

EcoStrategies, LLC

November 24, 2013

Rocky Martin, Director
Department of Buildings and Facilities
Town of Hinesburg
10632 Route 116
Hinesburg, VT 05461

RE: Development of Small Hydropower In-conduit System, Pump Station #1, Cemetery Pump House, Mechanicsville Road, Hinesburg, VT--Project Reference No. 2013005.A1G

Dear Mr. Martin:

This letter is a proposal to complete a basis of design for Pump Station #1 In-conduit Hydropower Generator Net Metered Project. A basis of design is important as it will frame the project details and establish a more accurate projection of the probable cost and rate of return for this project. According to the Clean Energy Development Fund granting agency staff and Agency of Natural Resources Drinking Water Supply Division, the Town may apply for a Hydropower grant and/or low interest loans to accomplish this and necessary capital improvements.

Once this step is complete and Hinesburg decides to move forward, the final design, or design-build phase can be accomplished. If this proposal meets your expectations, please execute and return one copy to our office.

Project Understanding

For some time, the Hinesburg Town staff has been interested in exploring use of its PRV and pump as a turbine generator to produce power at Pump Station #1 on Mechanicsville Road. Due to complicated and expensive permitting requirements at the State and Federal levels, few communities have advanced beyond pre-feasibility studies for small in-conduit systems.

Upon initial site visit of the Cemetery Pump House, staff and consultants agree that low cost hydropower options should be explored. It is proposed that the Town assess its options including: 1) use of the existing pump as a turbine by adding some controls and a meter; or 2) install a new small turbine generator (to capture the energy loss through the PRV via water pressure recovery) and convert to electricity. With Vermont's net metering law, Green Mountain Power will credit all power generated, at the going retail rate, to another municipal meter (suggested in the water system).

Again, estimated potential power generation and construction costs will need to be determined to estimate total project cost and rate of return.

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As part of this initial process, the Consultant will notify relevant State agencies for potential resources and incentives including making application to the Clean Energy Development Fund to make use of or be in the queue for any available grant funding.

To help ensure the greatest efficiency and most appropriate talent and expertise is used to advance selected tasks, EcoStrategies, LLC (a Vermont-based environmental consulting firm) will consult with Town officials, its water system engineers, and the firm's energy project development partners to tease out the most cost effective and energy generation options possible for this initial project feasibility. If the project is a go, EcoStrategies, LLC will help guide the town in soliciting bids for final design build and installation of energy generation equipment in accordance with this initial phase recommendations.

Proposed Scope and Budget

EcoStrategies proposes to assist the Town of Hinesburg staff with investigating the initial feasibility including basic factors including: evaluation of the space available in the cemetery pump station, assessing various generating system options, contacting vendors and (once project feasibility is confirmed) oversee engineering plan development (an amended agreement may be necessary), submission(s) to relevant State agencies including Water Supply, exploring grant funding opportunities and applying for ones that look promising. Specifically, the following tasks will be advanced:

1. Conduct extended time flow simulations using the model to validate flows and pressure across the PRV. Alternatively, measure the volume of water in the holding tank to assess and estimate 24 hour flows through the PRV. The budget does not include the cost of leasing or monitoring a temporary flow meter (which may be recommended).
2. Contact selected developers and vendors to explore use of existing pumps as turbines
3. Assess current piping and pumps
4. Develop initial estimates of power generation based on selected options: 1) proposed controls to be added to current system; 2) use of existing pumps as turbines; or 3) new induction generator.
5. Explore financing options for Town consideration including: notify Agency of Natural Resources DWSRF; Vermont Bond Bank; and Clean Energy Development Fund for potential available Grant funds and make application/complete initial forms.
6. Develop short list of permitting requirements including: State ANR Drinking Water Certification; DPS Certificate of Public Good 5.100 and Federal "Notice to Intent to Construct Hydropower Facility.
7. Coordinate with Green Mountain Power Corp proposed back-feed design.
8. Examine pump house for extent of improvements.
9. Develop a concept or one-line layout drawing of existing and proposed improvements

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10. Develop a Basis of Design memorandum including necessary permitting, table of materials, equipment and dimensions.
11. Develop an estimate of the probable cost of implementing the facility and the dollar value of electricity to be produced.
12. Meet with Hinesburg officials to discuss the approach for project implementation in preparation of financing options and permitting considerations.

Proposed Budget

EcoStrategies will provide the above services (billed on an hourly basis) for a not to exceed price of \$10,000.

We will bill only for the services completed and this budget will not be exceeded without expressed authorization.

It is hoped that this project feasibility study be approached efficiently and expending the minimal amount of the budgeted funds for the Town to have the critical information it needs moving forward.

General Terms and Conditions

The attached General Terms and Conditions will apply to the services described above.

Schedule

EcoStrategies, LLC and its subcontractors (TBD) will complete the Basis of Design within 90 days from authorization of this Agreement.

Very truly yours,



Debra Sachs, President | CEO
EcoStrategies, LLC

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AUTHORIZATION TO PROCEED

I hereby authorize EcoStrategies, LLC to proceed with the above-referenced project in accordance with the General Terms and Conditions and proposal dated November 24, 2013. I understand that billing will be monthly, payable within thirty (30) days of date of invoice with interest accruing at the rate of 1.5% per month thereafter. A 15% administration charge will be added to subcontract services that are billed through EcoStrategies. I further understand that the Town of Hinesburg will be responsible for the reasonable cost of collection.

For Town of Hinesburg

Printed Name

Date

Signature

Title