



## Nova Scotia NEG-ECP Report Card: 2011

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In August of 2001, the six New England Governors and the five eastern Canadian Premiers committed the region to a Climate Change Action Plan with the eventual goal of reducing the region's emissions of greenhouse gases by 75-85% in the long term with a goal of 10% below 1990 levels by 2020, and the interim target of reducing to 1990 levels by 2010.

Item	Outline	Grade
1. Greenhouse Gas Emissions	<p><b><i>Is the provincial climate action plan comprehensive and effective with clear targets, timelines, and follow-up?</i></b></p> <p>Nova Scotia has set a GHG target of 10% below 1990 levels by 2020 (EGSPA, 2007) and has outlined its approach to reducing GHGs in the province's Climate Change Action Plan, which includes 68 actions (2009).</p> <p><b><u>Currently, Nova Scotia is 18.7% away from meeting the total provincial GHG reduction target for 2020.</u></b></p> <p>The electricity sector is responsible for close to half of the province's GHGs, due to over-reliance on coal-burning generation. Subsequent supporting hard caps legislation including timelines and verification procedures for regulating GHGs from the electricity sector followed in 2010.</p> <p>By law, NSPI, the primary electrical utility in NS, is obliged to reduce GHGs 25% below 2007 levels by 2020.</p> <p>NSPI GHG emissions have decreased 8.8% between 2007 and 2010. This leaves 16.2% of GHG reductions remaining to be reduced by 2020 in order to meet the target for the electricity sector. In 2010, NSPI exceeded its 2010 GHG target by 4.6%.</p> <p><b><i>Have emissions decreased since 1990?</i></b></p> <p>No. Currently in 2011, Nova Scotia's total GHGs are 8.7% above 1990 levels. However, since 2004 Nova Scotia's</p>	B-



	<p>GHGs have generally decreased from a peak of 22.6% above 1990 levels.</p> <p><b><i>Have emissions decreased between 2006 and 2009?</i></b></p> <p>2006 was an anomalous year in Nova Scotia, due to reduced electricity demand at the single largest electricity customer in the province (and consequently dramatically reduced GHGs). Notwithstanding this anomaly, between 2005 and 2009, NS total GHG emissions decreased by 5.8%.</p>	
<p>2. Energy Efficiency</p>	<p><b><i>Has a securely funded administrative agency been established to manage targets for and spending on demand-side management?</i></b></p> <p>Nova Scotia has set up Efficiency Nova Scotia Corporation (ENSC) as a third-party, not-for-profit administrator of energy efficiency and conservation programs and services, with funding secured from a small levy on the NSPI rate-payer base.</p> <p>Minimum DSM savings targets were not included in the enabling legislation for ENSC, but are generally understood to be in the area of 2% annually in order to stabilize and eventually reduce electricity demand.</p> <p>ENSC spending on DSM budgets was aggressively projected to ramp-up in the NSPI Integrated Resource Plans (2007, 2009). However, the 2012 DSM Plan, the first to be tabled by ENSC, has relied on past-over achievements on DSM and DSM energy savings from outside program activities.</p> <p>This approach has consequently reduced the level of ambition in ‘ramping-up’ DSM budgets and spending through ‘in-house’ program activities at ENSC. However, since this is ENSC’s first year of operation, some flexibility must be afforded to the agency as it ‘gets its feet wet’.</p> <p>DSM has been erroneously mischaracterized by the political and media punditry as an ‘energy tax’ responsible for driving up NS electricity rates. In fact DSM is the sole mechanism to assist rate-payers with reducing usage and consequently</p>	<p>B+</p>



