



FACT SHEET

Vashon Island Distributed Bioenergy Feasibility & Demo – King County Food Waste Incentives for Non-Residential Targets | Washington State Dept. of Commerce Clean Energy Fund 2, R&DD

Deliverables

1. Software UI requirements and design for NAUTILUS AD 185-2 community operating system
2. Build or buy lean software, including mobile UI
3. Perform feedstock characterization – qualify and quantify real baseline data; develop UI
4. Establish feasibility, capacity, matching funds and business model
5. Finalize feedstock and take-off agreements (Community Benefit Agreement)
6. Fabricate, deliver and install NAUTILUS AD 185-2 with operating system and integrate EVs for feedstock logistics
7. Report quarterly on diversion and performance metrics, and transfer ownership of the community asset

Schedule

Set up and begin project implementation	No later than June 30, 2016
Ongoing implementation, monitoring and reporting	July 1, 2016 through June 30, 2018

Summary

The primary goal is to demonstrate an ecosystem for hyperlocal food waste recycling at a community scale (up to 5,000 lbs./day) that stimulates climate action and enhances food and energy independence. In collaboration with Zero Waste Vashon, an educational non-profit, and Vashon Island School District, commercial food waste will be collected, converted and utilized on-island. The project is designed to develop a repeatable CSB model on Vashon Island to recover nutrients, energy, water, carbon and probiotics from up to 1,000 tons/year of non-residential food waste into 35,000 to 45,000 therms/year of renewable fuel and 200,000 gallons per year of liquid soil amendment (Probiotics for Soil & Plants), with zero waste. Renewable fuel will be converted via a CHP microturbine into 350 to 450 MWh electricity for EVs and 700 to 900 MWh heat. This will be achieved by forming a public-private partnership bringing together multiple generators with a shared digester. First we need to establish feasibility, agreements, business process and supporting infrastructure to deploy and operate smoothly on-island. Co-products will be used beneficially within the remote community, thereby avoiding trucking, exportation of bioresources, and importation of soil amendments, energy, and fuel, along with the associated greenhouse gas emissions and loss of soil fertility.



King County



Level of Effort by Team Member (Impact 95%, ZWV 5%, \$3,198 expense budget)

Allen	Kumar	Dammann	Murphy
8%	79%	5%	8%