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Salt Spring microhydro study released

Ever wondered how much power could be generated from the hundreds of small seasonal creeks that rush down Salt Spring Island's hillsides each winter? A new study just released by the Earth Festival Society, as part of the implementation of the Salt Spring Island Community Energy Strategy, attempts to answer that question.

Ten Salt Spring property owners interested in installing microhydro systems volunteered for preliminary site assessments. The project team also reviewed other known potential sites, existing rainfall and surface water data and mapping, environmental and regulatory implications, and the economic viability of installations.

The availability of net metering in BC provides the opportunity for communities to meet part of their power supply through micro-scale distributed generation. On Salt Spring, the majority of homes use at least some electricity for space heating. Electricity consumption is much greater during the winter months, making microhydro a good match.

Although the lack of measured data made it difficult to draw any hard conclusions regarding the total microhydro potential, the study concluded that there may be over 70 sites suitable for net metering, conservatively capable of producing enough electricity to supply about 47 average Salt Spring homes. The total number of developable sites is likely under 300.

Regulatory requirements are greater for microhydro than for other renewable energy systems such as solar energy. A water licence must be acquired from the Water Stewardship Division of the Ministry of Environment, even if the stream runs through private land. In addition, a water rental fee of \$100 is charged every year, regardless of the amount of output, rendering very small systems uneconomic. Where ecologically protected areas are involved, the regulatory requirements may be onerous and may render the development of otherwise good sites unfeasible.

The study found that microhydro was likely insufficient to meet the entire annual Salt Spring Energy Strategy target of 5,400 MWh for locally generated renewable energy, but it could generate anywhere from 15% to 60%. Other renewable technologies such as solar photovoltaics could provide the balance.

Microhydro is generally considered the most cost-effective renewable energy technology. The study looked at three

systems of different sizes and concluded that 3,500 Watt and 10 kilowatt systems were cost-effective, yielding net benefits of about \$300 and \$14,000 respectively over 20 years, over and above costs.

If you have a good seasonal creek on your property and your home is already energy-efficient, your best green investment could well be a microhydro installation, says, the Earth Festival Society, which can provide more information and which encourages Salt Spring property owners to monitor flows in their seasonal creeks and install microhydro systems wherever viable.

The Microhydro Feasibility Study for Salt Spring Island was undertaken by the Earth Festival Society for CRD and Islands Trust, funded by a Ministry of Community Services Infrastructure Planning Grant and a CRD Director's Grant in Aid. The report is available at www.saltspringenergystrategy.org and at Salt Spring's public library. It will also be available on the CRD and Island Trust websites. ☺

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