	<p>electricity bills in a time of continual rate-increases, due mostly to an unsustainable reliance on coal-burning.</p> <p><b><i>Are there efficiency programs in place to address all major types of fuel and all sectors (residential, commercial, industrial, agricultural)?</i></b></p> <p>ENSC programs are designed to address the needs of a variety of electricity rate-payers. ENSC has also been given a mandate to manage other fuel types; however the nature of these programs has yet to be determined. Home heating (i.e. oil) and transportation remain key areas of interest for reducing GHGs through efficiency and conservation measures.</p> <p><b><i>Have EnerGuide80 standards been implemented for residential building codes and are they enforced?</i></b></p> <p>Energuid80 standards have been integrated into the provincial residential building code.</p> <p><b><i>Are there stringent commercial building codes?</i></b> ?</p> <p><b><i>Are programs in place to support retrofitting to improve efficiency?</i></b></p> <p>Yes. ENSC as well as various other municipally led initiatives (i.e. HRM Solar City) support efficiency retrofitting, including top-ups to the federal Energuide Program.</p>	
3. Renewables	<p><b><i>Has a provincial policy mandating increased renewable energy been implemented?</i></b></p> <p>Yes. Nova Scotia has mandated that 25% of all electricity sales in the province come from renewable sources by 2015, and 40% by 2020. The renewable electricity supply increased 6.4% between 2004 and 2010, currently constituting 13.5% of all the electricity produced in Nova Scotia.</p> <p>However, large scale forest biomass has been included in the definition of 'renewable' and is highly problematic given its questionable carbon neutrality and sustainability, as well</p>	B-



as outstanding policy conflicts.

Also, the 40% renewable target for 2020 is relying heavily on the uncertain Lower Churchill Falls project in Labrador, while community Feed In Tariffs for distributed renewable energy may at best constitute less than 6% of the province's renewable supply.

***Are there effective provincial programs to promote renewable energy, cogeneration and decentralized generation?***

Nova Scotia has undertaken various initiatives to promote renewable energy such as supporting the development of supply chains (i.e. tidal, wind) through research and development funding, and providing other 'innovation' funding to support technological capacity development.

Cogeneration is supported through the utilization of biomass; however outstanding environmental concerns remain within this policy area (i.e. conflicting policy directions, lack of efficiency standards etc.). Decentralized generation is nascent, and intended to be facilitated by the Community Feed-In Tariff (COMFIT) program.

***Are there policies that encourage the implementation of renewable energy in small, remote, and rural communities?***

The COMFIT program is a small but limited step in the right direction of supporting distributed renewables. COMFIT is targeted at promoting small-scale renewable generation on the distribution grid by: municipalities, First Nations, not-for-profits, co-operatives, Community Economic Development Investment Funds (CEDIFs), universities and saw-millers. Eligible technologies include: biomass combined heat and power, run-of-the-river hydro, in-stream tidal and wind (under 50kW and over 50kW). Solar PV was notably omitted from eligible technologies as it is seen as not being 'cost-effective' by policy-makers.

Criticisms of the COMFIT approach include: vastly under-estimating the potential that Feed-In Tariffs could have in transforming the NS electricity supply market for renewable



	<p>procurement; making COMFIT overly bureaucratic and placing inequitable restrictions on COMFIT eligible stakeholders; the lack of transparency with regards to the availability of distribution grid capacity; the lack of policy attention to creating an 'enabling environment' for COMFIT stakeholders, including on accessibility to debt-equity financing; and finally providing appropriate 'capacity-building' mechanisms to support COMFIT stakeholders (i.e. access to resources, finance support etc.).</p> <p><b><i>Has a Feed-in Tariff for community-based renewable energy been implemented?</i></b></p> <p>The COMFIT rates have been proposed by an independent consulting firm and reviewed by the provincial regulator. Outstanding concerns with respect to COMFIT 'risk and uncertainty' remain unabated; however the province intends to undertake a review of the COMFIT policy within 12 to 18 months of implementation, to ensure it is meeting its intended objectives.</p> <p><b><i>Are there plans to increase energy storage and balancing capacity on the grid?</i></b></p> <p>Various studies have been conducted on the need for investing in Nova Scotia's domestic grid. Various initiatives are underway to strengthen Nova Scotia's regional connectivity and ability to load balance renewable electricity through regional approaches. Energy storage remains an under-explored area of policy development.</p>	
<p>4. Transportation</p>	<p><b><i>Is there a public transit strategy? Is there dedicated funding for public transit?</i></b></p> <p>No. Public Transit relies mostly on federal and municipal funding. There is currently no public transit strategy for the province.</p> <p><b><i>Is there a rail strategy? Is there dedicated funding for rail transit?</i></b></p> <p>No. Nova Scotia has decommissioned and privatized substantial portions of its rail infrastructure, while investing</p>	<p>F</p>



heavily in expanding and maintaining its highway infrastructure.

