
TO: Mayor Kogon and Members of Amherst Town Council

SUBMITTED BY: Aaron Bourgeois, Director of Operations

DATE: April 17, 2023

SUBJECT: **Wellfield Panel Upgrades (VFD's)**

ORIGIN: 2020/21 Water Utility Capital Budget.

LEGISLATIVE AUTHORITY: MGA Section 65 The council shall adopt an operating budget and a capital budget for each fiscal year

RECOMMENDATION: That Council forward to the April 24, 2023 regular meeting approval of an amendment to the 2023/24 Water Utility Capital Budget and approve and allocate \$85,000 from the water depreciation fund for the installation of variable frequency drives (VFD's) for the 4 production wells at the North Tyndal Wellfield.

BACKGROUND: The wellfield generator project was originally approved in the 2020/21 water utility capital budget. An RFP for the engineering services was issued to size a single propane generator suitable to power the production wells and the chlorination building. The consultant provided a preliminary report to staff indicating cost to complete the project would be well beyond the approved budget, the engineer's preliminary cost estimates for the project ranged from \$638,000 to \$940,000.

At the February 28, 2022 council meeting, Council approved an amendment to the original scope of work for the wellfield generator project and approved the purchase of 1 new towable diesel fueled generator and upgrading the 4 production wells at the North Tyndal Wellfield with VFD's (variable frequency drives).

Based on the consultants cost estimates the amended scope of work could be accommodated in the approved project budget of \$240,000. (\$40,000 engineering services, \$125,000 generator and \$73,000 for the VFD's)

The actual cost of the generator was \$175,982.63 plus \$47,736.81 in engineering fees, for a total of \$223,719.53.

An RFP for the supply and installation of the VFD's was closed in February, one proposal was received with a cost of \$80,807 plus applicable taxes.



All water utility projects valued at more than \$250,000 require approval from the UARB. Staff notified the UARB and provided them with the details and history of the project. It was agreed that the generator purchase and the purchase and installation of the VFD's could be treated as two separate projects and no approval from the Board would be required.

DISCUSSION: Amending the water utility capital budget at this time is necessary to complete the project. When the VFD installation is complete the Amherst Water Utility will be able to operate any 3 of the 4 production wells simultaneously during a prolonged power outage to ensure there is no interruption in the delivery of potable water for our residents, and an adequate supply of water for fire suppression if needed.

Replacing the existing direct online motor starters with VFD's will also reduce turbidity (from the source) in our water distribution system.

FINANCIAL IMPLICATIONS: The Wellfield VFD's will be funded from the Water Depreciation Fund. The estimated balance of the Water Depreciation Fund at March 31, 2024 is \$1,200,000.

COMMUNITY ENGAGEMENT: When the project is completed a media release should be issued as the water utility will now have a backup power source for the wellfield and the VFD's will help to reduce turbidity in the distribution system.

ENVIRONMENTAL IMPLICATIONS: There are no negative environmental implications associated with this decision.

SOCIAL JUSTICE IMPLICATIONS: There are no social justice implications. associated with this decision.

ALTERNATIVES: Do not undertake this project at this time and defer it to a future budget year.

ATTACHMENTS: None

Report prepared by: Aaron Bourgeois, Director of Operations
Report and Financial approved by: