

Introduction

The Town of Berwick is one of the six municipalities in Nova Scotia that owns its own electric utility. Berwick Energy operates its 0.52MW hydroelectric facility at Factorydale; this provides approximately 5% of the Town’s electricity requirements, with the remainder purchased from Nova Scotia Power. The Town is set within an agricultural area with historical forestry operations. Indeed the Town of Berwick has been operating its hydroelectric generating facility since 1921 after it converted the facility from its use as part of the Easson family’s sawmill.



Picture 1 Hydroelectric Dam and Penstock, Factorydale, NS
Courtesy of Berwick Electric Commission

Vision

With a hydroelectric facility that has been part of the Town for almost a century, the Town aims to be a leading community in Nova Scotia in terms of the generation and management of energy resources. The Berwick Energy Future (BEF) began in 2006 to encompass the Town’s energy related Projects to work toward engaging the entire community to reduce both greenhouse gases and costs via energy conservation and alternative electricity generation.

Ownership Structure

The Town’s electric utility trades as Berwick Energy and is managed by the Berwick Electric Commission. Berwick Energy’s situation of self-owned and operated generation by a municipal utility is unique in Nova Scotia. While many communities’ generation was consolidated, Berwick maintained its independence. The Berwick Electric Commission was created in 1976 to manage the utility on behalf of the Town under an Act of the Legislature. Real property remains vested in the Town.

Planning Process

The hydroelectric facility has been a fixture of the Town for generations; it requires maintenance which has included generator replacement from the original 125 kW machine, dam replacement and upgrades, installation of submerged gates, the penstock and the surge tank, and addressing erosion issues. In addition, agreements with Department of Fisheries and Oceans in 1992 required upgrades to the control gates. This work, as well as other energy projects, is facilitated by the Berwick Electric Commission; however, they rely on experts as required for engineering, environmental and consultation. As part of the Berwick Energy Future initiative, the Town has engaged one consultant as an energy advisor to work with the Town to construct actionable projects with real cost benefits and greenhouse gas reductions.

“Berwick is committed to continuing the transition to a green community. Berwick is seeking additional supplies of renewable energy and affecting various energy efficiency projects in the Town. The Town sees itself as a leader in green initiatives, especially supplying renewable energy.”

Don Regan, Electric Superintendent

Project Financing

Through Berwick Energy, bulk electricity is purchased from Nova Scotia Power at reduced rates; the cost of the purchasing electricity and operation of the generation facilities and distribution system are covered by rates paid by its customers. These rates are set by the Utility and Review Board as they are also set for Nova Scotia Power's customers. The cost for operations and maintenance of the hydroelectric facility is included in the rates charged by the Town, i.e., a pass-through cost. The approximate annual costs are budgeted at \$155,000 including debt service costs relating to the hydro system. Many ongoing projects through the BEF have also received funding, e.g., the Green Municipal Fund, EcoNS and ConserveNS.

Benefits and Barriers

The Berwick Electric Commission, as an independent utility, manages its supply, generation and distribution of electricity. It has a unique position in the ongoing operation of a legacy renewable energy project and being a self-owned and operated utility. Through the Commission's staff and its budget, capacity exists in house to review potential projects, yet like any other municipality, outside financing and expertise is required for new projects. The COMFIT only applies at this time to projects that connect through the Nova Scotia Power distribution system; new renewable energy projects in the Town are therefore not yet eligible under the COMFIT.

Lessons Learned

While there are many unique aspects of this community energy project, many lessons can be learned:

- Various models of ownership exist within the community;
- Community energy is a long term commitment;
- Despite in-house resources, outside advice and support is needed to maintain existing projects and implement new ones; and
- Existing initiatives often increase community motivation and support.

Further Information

Don Regan, Electric Superintendent
Phone 902-538-4744; Email dregan@town.berwick.ns.ca
236 Commercial Street, P.O. Box 130, Berwick, NS B0P 1E0
<http://www.town.berwick.ns.ca/berwick-electric-commission.html>

Project Development

Resource Assessment

Feasibility testing of any new run-of-river projects require hydrologic modeling.

Technical Design

Various consulting firms have been used in project upgrades and feasibility assessment of potential future projects.

Environmental Assessment

Any future work may impact the watercourse and fish and their habitat; it would require study and assessment.

Grid Connection / Energy Use

Connection and energy use are within Berwick's utility.

Project Financing

Debt financing of re-investment in existing hydroelectric facility is through Municipal Finance Corporation.

Land Ownership and Access

Land was acquired for the existing project in 1920 and remains vested in the Town.

Community Engagement

The Berwick Energy Future involves many facets of community outreach.

Aboriginal Consultation

The Mi'kmaq will be consulted as appropriate on new projects.

Permits and Approvals

A federal environmental assessment and provincial watercourse approval will be required on new hydro projects.