***Has there been investment in ports and rail systems to encourage alternatives to car and truck use?***

Mass transit or movement of goods by rail does not receive appreciable levels of provincial support. Port investment has mostly been targeted through the 'Atlantic Gateway' initiative, a plan to exploit Nova Scotia's (short-term) comparative advantage as an eastern port of entry for importing goods from Europe and Asia to Northeastern American consumer markets. Both the federal and provincial government have supported investment in both port and airport development, but not to support alternatives to car and truck use.

***Is there a provincial strategy for reducing sprawl? Do zoning laws encourage compact, mixed-use development?***

Service Nova Scotia and Municipal Relations encourages 'smart-growth' principles and efficient use of resources, however there is no overarching provincial strategy for reducing urban sprawl, no monitoring and evaluation of the effectiveness of this policy to reducing sprawl.

***Is there a program to create financial incentives for use/purchase of low-emitting vehicles or equivalent?***

Yes. Programs administered by various agencies target emissions reductions from the provincial vehicle fleet, including trucks, taxis and 'retire your ride' programs for private vehicles. However, transportation has been a major area of emissions growth and the provincial 'sustainable transportation strategy' has been missing in action for over a year, while plans to implement California vehicle emissions standards never materialized.

***Is mass transit ridership stable and funded appropriately?***

No. Mass transit ridership relies mostly on municipal with minimal support from federal funding. While the



	<p>municipalities are enabled by legislation to provide transit services, there are substantially limited in their fiscal capacities to support effective transit. Outside of major urban areas in Nova Scotia, transit is virtually non-existent.</p>	
<p>5. Regional Policy Integration + Cooperation</p>	<p><b><i>Is the province engaging in regional level dialogue and initiatives that target GHG emissions reductions, increased renewable generation, sustainable transportation, and climate change adaptation?</i></b></p> <p>To various levels and through a diversity of channels, Nova Scotia engages in regional scale dialogue and initiatives on climate change. Areas for improvement include recommitting through NEG-ECP to a second-phase of the regional climate change plan, exploring the effectiveness of all options to displacing coal-burning and supporting renewable growth through electricity import substitution, moving towards a regional grid operator to provide greater flexibility in load-balancing, developing a regional approach to transportation and providing greater support to adaptation issues.</p> <p><b><i>Are there plans to improve regional grid connectivity to increase opportunities for balancing, storage, and smart grid initiatives that support increased integration of renewables?</i></b></p> <p>Yes. Power Shift Atlantic and various other initiatives seek to improve the regional grid's operational capacities. However, investment in renewable energy storage technologies deserves more attention to support the development of distributed renewable growth.</p> <p><b><i>Does the province work actively with regional bodies to promote policy consistency in the areas of energy, transportation, and climate?</i></b></p> <p>More efforts are required to ensure policy consistency on various energy, transportation and climate issues at a regional level.</p> <p><b><i>Does the province contribute to regional capacity to implement policy?</i></b></p> <p>Yes. Nova Scotia has signified strong support as a regional</p>	<p>C+</p>



	<p>leader by developing policies to maximize the province's renewable electricity resources while reducing electricity demand through efficiency and conservation and moving forward towards reducing GHGs, particularly from the electricity sector. However, much work remains to be done to support aggressive reductions in GHGs, consistent with meeting and exceeding the 2020 targets for both GHGs and renewable electricity.</p>	
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**Progress made**

