



CITY OF TUALATIN

Staff Report

TO: Honorable Mayor and Members of the City Council

THROUGH: Sherilyn Lombos, City Manager

FROM: Rachel Sykes, Public Works Director
Nic Westendorf, Deputy Public Works Director

DATE: February 24, 2025

SUBJECT:

Resolution No. 5870-25 authorizing the City manager to execute a contract amendment to the Construction Project Contract with InPipe Energy, Inc. and Tapani Inc. for the InPipe micro hydro turbine project.

RECOMMENDATION:

Staff recommend approval of Resolution No. 5870-25.

EXECUTIVE SUMMARY:

In June 2024, Council authorized a contract with InPipe Energy, Inc. and Tapani Inc. to install a micro-hydro turbine near the Tualatin City Services (TCS) site. The turbine would be installed next to an existing pressure reducing valve, rerouting water through the turbine to capture the spent energy from the valve. Based on pressure levels and water flow volumes, it is estimated that the turbine at this site would generate approximately 278,000 kWh of electricity annually. Electricity generated will be 'net-metered' back into the power grid to offset energy use on site.

During the design process staff began an analysis to determine how the City could best maximize the benefits of this turbine. PAE, a Portland based sustainable engineering firm, was contracted to conduct a site analysis and provide installation options for the project that would allow the City to maximize the benefit of the micro hydro turbine. After a thorough review by City staff, PAE, InPipe, Tapani, and Portland General Electric (PGE) it was determined that a slight alignment modification could allow the City increased future flexibility from the micro hydro turbine and increase site security and resiliency.

The proposed change amendment would move the location of the new electrical equipment and meter from the right-of-way at the corner of 108th and Herman to a central location at the interior of the TCS site. The proposed configuration allows for much more flexibility in the future if the City wanted to begin consolidating electrical meters, add additional renewable energy generation or battery storage, or develop a microgrid to use the turbine to directly power the TCS facilities. The new location also improves security by moving most of the equipment into a secure area of our site, reducing the chance of tampering or being hit by a car.

OUTCOMES OF DECISION:

If approved, the micro hydro turbine project would move forward with the proposed alignment. Finalization of the electrical design would begin immediately with construction completed in summer of 2025.

ALTERNATIVES TO RECOMMENDATION:

Council could reject the proposed amendment, and the project could continue with the original scope. Finalization of the electrical design would begin immediately with construction completed in summer of 2025.

FINANCIAL IMPLICATIONS:

The total expected cost to the City after anticipated grant reimbursements is \$64,420, resulting in a payback period of 4.4 years. While the proposed amendment would increase the total contract cost \$230,410, much of that increase is able to be covered by external funding.

When Council authorized the original construction contract staff anticipated payback period of 7 years or less and a maximum cost to the City of \$214,000. The proposed amendment still meets original payback period and falls below the maximum cost to the City.

ATTACHMENTS:

- PowerPoint Presentation
- Resolution 5870-25