

Nova Scotia's Electricity System Review Consultation Phase Submission by Efficiency Nova Scotia

Introduction

About Efficiency Nova Scotia

Efficiency Nova Scotia is the independent, non-profit organization helping Nova Scotians use energy better and save money. It is independent from both government and Nova Scotia Power to ensure a consistent, customer-focused, innovative and accountable approach to energy efficiency. Efficiency Nova Scotia offers education, technical assistance and a range of financial incentives to help all Nova Scotians reduce their energy use.

Nova Scotia is a North American leader in energy efficiency. Efficiency now accounts for more than five per cent of the province's electricity supply. Nova Scotians are not spending \$78 million on electricity costs in 2014 alone due to Efficiency Nova Scotia's activities to date. With further investment in electricity efficiency, these savings will increase every year. In addition, energy efficiency activities to date have prevented more than 550,000 tonnes of carbon dioxide annually from entering the atmosphere, the equivalent of taking 110,000 cars off the road.

Efficiency Nova Scotia is led by an independent Board of Directors and is regulated by the Nova Scotia Utility and Review Board. Funding for electricity efficiency is provided by ratepayers; funding for non-electrical efficiency is provided by the Government of Nova Scotia through a multi-year contract, and is primarily focused on services for low income Nova Scotians.

Beginning in 2015, a new, non-profit organization – EfficiencyOne – will administer the Efficiency Nova Scotia brand. EfficiencyOne through its Efficiency Nova Scotia franchise will 'sell' cost-effective and affordable electricity efficiency to the utility. Electricity efficiency will compete with other energy sources, like coal and wind, which means even more competition in the electricity system. This model has worked successfully in Vermont – a leading jurisdiction for energy efficiency. EfficiencyOne through its Efficiency Nova Scotia franchise will also provide non-electrical efficiency services on a contract basis with the provincial government.

Electricity Review

Efficiency Nova Scotia is pleased to have the opportunity to provide a response to Phase Two of the Electricity System Review. The review is being conducted at a critical time for Nova Scotians as the province works to identify a legislative framework and policy approach for the electricity system to effectively support economic prosperity and environmental sustainability. A reliable, competitive, affordable and efficient electricity system is an essential element of a prosperous future for Nova Scotia.

Efficiency Nova Scotia welcomes the opportunity to comment on the important role that electricity efficiency and conservation can play in achieving these objectives.

The Essential Role of Efficiency

Efficiency and the electricity system

Electricity efficiency and conservation has an essential role in Nova Scotia's electricity system. It has been supplying cost-effective electricity efficiency to Nova Scotia's electricity system since 2008. In both the 2007 and most recent modelling for the 2014 Integrated Resource Plan (IRP), electricity efficiency programs are shown to deliver saved electricity at a lower cost than all other types of supply, including renewables. Further, the energy efficiency market potential study prepared by Navigant Consulting as an input into the 2014 IRP indicates that significant potential for additional cost effective savings remain within the Nova Scotia market. This is to say that while electricity efficiency and conservation has made a growing and significant contribution to meeting the province's future electricity needs for the past seven years, it can continue to do so over the long-term.

Electricity efficiency and conservation is not only the lowest cost resource but also offers relative cost stability and predictability, particularly when compared with non-renewable fuel sources, such as coal and natural gas. Price stability and predictability are key components in delivering affordable electricity to Nova Scotia households and businesses as they allow customers to plan their budgets and expenditures with a reasonable amount of certainty about their electricity costs. Non-renewable fuel resources in particular are

often subject to significant commodity market price fluctuations that risk unforeseen and unpredictable electricity rate increases as Nova Scotia Power recovers these costs through the Fuel Adjustment Mechanism (FAM).

Efficiency and the utility: governance, performance and accountability

There have been discussions concerning Performance Based Ratemaking (PBR) for the utility, which would replace the rate-of-return model under which the utility currently operates. Academic literature suggests the current model may conflict with investment in energy efficiency. As Steven Nadel and Garrett Herndon's June 2014 article "The Future of the Utility Industry and the Role of Energy Efficiency", state:

"...under traditional regulation, utilities earn money by increasing their rate base and then earning a return authorized by regulators on this rate base. If the future brings more energy efficiency and distributed generation, then the need for new utility investments will be lower, reducing opportunities for utilities to earn profits. To address this concern, as of October 2013, 29 states have adopted some form of shareholder incentive that rewards utilities for achieving energy efficiency goals, and sometimes other goals as well (Downs et al. 2013)."

PBR offers the potential to utilize incentives to achieve stated system objectives while potentially simplifying the legislative framework that governs the electricity sector. Nadel and Herndon suggest regulatory bodies experiment with PBR over the short-term and implement best practices over the medium-term. This approach is suggested as PBR is complex and can have significant unintended consequences. For example, depending on its structure, PBR can enhance and reward a utility's investment in energy efficiency – or can do just the opposite.

