

Multi Substation Transformer Upgrade and Reconditioning Project

Riverside Public Utilities

Board of Public Utilities
June 25, 2018

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BACKGROUND

Substation Power Transformers:

1. Essential components of the power grid
2. Critical to the reliability and optimum operation of the electric grid
3. Expected design life of approximately 40 years

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BACKGROUND

Substation Power Transformers in RPU's System:

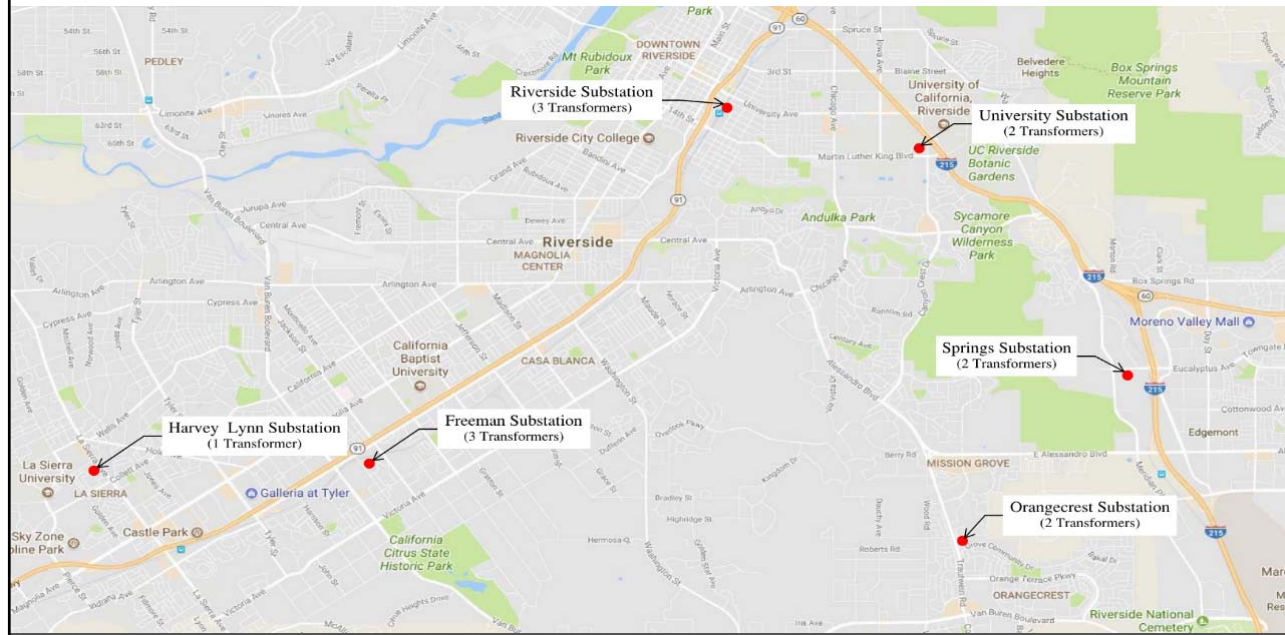
1. Provide power to 5,000 or more customers
2. Stands out as one of most expensive pieces of equipment in the electric system
3. Identified 13 units for upgrade and reconditioning

DISCUSSION

RPU proposes to upgrade and
recondition
13 transformers located at 6
substations



DISCUSSION – WORK MAP



DISCUSSION - BENEFITS

1. Planned upgrades and reconditioning is based on the condition and criticality of transformer to prolong the life of the transformers
2. Decrease the risk of in-service failures
3. Maintain electric system's reliability and safety to customers and personnel
4. Support implementation of condition-based maintenance program

DISCUSSION –WORK SCOPE

1. Includes addition of auxiliary and monitoring equipment, replacing gauges, replacing pressure relief valves, replacing bushings, addition of maintenance free breathers, replacing insulating oil and regasketing
2. Involves performing oil screen and electrical testing
3. Posted through the Purchasing Department, request for proposal Bid No. RPU-7533

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PROPOSAL RESULTS

VENDORS	AMOUNT	RANKING
Reinhausen Manufacturing	\$1,873,580	1st
Isberg & Association/SPX.	-	Non-Responsive
Delta Star Inc.	-	Non-Responsive

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PROJECT BREAKDOWN

DESCRIPTION	AMOUNT
Reinhausen Contract	\$1,873,580
Reinhausen Contract Change Order Authority (15%) *	\$281,037
Engineering and Project Management	\$208,000
Inspection and QEW Services	\$512,000
SCADA & ODMS Integration and Commissioning	\$208,000
Work Order Total	\$3,082,617

* Change order authority of an amount not to exceed 15% of the contract requested due to unknown internal condition of substation transformer – 1st inspection in 20 years.

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RECOMMENDATIONS

That the Public Utilities Board:

1. Award Bid No. RPU-7533 for the Multi Substation Transformer Upgrade and Reconditioning Project to Reinhausen Manufacturing of Humboldt, Tennessee, in the amount of \$1,873,580;
2. Authorize staff to issue change orders in an amount not to exceed 15% or \$281,037 of the Reinhausen Manufacturing contract; and
3. Approve Work Order No. 1822318 in the amount of \$ \$3,082,617.

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