1. Nova Scotia's total GHGs have generally decreased from a peak of 22.6% above 1990 GHG levels in 2004; to 8.7% above 1990 GHG levels in 2010. Between 2005 and 2009, NS total GHG emissions decreased by 5.8%.
2. NSPI, the province's top GHG emitter, has decreased GHG emissions by 8.8% between 2007 and 2010. In 2010, NSPI exceeded its 2010 GHG target by 4.6%.
3. The independent establishment of Efficiency NS as an administrator of energy efficiency and conservation is an important milestone in supporting the reduction of GHGs from the electricity sector in NS.
4. The renewable electricity supply increased 6.4% between 2004 and 2010, currently constituting 13.5% of all the electricity produced in Nova Scotia.
5. The recent setting of a 40% renewable target for 2020 is ambitious and commendable; however, careful consideration and evaluation of the methods to meeting this target must ensure that Nova Scotia benefits come first.
6. COMFIT is a small and limited step towards greater diversification and decentralization of the provincial electricity supply, however outstanding concerns remain.
7. Mandating municipalities to produce climate change and adaptation plans by 2014 is a positive signal, but must be matched with increasing municipalities' capacity to implement sustainability solutions.

**Improvements needed**

1. Currently in 2011, Nova Scotia's total GHGs are 8.7% above 1990 GHG levels and 18.7% above the 2020 target of 10% below 1990 GHG levels. Strengthening GHG reduction targets to achieve 25%-40% below 1990 levels by 2020, is required to have a scientifically relevant GHG policy approach, consistent with the imperative of keeping global temperatures from rising above 2 degrees, by 2050.
2. NSPI requires a further 16.2% of GHG reductions by 2020 to reach the legislated GHG 'hard-cap' target. A definitive plan and timeline to phasing out and displacing coal based electricity is required, beyond the hard-cap legislation. The Province should support and work with the federal Government to develop a plan



for phasing out coal in Nova Scotia. This plan should start in 2015 with closing/retrofitting Trenton and Point Tupper, or through another mutually agreeable compromise (Lingan), in order to comply with proposed federal coal-burning regulations.

3. Developing renewable energy must ensure that Nova Scotia achieves broad benefits in transitioning to a low-carbon economy. Giving full consideration to all of the options for rapidly and cost-effectively displacing coal burning through hydro imports, absolutely must ensure an open and transparent process to openly and transparently assess the cost-effectiveness of different scenarios and options. This should include comparative analysis of the proposed Labrador hydro proposal against other opportunities, such as importing from Quebec or New Brunswick, in order to ensure that Nova Scotia benefits (coal displacement, rate impacts, supporting RE development in Nova Scotia) are achieved.
4. Equitable access to the provincial electricity grid and diversification of the province's electricity supply supported by comprehensive FITs for renewable procurement can build on the COMFIT. Greater leadership from Government is required on this file to support more innovation that can support distributed energy solutions.
5. Substantial grid improvements are required and serious consideration should be given to decoupling NSPI's ownership and control of the provincial grid, in order to facilitate more renewable energy and equity in access.
6. Large scale forest biomass, non-traditional natural gas extraction (fracking) must be reconsidered as enabling 'renewable' or 'low-carbon' mechanisms to reducing GHGs, given the unacceptable ecological and human impacts of these methods. If these methods are to be utilized, then a plan to address impacts is required.
7. Transportation strategies are required, in light of failure to meet California vehicle emissions standards in 2010 or introduce a sustainable transportation strategy for the province, and continued high levels of spending on roads and highways in the province.
8. More support for mass public transit is required.
9. Enshrining 'all cost-effective energy efficiency' and the 2% annual demand reduction target in the mandate of Efficiency NS would provide greater ambition to achieving transformative change to energy use in Nova Scotia, beyond electricity.
10. A strategy for reducing GHGs from heating is required. Solar thermal (air & water), geothermal and district heating all offer under-utilized and efficient mechanisms for reducing Nova Scotia's unsustainable dependency on oil and electricity for home heating needs.
11. More support for adaptation measures are required, particularly for under-resourced and under-capacity municipalities.