

Mount Vernon High School Energy Recovery Project



PUBLIC UTILITY DISTRICT
NO. 1 OF SKAGIT COUNTY

About Skagit PUD

- Skagit PUD provides 9 million gallons of water a day
- Serves over 85,000 people
- Our Mission is to provide our customers with high-quality water services at an affordable price
- Our Vision is to be an outstanding regional leader and innovative utility provider

- Core Values:
 - Quality
 - Environmental Stewardship
 - Financial Prudence

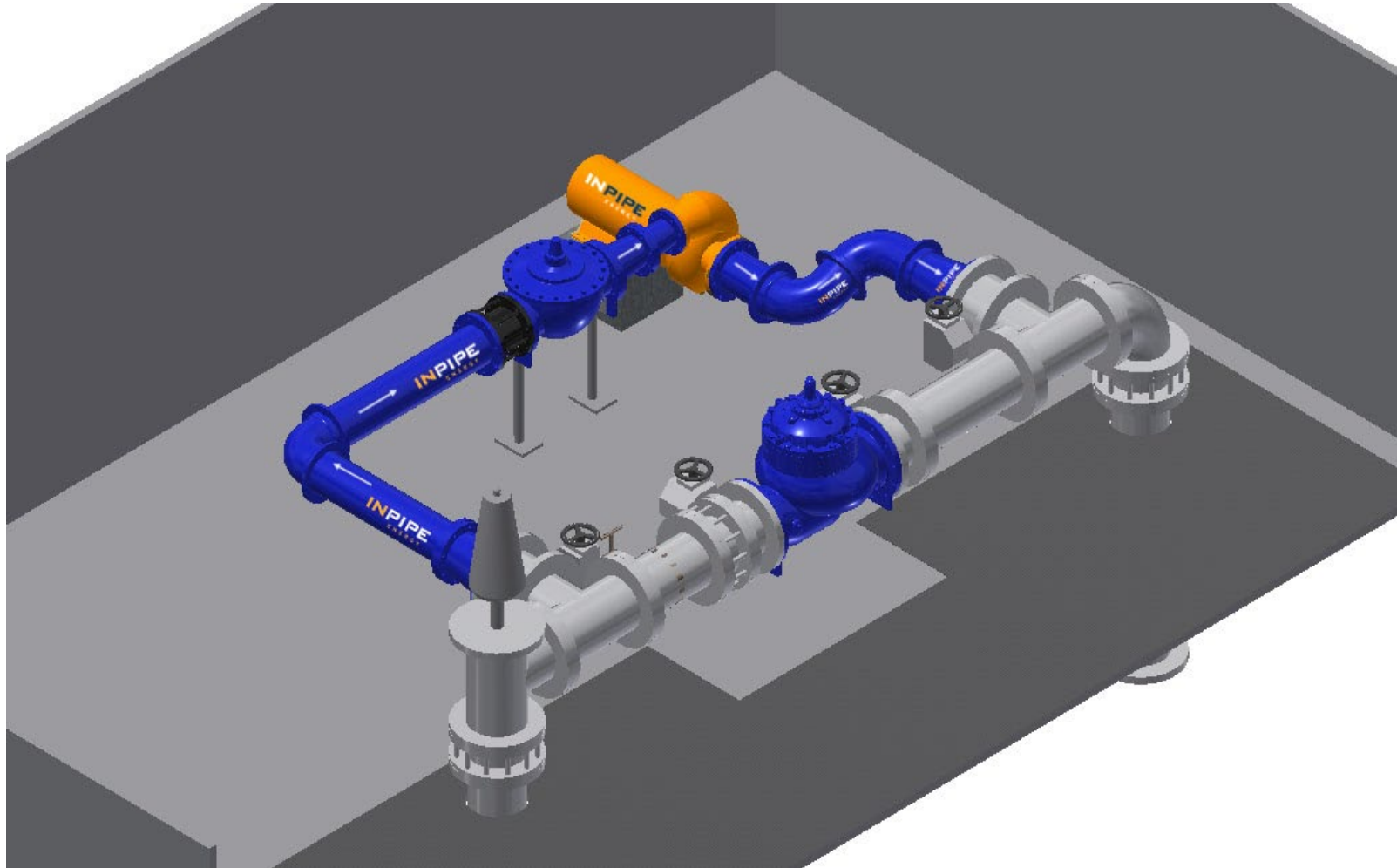


What is Micro-Hydro

Harvests energy by reducing pressure in the water distribution system

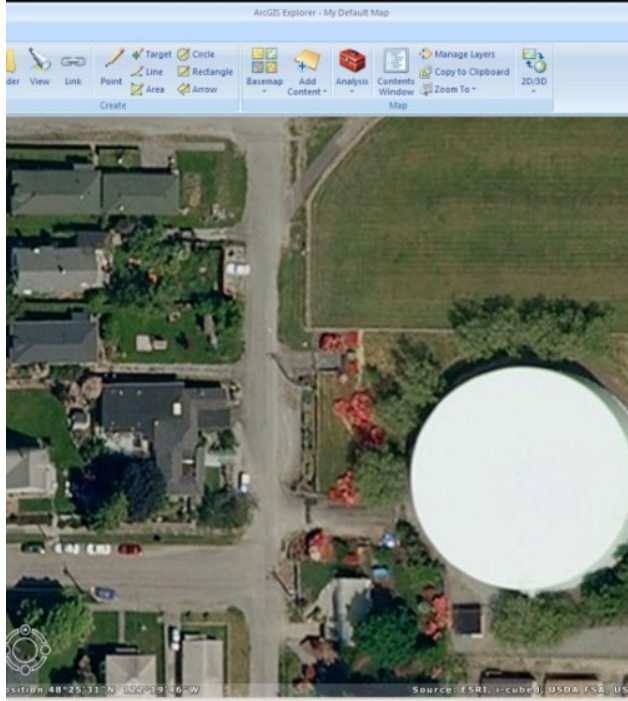


Conceptual Layout



Existing Micro-Hydro





9th & Highland

- Consistent pressure and flow rates for constant, long-term energy production
- 290,000 kWh of energy annually
- Offsets 9.3 million pounds of CO₂, assuming a 30-year project life and 1.07 pounds of CO₂/kWh.
- \$21,200 in yearly savings
- Minimal onsite power demand



Proposed Site



- Water Purveyor, not an Energy Purveyor
- Puget Sound Energy is the Energy Purveyor in the area
- Plenty of energy generation on site with nowhere to consume it
- Puget Sound Energy Schedule 150
- RCW 80.60.030

Puget Sound Energy Schedule 150

Net metering

- Contiguous properties
- Account Balance re-sets March 31
- Site generation intended to offset current energy demand

RCW 80.60.030 (4)

(4) If a customer-generator requests, an electric utility shall provide such a customer-generator meter aggregation.

(a) For a customer-generator participating in meter aggregation, credits for kilowatt-hours earned by the customer-generator's net metering system during the billing period first shall be used to offset electricity supplied by the electric utility at the location of the customer-generator's designated meter.

(b) A customer-generator may aggregate a designated meter with one additional aggregated meter located on the same parcel as the designated meter or a parcel that is contiguous with the parcel where the designated meter is located.

