



Memo

TO: Public Works Committee
FROM: Kevin Schone, Public Works Manager
DATE: March 4th, 2019
SUBJECT: Wells 6 & 8 VFD Improvement Consideration

In November 2018, staff met with an energy advisor from Leidos, Inc. for taking advantage of energy efficiency programs and reducing electrical cost. Leidos is an Ameren contractor that manages ActOnEnergy programs.

One project that was identified was the addition of VFD's at Wells 6 & 8 at WTP #1 as well as adding full ethernet connectivity and controls to these same wells. On February 4, 2019, this project was denied by Ameren because only one application can be accepted and on recommendation staff had submitted both a Standard Application and a Custom Application. This was done due to two separate contractors working on this project. Because only one application can be submitted for this work staff re-evaluated this project and has taken a reduced scope approach to getting this approved by Ameren with one contractor. Original cost of this project was \$60,950.

On Tuesday, February 26, 2019, staff met with Foermost and RNS Electric for simplified controls at wells 6&8. Below is the new scope of work to be completed pending approval.

Well #8

- New Toshiba VFAS3 100-hp variable frequency drive.
- New 100-hp line reactor.
- New 100-hp long lead filter.
- Conduit and wire as needed to rework power from existing motor starter to new equipment.
- Relocate Subtrol to the right side of the motor starter.
- **New pressure transducer to send analog input to frequency drive**

Well #6

- New Toshiba VFAS3 75-hp variable frequency drive.
- New 100-hp line reactor.
- New 75-hp long lead filter.

- Conduit and wire as needed to rework power from existing motor starter to new equipment.
- Relocate Subtrol to the right side of the motor starter.
- **New 200-amp 3-phase heavy duty disconnect** to replace exiting non-fused disconnect.
- **New pressure transducer to send analog input to frequency drive.**
- **Spare pressure transducer then can be used in well 6 or 8.**

Cost of this reduced project is \$30,375 with additional start-up charges of \$125/hr. Staff anticipates start-up to be an additional \$1,000.

| | Original Full | | Reduced Scope | |
|---------------|---------------|-----|---------------|-----|
| Total Cost | \$60,950.00 | | \$31,375.00 | |
| Ameren Rebate | \$25,346.25 | 42% | \$23,566.00 | 75% |
| City Cost | \$35,603.75 | | \$ 7,809.00 | |

If approved by Ameren the City could expect an incentive check in the amount of \$23,566 bringing the total City's cost to \$7,809.

Staff will also look to budget for increased control as previously scoped in FY19/20 and will work with the contractor and Ameren for any potential incentives.

This matter has been placed on the Public Works Committee meeting agenda of Monday, March 4th, 2019, for review and discussion.