

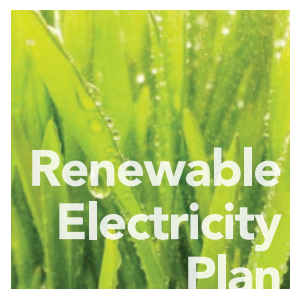
Renewable Electricity Plan

A path to good jobs, stable prices,
and a cleaner environment.

April 2010


NOVA SCOTIA
Department of Energy

Executive Summary



This Renewable Electricity Plan sets out a detailed program to move Nova Scotia away from carbon-based electricity towards greener, more local sources.

The motivation for this plan is simple: nearly 90 percent of the province's electricity supply comes from fossil fuels—most of it coal. Coal made more sense when it was mined here in Nova Scotia, but now we buy it from others. This over-reliance on a single fuel source weakens our energy security, binds us to the volatile and upward trend of international prices, and drains wealth away from the province. Equally important, it has a negative impact on both our health and our environment.

The province is committed to making a change—and to keeping its commitment to make life better for Nova Scotia families.

The Commitment: 25% Renewable Electricity by 2015.

This plan commits the 2015 target of 25 percent renewable electricity to law. By that date, Nova Scotia's total renewable electricity content will have more than doubled from 2009 levels—and the equivalent of more than 300,000 homes will be powered by clean, local sources.

The New Goal: 40% Renewable Electricity by 2020.

The 2020 goal places Nova Scotia in a position of global leadership. It may require expanded grid connections with our neighbours, and may include a greatly expanded role for tidal energy as we learn more. By 2020, this goal means Nova Scotia will have the equivalent of more than 500,000 homes running on renewable power—more than enough energy for every residential customer in the province.

The Plan

In addition to energy conservation and efficiency programs, the province will make an orderly transition to new, local, renewable energy sources. This plan uses several different mechanisms to achieve that transition. It creates a role for everyone from Nova Scotia Power (who will continue their regulated obligations) and large independent producers, to community organizations and committed citizens.

Larger Projects: Regulation + Competition

Large and medium-sized renewable electricity projects will be split evenly between Nova Scotia Power (NSPI) and Independent Power Producers (IPPs). The Utility and Review Board (UARB) will evaluate and approve NSPI-sponsored projects in the traditional way. Independent producers will compete for projects in a bidding process managed by a new authority, the *Renewable Electricity Administrator*.

Community Projects: Fixed Price

To encourage a range of projects widely dispersed throughout the province, this plan establishes a community-based feed-in tariff (COMFIT) for an expected 100 megawatts of renewable electricity projects connected to the grid at the distribution level. The plan also introduces a variety of programs to assist community groups in the technical, financial, and regulatory work needed to develop these projects.

Individuals: Enhanced Net Metering

To give individuals and small businesses the opportunity to participate in green energy projects, the plan expands and enhances the current net metering program available to consumers through NSPI. Projects up to one megawatt, and connected to multiple meters within a

Using the two methods—UARB regulation and competitive bidding—in parallel will help determine which model gives the best value for ratepayers for future policy development.

The process for developing these medium and large projects will include the following features:

- NSPI will continue to follow the current process for developing its share of renewable energy projects, seeking approval from the UARB to recover costs from ratepayers.
- A competitive bidding process for independent power producers will be open to all qualified producers except NSPI.
- A new independent authority, the Renewable Electricity Administrator (REA), will manage the competitive bidding processes and select winning projects. (The role of the Renewable Electricity Administrator is described more fully in Section 7 of the plan.)
- Independent power producers can form partnerships with NSPI, but NSPI can have no more than 49% ownership or operating authority of such projects.
- Government retains the discretion to call for bids for renewable electricity projects, including specific technologies such as tidal.
- The bidding process for renewable electricity projects involving forest products must ensure that the management and use of the resource conforms to sustainability standards and regulations.

2. Community-Based Feed-In Tariff

Small-scale producers typically cannot compete successfully against much larger developers in a competitive bidding process. More than 45 jurisdictions around the world, including Spain, Germany, Ontario, and Vermont, have established feed-in tariffs (FITs) that support and encourage small-scale and community ownership. These programs let newcomers participate in the renewable electricity industry, and encourage the development of multiple projects over widely-dispersed rural areas.

This plan introduces a Community-Based Feed-In Tariff (COMFIT) to encourage the development of local renewable energy projects by municipalities, First Nations, co-operatives, and non-profit groups. Most communities are not directly transmission connected, but are served through local distribution substations that are designed to accommodate the electricity needs of the specific community. Projects will be connected to the grid at the distribution level. Due to distribution level capacity, projects will typically be less than 2 MW, but potentially up to 5 or 6 MW depending on location. The size of the projects that are distribution-connected will require technical study on a case by case basis, and will be limited by area operating constraints.

This approach manages costs and gives us experience with the introduction of intermittent power sources at the distribution level. Renewable electricity from large-scale commercial projects will continue to be procured through the competitive bidding process, because this offers the best value for ratepayers. At this time, a FIT for large-scale projects would likely have a significant impact on electricity rates. Government will review, and if appropriate adjust, the COMFIT program in 2012, to ensure that we learn from our experience and ensure that the objective of supplying 100 MW through community/small-scale renewable electricity projects is met.

Things This Plan Does Not Do



Planning involves choices, and in developing this Renewable Electricity Plan, the government has chosen not to do several things.

The province has decided to maintain a regulated electricity marketplace and not open it to competition. Opening the system to private sales would pose major challenges for an electrical system that is not well-connected to the North American grid. Opening the market would raise difficult questions for those who stay behind: Who will carry out planning? Who will supply power when the wind speed drops? Even Ontario—a province with more energy options than Nova Scotia and access to lots of energy beyond its borders—has largely reversed deregulation. If Nova Scotia eventually moves to regional cooperation and regional system operation, these choices can be revisited.

Government has decided not to let independent power producers build all the medium and large-scale renewable energy projects. In essence, there are two competing models for selecting new power projects: UARB regulation of an integrated utility, and competitive bids by independent producers. However, Nova Scotia's lack of a robust connection to the North American grid limits competition. Without that element, competitive bids may not be the best model—that was the judgment in 2001. This plan allows the two models to operate in parallel. The results will allow government to determine the best way to balance the development projects in the future.

Government has chosen not to extend the COMFIT to larger projects. Just as a commercial farm can produce vegetables cheaper than a garden patch, an industrial-scale wind farm can produce electricity cheaper than a backyard turbine. There are many economies of scale in renewable power production. Nevertheless, a conscious decision has been made to encourage small as well as larger renewable electricity projects. This is partly to ensure widely dispersed energy sources, and partly to encourage rural community economic development. A FIT will result in somewhat more expensive electricity than open competitive bidding, but it gives these smaller projects a degree of market certainty.

At this time, there is no solar COMFIT. Although solar technologies are technically feasible, they still come at a high cost that could significantly affect electricity rates if supported by a feed-in tariff. However, Government recognizes the current value and potential of solar energy and has included it as a qualifying renewable resource under the enhanced net metering program. In several years, the cost of solar technology will change and solar will likely have a larger role in the renewable energy mix.

Renewable electricity produced from small local projects will be slightly higher priced than electricity from large-scale projects. But since the total amount of power from COMFIT projects will start out small, the overall impact on rates is low—estimated at less than one percent on a typical consumer's bill. Of course until the UARB sets the COMFIT rate, and we see how fully it is taken up, the precise impact can't be calculated with certainty.