



Organic Material Recovery AND Bioenergy Project

Budget Narrative



1. BUDGET

Budget Detail

Table 1 depicts the SF-424A budget for both measures 1 and 2 by expenditure year. A detailed budget spreadsheet as well as the SF424-A have been attached to this application package. As one biodigester facility will be constructed for both measures, costs are not broken down by measure. The total Project cost is \$54,604,103. All incurred costs will be contractual. A construction contingency of 30% is included within the budget as a mitigation measure for any potential cost overruns and any unanticipated expenses.

The County has sufficient funding to cover costs for conducting stakeholder engagement, environmental work, as well as grant management. These costs are therefore not included within the Total Project Budget.

Table 1 Total Project Budget for Both Measures

Category	Year 1	Year 2	Year 3	Year 4	Total
Equipment	\$0	\$7,166,988	\$0	\$0	\$7,166,988
Construction	\$0	\$16,733,837	\$14,656,980	\$3,705,998	\$35,096,815
Contractual	\$4,606,754	\$7,733,546	\$0	\$0	\$12,340,300
Total (Direct Costs)	\$4,606,754	\$31,634,370	\$14,656,980	\$3,705,998	\$54,604,103

The biodigester facility consists of four primary components:

- HSOW biodigester for a total cost of \$4,992,510
- Silo Anaerobic Digester System for a total cost of \$24,721,932
- RNG upgrading equipment for a total cost of \$13,069,432
- Centrifuge Dewatering Facility for a total cost of \$11,820,229

Personnel

The County is not seeking grant funding for County personnel costs and as such none have been provided within the project budget.

Fringe Benefits

As the County is not seeking grant funding for County personnel costs, the project budget does not include fringe benefits.

Travel

The County is not seeking grant funding for County personnel travel costs, therefore the project budget does not include travel costs.

Equipment

Table 2 identifies the equipment costs the County expects to incur for the construction of the biodigester facility.



Table 2. Equipment Budget

Category	Year 1	Year 2	Year 3	Year 4	Total
HSOW Receiving Station					
Miscellaneous Equipment (5%)	\$0	\$309,608	\$0	\$0	\$309,608
RNG Upgrading Equipment					
Bulk H ₂ S Reduction System	\$0	\$275,000	\$0	\$0	\$275,000
Raw Gas Blower	\$0	\$225,000	\$0	\$0	\$225,000
H ₂ S Polisher	\$0	\$175,000	\$0	\$0	\$175,000
PSA Upgrading System	\$0	\$1,950,000	\$0	\$0	\$1,950,000
Emergency Flare	\$0	\$100,000	\$0	\$0	\$100,000
Containerized E-house	\$0	\$150,000	\$0	\$0	\$150,000
Miscellaneous (5%)	\$0	\$143,750	\$0	\$0	\$143,750
Centrifuge Dewatering Facility					
Centrifuges	\$0	\$763,547	\$0	\$0	\$763,547
Shaftless Screw Conveyer	\$0	\$303,678	\$0	\$0	\$303,678
Bulk Tanks (7,353 gallons each)	\$0	\$55,075	\$0	\$0	\$55,075
Metering Pumps	\$0	\$19,928	\$0	\$0	\$19,928
Miscellaneous (10%)	\$0	\$106,723	\$0	\$0	\$106,723
Silo Anaerobic Digester					
Mixing Pumps (Active) (0 hp)	\$0	\$961,620	\$0	\$0	\$961,620
Transfer Pumps (Active) (43 hp)	\$0	\$120,397	\$0	\$0	\$120,397
Transfer Pumps (Standby) (43 hp)	\$0	\$120,397	\$0	\$0	\$120,397
Sludge Heating Pumps (Active) (18 hp)	\$0	\$927,793	\$0	\$0	\$927,793
Dewatering Feed Pumps (Active) (4 hp)	\$0	\$32,805	\$0	\$0	\$32,805
Dewatering Feed Pumps (Standby) (4 hp)	\$0	\$32,805	\$0	\$0	\$32,805
Boilers (2,444,339 BTU/hour each)	\$0	\$93,773	\$0	\$0	\$93,773
Fuel Oil Tank (1 each, 385 gallons)	\$0	\$3,714	\$0	\$0	\$3,714
Flares	\$0	\$60,949	\$0	\$0	\$60,949
Miscellaneous (10%)	\$0	\$235,425	\$0	\$0	\$235,425
Total (Direct Costs)					
	\$0	\$7,166,987	\$0	\$0	\$7,166,987



