² City Council, June 22, 2022: <https://portal.laserfiche.com/Portal/DocView.aspx?id=59558&repo=r-704298fc&searchid=bb3e831d-8d17-4b91-971f-090a351c7a98>

grid. Specifically, the Project involves replacing the current 1,413 single phase pole top transformers rated less than 50kVA. Additionally, 300 - 400 pad mount and underground transformers will need to be replaced or added with 75kVA or larger to mitigate overloads.

Current manufacturer delivery lead times are approximately 8 months to 24 months, depending on the transformer type. Considering the number of transformers needed for Grid Mod and lead times, an estimated additional 200-300 transformers will need to be purchased each year. As staff ramps up to meet the needs of new electric initiatives and projects in addition to existing transformer replacements, having a secure supply of transformers is vital to ensure continuity in electric services. This agreement provides the City with the authorization to purchase transformers as needed with prequalified vendors to avoid supply chain shortages, low inventory, and lead time issues. If the authorization level is not increased, then the City may not be able to purchase the volume of transformers needed at the time of need, resulting in potential project delays, service disruptions, and increased expenses associated with inventory shortages.

Per the requirements of City of Palo Alto's Policies and Procedures 1 – 44/ASD, "Prequalification of Contractors," the Utilities Department solicited a Request for Qualifications (RFQ) for the prequalification of transformer suppliers in December 2021. Staff sent the solicitation to over 400 vendors. The City's prequalification process includes an evaluation of the following criteria: (a) ability to meet technical specifications, (b) ability to deliver materials on time, (c) equipment reliability and quality, (d) manufacturing history, and (e) references from other utilities. As part of its review process, staff identifies any exceptions to the City's technical specifications and determines whether those are acceptable, and also determines whether the City's other key criteria are met. If so, the supplier is deemed qualified. If not, then the supplier is deemed not qualified to supply that particular type of transformer. Suppliers can request to become qualified at a later time and will be evaluated by the same criteria.

FY 2022 - FY 2024 Prequalified Suppliers by Transformer Type						
	Hitachi Energy USA	Power Partners, Inc.	Howard Industries, Inc.	SETI	Sunbelt	Emerald Transformers
Padmount	YES	NO	YES	YES	NO	YES
Underground Residential	NO	NO	YES	NO	NO	YES
Underground Commercial	YES	NO	YES	NO	NO	YES
Pole Top	NO	YES	YES	YES	YES	YES

When staff determines that transformers are needed, staff issues a Request for Quotation to the prequalified manufacturers for each particular transformer type. Staff places orders with manufacturers based on CIP requirements, new customer connections, and to replace old or failed transformers. Engineering staff reviews and evaluates all quotes, and issues a purchase order to the vendor offering the lowest price.

FISCAL/RESOURCE IMPACT

Funding for the additional \$2 million increase in the spending authorization level is available in the FY 2024 Adopted Capital Budget within the Electric Fund project EL-24000 Grid Modernization for Electrification. Unspent funds will be returned to the Electric Fund reserves annually. Funding for subsequent years is subject to City Council approval of the annual appropriation of funds through the annual budget process

STAKEHOLDER ENGAGEMENT

This agreement to increase the authorization amount of an existing agreement for materials does not directly impact customers that would require community outreach. Staff most recently received Council approval and authorization for electric distribution transformer purchase orders in June 20, 2022².

ENVIRONMENTAL REVIEW

The grid modernization project will replace aging infrastructure and install modern network infrastructure to meet future needs related to home electrification. This project does not expand the existing footprint of the City's network; there is sufficient capacity on the existing sub-transmission lines, substations, and primary feeders to serve the energy load that is being added to the system. Changes to the equipment on the network will include replacement and installation of pad-mounted transformers and new protective devices to improve reliability, and system controls to allow for the import and export of energy from homes on the network. This project is categorically exempt from California Environmental Quality Act (CEQA) review under CEQA Guidelines section 15303 (construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures) and section 15302 (replacement or reconstruction of existing structures and facilities). In addition, Council's approval of the grid modernization project does not require additional environmental review under CEQA Guidelines section 15183, because the grid modernization project, an element of the Council-approved S/CAP, is consistent with the Environmental Impact Report (EIR) Addendum to the City of Palo Alto Comprehensive Plan Final Environmental Impact Report Council approved on June 5, 2023³.

ATTACHMENTS: None

APPROVED BY:

Dean Batchelor, Director of Utilities

Staff: Dave Yuan, Strategic Business Manager

³Environmental Impact Report <https://cityofpaloalto.primegov.com/Portal/Meeting?meetingTemplateId=12530>