(c) For the purposes of (b) of this subsection, a parcel is considered contiguous if they share a common property boundary, but may be separated only by a road or rail corridor.

(d) A retail electric customer who is a customer-generator and receives retail electric service from an electric utility at an aggregated meter must be the same retail electric customer who receives retail electric service from such an electric utility at the designated meter that is located on the premises where such a customer-generator's net metering system is located.

Mount Vernon High School

- Tank site adjacent to high school
- High power consumption



Mount Vernon High School

- Title 1 School
- 1,995 Students
- 62% Free or Reduced Lunch
- School Energy Consumption – 293,490 kWh in high demand months
- One of the 14 onsite meters, the easiest one to connect to consumes 105,000 kWh per month
- Connection to existing meter physically feasible without causing significant disruption to campus



- 1. Collaborative dialogue with the power utility (PSE) to determine path forward**
 - Best chance of success
- 2. Alternate Ownership**
 - Lease the micro-hydro to third-party (School)
 - Lease the micro-hydro to PSE
- 3. Pursue legislative amendments or change existing laws**
 - Allow for broader aggregation of meters
 - Time and money required

Pursued collaborative agreement with PSE management

- Multiple discussions with PSE
- Agreed to move the project forward by having everything behind the meter
- Allow multiple systems behind the meter for one site

School Agreement

- Brought school onboard early in process.
- Improvements funded by grants. Title 1 school asset to grant applications.
- PUD will operate and maintain micro-hydro unit.
- School will receive benefit of energy created.
- School is only adjacent parcel with high power demand.

Pursuing funding for project

- Major regulatory roadblocks addressed
- Grant application for funding
 - Commerce Energy Fund Research Grants
 - Rural Clean Energy Programs
 - Community Project Funding Requests

Questions

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