Contractual

The County will procure the services of one firm to carry out the non-construction work for permitting, engineering, construction services, commissioning, and startup work of the biodigester facility. To account for inflation, costs were escalated at a rate of 9% for year 1 and 12% for year 2 as the original budget was prepared by a cost estimator using 2022-dollar values. Table 3 depicts contractual costs by expenditure year.

Table 3. Contractual Budget

Category	Year 1	Year 2	Year 3	Year 4	Total
HSOW Receiving Station					
Non-Construction Work (Permitting, Engineering, Construction Services, Commissioning & Startup)	\$445,687	\$457,953	\$0	\$0	\$903,640
RNG Upgrading Equipment					
Non-Construction Work (Permitting, Engineering, Construction Services, Commissioning & Startup)	\$898,909	\$923,650	\$0	\$0	\$1,822,559
Interconnection to NW Natural Pipeline	\$0	\$3,000,000	\$0	\$0	\$3,000,000
Centrifuge Dewatering Facility					
Non-Construction Work (Permitting, Engineering, Construction Services, Commissioning & Startup)	\$1,055,205	\$1,084,247	\$0	\$0	\$2,139,452
Silo Anaerobic Digester					
Non-Construction Work (Permitting, Engineering, Construction Services, Commissioning & Startup)	\$2,206,954	\$2,267,696	\$0	\$0	\$4,474,649
Total (Direct Costs)					
	\$4,606,755	\$7,733,546	\$0	\$0	\$12,340,300

Construction

The County will procure the services of one firm to carry out the construction work of the biodigester facility. To account for inflation, costs were escalated at a rate of 12% for year 2, 15% for year 3, and 18% for year 4 as the original budget was prepared by a cost estimator using 2022-dollar values. Table 4 depicts contractual costs by expenditure year.

Table 4. Construction Budget

Category	Year 1	Year 2	Year 3	Year 4	Total
HSOW Receiving Station					
Construction	\$0	\$595,638	\$815,456	\$209,182	\$1,620,276
Sitework Preparation (Electrical, Piping, Overall)	\$0	\$445,079	\$0	\$0	\$445,079
Plant Computer System	\$0	\$103,668	\$0	\$0	\$103,668



RNG Upgrading Equipment					
Construction	\$0	\$316,969	\$433,945	\$111,316	\$862,230
Sitework Preparation (Electrical, Piping, Overall)	\$0	\$972,038	\$0	\$0	\$972,038
Plant Computer System	\$0	\$226,406	\$0	\$0	\$226,406
Centrifuge Dewatering Facility					
Construction	\$0	\$1,214,687	\$1,662,964	\$426,586	\$3,304,237
Sitework Preparation (Electrical, Piping, Overall)	\$0	\$1,066,738	\$0	\$0	\$1,066,738
Plant Computer System	\$0	\$248,464	\$0	\$0	\$248,464
Silo Anaerobic Digester					
Construction	\$0	\$2,549,035	\$3,489,750	\$895,197	\$6,933,982
Sitework Preparation (Electrical, Piping, Overall)	\$0	\$2,230,509	\$0	\$0	\$2,230,509
Plant Computer System	\$0	\$519,529	\$0	\$0	\$519,529
Overhead (12%)	\$0	\$1,156,506	\$1,470,102	\$367,526	\$2,994,134
Profit (10%)	\$0	\$1,076,035	\$1,434,714	\$358,678	\$2,869,427
Mob/Bonds/Insurance (3%)	\$0	\$355,092	\$473,456	\$118,364	\$946,912
Contingency (30%)	\$0	\$3,657,444	\$4,876,593	\$1,219,148	\$9,753,185
Total (Direct Costs)	\$0	\$16,138,199	\$14,656,980	\$3,705,997	\$35,096,814

Other

The County is not seeking grant funding for other costs not quantified above in the previous budget tables.