Given the collective and evidence-based benefits of electricity efficiency, Efficiency Nova Scotia would strongly encourage any examination of PBR requires that investment in efficiency – that evidence has shown provides significant collective benefits to ratepayers – is one for which the utility is rewarded or incented.

Efficiency Nova Scotia can also play a key role in the effective implementation of smart meter technology by ensuring that ratepayers receive the objective

information and support required to benefit from this technology at home and at work.

Efficiency and the economy

In responding to the Electricity System Review Scope of Work, Nova Scotians said the Review should look at potential economic and community development opportunities associated with electricity production and new technologies. Accordingly, it is important to highlight the tangible economic and community benefits that electricity efficiency and conservation provides. Electricity efficiency and conservation investment directly contributes to employment in communities across the province as the incentives offered to residential and commercial electricity customers through Efficiency Nova Scotia programs result in increased demand for energy efficient goods and services. While fuel costs are higher than electricity efficiency and conservation on a per kWh basis, the former's costs are primarily for the commodity itself. In contrast, electricity efficiency and conservation is a labour-intensive activity that can only be done locally; it cannot be out-sourced. From home energy auditors, insulators, builders and home renovators, as well as organizations with a focus on marketing and behaviour, the efficiency industry now has 60-plus businesses which indicate efficiency exceeds one-half of their revenue. These businesses operate in all areas of the province, employing 1,200 Nova Scotians and contributing \$192 million annually to the Nova Scotia economy, with a wage bill of more than \$60 million. In addition, the industry is expected to grow at a much higher rate than the provincial economy over the next five years.

In addition, electricity efficiency and conservation programs generate income for Nova Scotia households and businesses as the savings that are realized through the adoption of electricity efficient products and behaviours are re-spent on other goods and services in the economy, which indirectly results in additional employment and income.

Nova Scotia's leadership in electricity efficiency and conservation and market transformation offers the provincial energy efficiency industry a tremendous platform to seize business opportunities across North America and around the world. EfficiencyOne is well-positioned to help Nova Scotia companies identify

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export opportunities and develop those opportunities into sales. It is also well-positioned to lead supply chain development in the energy efficiency industry.

Electricity efficiency and conservation has close linkages to other government strategies and reports of significance. Government's efficiency and conservation plan *"Using Less Energy: Nova Scotia's Electricity Efficiency and Conservation Plan"* outlines a long-term commitment to energy efficiency in Nova Scotia. It highlights the role efficiency plays, along with renewable electricity generation, in meeting environmental targets. The strategy outlines four key pillars to the future of efficiency in Nova Scotia: affordability, competition, accountability, and transformation. All four are foundational to the work that Efficiency Nova Scotia does – and will do.

In addition, energy efficiency and conservation can play an instrumental role in transforming Nova Scotia's economy. The One Nova Scotia Coalition is mandated to move forward the work of the Nova Scotia Commission on Building Our New Economy ('Ivany Commission'). The 'Ivany Report' highlighted the energy efficiency industry as a "game changer" stating:

"Strategic investments in energy efficiency through demand side management initiatives are lowering operating costs for residents as well as businesses and public institutions. Many of these innovations have set us apart from other provinces in Canada and are part of what makes it exciting to be in Nova Scotia."

Summary

Nova Scotia is a North American leader in energy efficiency and conservation and the recently enacted *"Using Less Energy: Nova Scotia's Electricity Efficiency and Conservation Plan"* establishes the framework under which this leadership can continue over the long term. In 2014 Nova Scotians will not spend \$78 million on electricity costs due to efficiency and conservation efforts to date and these savings can grow substantially in the future to act as a key contributor to a more competitive and affordable electricity system.

Efficiency and conservation is not only the lowest cost resource available to the electrical utility as outlined in the Integrated Resource Plan, it also offers relatively low cost volatility and relatively high cost predictability which are also key contributors to overall electricity affordability.

Electricity efficiency and conservation investment contributes to employment in communities across the province and generates income for Nova Scotia households and businesses - values that Nova Scotians have stated should be considered in electricity system reform. These benefits, as well as the clear environmental benefits of reducing required electricity generation reflect precisely the 'Ivany Commission' Report's vision for Nova Scotia's economy in the future.

Innovative, performance-based approaches to achieving electricity system goals and objectives offer promise for improved reliability and affordability while potentially reducing legislative complexity and burden. However, such efforts must reward - or not punish - utilities for efficiency investment and have a greater likelihood of lasting success with a commitment to standards and objectives that ensure short-term benefits are not obtained at the expense of long-term costs.

Efficiency and conservation currently makes a substantial contribution to the reliability, competitiveness, affordability and efficiency of Nova Scotia's electricity system. It can continue to do this - and more - in the future.

Once again, Efficiency Nova Scotia appreciates the opportunity to participate in the Electricity System Review.