

NORTH UNIT IRRIGATION DISTRICT
Jefferson County, Oregon
RESOLUTION NO. 2023-09
June 13, 2023

**A Resolution Regarding the Design, Piping, and Installation of a Hydropower Facility on
NUID's Main Canal and Ochoco Highway**

WHEREAS: The North Unit Irrigation District (NUID) is committed to modernizing its irrigation system and providing more reliable water to its patrons.

WHEREAS: An energy generation analysis was performed, and a location 1,500 feet north of the intersection of the NUID Main Canal and Ochoco Highway was identified as a proposed site for the installation of a new in-conduit hydropower project, including a synchronous hydro-generator and associated powerhouse.

WHEREAS: The proposed project involves piping approximately 8,000 feet of NUID's Main Canal and installing a hydropower facility to generate renewable energy using water already diverted from the Deschutes River, for agricultural production.

WHEREAS: The project will contribute to pressurized water deliveries to patrons, making on-farm irrigation efficiency improvements more affordable and feasible for farmers and ranchers, while saving water and energy for the District and individual irrigators.

NOW, THEREFORE BE IT RESOLVED: That the NUID Board of Directors approves construction-level site design for the proposed in-conduit hydropower project, as described above, and authorizes District Manager, Joshua Bailey to take actions to assist with the completion of the design phase. Such actions include, but are not limited to, the following:

1. Update hydraulic calculations and assumptions for pipe sizing, pipe materials, and water availability.
2. Develop an irrigation water bypass strategy to be incorporated into the design.
3. Review available turbine technologies and select hydroelectric power generating technology appropriate for the project.
4. Develop professional engineer stamped civil site plan, piping plans, intake structure, and draft structure through incremental design, comment, and updates until final drawings are developed. It is anticipated that these final drawings will include approximately 8,000 linear feet of piping design, reinforced concrete intake structure, Obermeyer Gate if required, reinforced concrete discharge structure, powerhouse, and site grading, and it is further anticipated that the final product will include approximately 20 sheets of drawings.

5. Develop professional engineer stamped structural design for civil facilities and powerhouse, and structural calculations through all design and review processes to final approval.
6. Prepare project cost estimates at the 90 percent and final design levels.

BE IT FURTHER RESOLVED: That this resolution does not commit or otherwise authorize NUID to build or begin construction of the project. Any commitment or authorization to build or begin construction of the project will require and be subject to further action by the NUID Board of Directors.

BE IT FURTHER RESOLVED: That the NUID Board of Directors authorizes the expenditure of funds secured by the Farmers Conservation Alliance (FCA). The funds secured by FCA are as follows: (a) the Community Renewable Energy Program grant from the Oregon Department of Energy (ODOE) for \$100,000; (b) the Oregon Energy Trust's community development fund for \$100,000; and (c) \$50,000 from the Idaho National Labs (INL), which will pay FCA directly for project coordination. NUID is not expected to, and this resolution does not commit or otherwise authorize NUID to, match or fund any portion of the actions authorized by this resolution. Any commitment or authorization to match or otherwise fund the project, including the construction-level site design, actions to complete the design phase, or other aspects of the proposed in-conduit hydropower project, will require and be subject to further action by the NUID Board of Directors.

ADOPTED BY THE BOARD OF DIRECTORS OF NOTHR UNIT IRRIGATION DISTRICT AT A REGULAR MEETING HELD ON THE 13TH DAY OF JUNE 2023, BY THE FOLLOWING VOTES:

AYES: _____
NAYS: _____
ABSENT: _____

ATTEST:

Joshua Bailey, Secretary- Manager

Michael Kirsch, Chairman