Indirect Charges

The County has not budgeted for indirect charges as the County is not seeking grant funding for County personnel costs.

Expenditure of Awarded Funds

The County has provided a detailed project schedule under Section 3c within the workplan. The biodigester facility will help the County meet state GHG emission reduction goals. As the State food recovery goals were not met by 50% in 2020, the County needs to rapidly address the insufficient capacity of its waste facilities to meet State goals. The County therefore intends to rapidly expedite funds by April 2028 upon the proposed project schedule. No significant project delays are anticipated, as no ROW acquisition is expected to be required for the construction of the biodigester facility. Minimal ROW acquisition is however expected for the RNG pipe to tie in with the NW Natural Gas pipeline.

Founded in 1844, the County has been providing services to its residents for over a century. The County has decades of experience in delivering projects funded through grants. The County has experienced grant funding and finance personnel who will ensure the project is delivered in compliance with all federal reporting standards. The County is authorized under federal, state, and local laws and regulations to request and receive federal funds. The County has never been excluded from receiving contracts by the federal government. The County does not anticipate any issues in the obligation and

execution of the grant award as the County has procedures and controls in place to ensure funds are expended in compliance with federal reporting regulations.

The County intends to contract for the design and construction of the proposed facilities using either a traditional design, bid, build approach or potentially using a P3 model depending on the outcomes of the P3 sounding effort that will be conducted in summer of 2024. The County has sound procurement standards that are in compliance with federal requirements, supporting its technical capacity to receive federal funds and hire a contractor to deliver the project. The County’s purchasing department has established procedures for obtaining competitive bids from Engineering firms and Contractors, monitoring and managing professional services firms and construction contractors to help ensure that the project is designed and constructed in a timely and cost-effective manner. As indicated in section **3C Authorities, Implementation Timeline, and Milestones**, facility design is anticipated to be completed in approximately 12 months and construction in 24 months.

Reasonableness of Costs

The requested grant funds are reasonable for the anticipated GHG emissions reductions of 190,900 tonne of CO_{2eq} by 2050 for a County home to about 40,000 people. The project will help the County meet GHG emissions reductions goals in line with EPA Strategic Plan goals. The GHG emissions reduction estimates for this project are as follows:

Cumulative GHG reduction from 2025 through 2030

- Measure 1: 6,300 tonne CO_{2eq}/y x 3 years = 18,900 tonne CO_{2eq}

Cumulative GHG reduction from 2031 through 2050

- Measure 2: 8,600 tonne CO_{2eq}/y x 20 years = 172,000 tonne CO_{2eq}

Cumulative GHG reduction from 2025 through 2050

- 18,900 + 172,000 = 190,900 tonne CO_{2eq}

The metrics for GHG emission reductions for this project have been estimated as follows:

- Cost of GHG reductions (2025 -2030) = \$54,600,000/18,900 = \$2,889
- Cost of GHG reductions (2031 - 2050) = \$54,600,000/172,000 = \$317
- Cost of GHG reductions (2025 - 2050) = \$54,600,000/190,900 = \$286

Project cost per mass of volatile solids received:

- Measure 1: \$9.16 per pound of volatile solids received per year
- Measure 2: \$8.11 per pound of volatile solids received per year

Non-Construction Work (Permitting, Engineering, Construction Services, Commissioning & Startup) as a percent of construction subtotal = \$12.3 million/\$54.6 million = 22.6 %

This percent falls into the range of reasonableness for this process heavy, complicated type of facility which range from 20 to 25%.

The HSOw feedstocks, especially from seafood processing which comprise the majority of the loading to this biodigester system, are highly variable seasonally. This aspect of the loading may tent to drive up the cost metrics relative to other waste to renewable energy projects.