

# Five steps towards an Atlantic Sustainable Energy Vision

Extreme weather causing more hurricanes, floods, and wildfires, ocean acidification and melting sheets of Arctic ice are all indicators that we are on the wrong track. The air we breathe, the food we eat, and the water we drink are negatively affected by pollution. Our personal lives and our communities will increasingly suffer the consequences. While world leaders have agreed to limit warming to two degrees, current government pledges have us on a dangerous path towards six degrees of warming. This would lead to irreversible and substantial environmental, economic and social upheaval.

We can change course.

Atlantic Canadian provinces are already taking action to reduce pollution and generate good green jobs, but we need more. We can use our social ingenuity and resilience to provide energy security in a way that reduces pollution and builds a better future for all of us.

Many of our communities are coastal communities; all of our communities have strong ties to the water as well as the land. This puts Atlantic Canada on the front lines of climate change. For current and future generations, it is our responsibility to act now, and to act with conviction.

Here are five actions Atlantic Canada can take towards a sustainable energy future, with concrete examples of how we're already on our way.

## STEP 1

### Say "No" to New Fossil Fuel Infrastructure

**Goal: Reject the Energy East pipeline, permanently ban fracking and enact a moratorium on oil and gas exploration and drilling in the Gulf of St. Lawrence**

Once fossil fuel infrastructure is built, it defines the landscape that we have to live in and work with for decades to come. Developing fracked gas creates a system that relies on a polluting, finite and non-renewable resource, while threatening our water and climate. A pipeline can only do one thing: move fossil fuels, leaving communities along its route vulnerable to a spill. Offshore drilling proposed for the Gulf of St. Lawrence introduces new risks to the Atlantic region and more climate pollution.

A sustainable vision for Atlantic Canada must include saying "no" to fracking and TransCanada's Energy East pipeline. Fracking for natural gas not only uses and contaminates vast quantities of water but also pollutes our climate. Fracking allows methane – one of the most powerful greenhouse gases – to escape into the atmosphere, making fracking as bad for the climate as using coal.<sup>1</sup>

Nova Scotia's ban on high-volume hydraulic fracturing and a fracking moratorium in New Brunswick are significant steps towards decreasing the region's climate pollution.

Another critical step is rejecting TransCanada's proposed Energy East pipeline, a 1.1 million barrels of oil per day export pipeline from Alberta to a new deep sea port in Saint John, New Brunswick. Beyond the risk of a serious pipeline or tanker spill along the route, including in the Bay of Fundy, this pipeline would

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1 Ingraffea, Anthony R. "The Carbon Footprint of Shale Gas Development and the Remedial Measures Necessary to Address it." *Ontario Energy Board Proceedings*. Jun. 26 2013. <<http://www.canadians.org/sites/default/files/publications/OEB%20Ingraffea.pdf>>

produce more climate pollution than any single Atlantic province.<sup>2</sup>

The Canada Newfoundland and Labrador Offshore Petroleum Board continues to issue preliminary licenses to Corridor Resources for proposed offshore drilling at Old Harry in the Gulf of St Lawrence. Old Harry is a highly sensitive marine area. There are approximately 50,000 jobs in the areas multi-billion dollar Gulf tourism and fishery industries that would be put at risk from a spill that could eventually travel to the coasts of five provinces. In July 2014 Innu Maliseet and Mi'kmaq Alliance called for a twelve year moratorium in the Gulf of St Lawrence because the duty to consult has not been upheld.

Nova Scotia, Prince Edward Island, and New Brunswick have done important work in the last decade to develop their wind resources. They will benefit from clean energy, stable electricity prices, and sustainable energy infrastructure for the next 50 years. On some days, Prince Edward Island uses wind energy to meet up to 30 per cent of its electricity demand.

*Right: Wind turbines on Prince Edward Island. Photo by Martin Cathrae, CC by-sa 2.0*



## STEP 2 Stop Subsidizing Fossil Fuels

**Goal: End all subsidies to Atlantic fossil fuel extraction industries and re-direct to clean energy projects. Tax oil and gas development companies at a minimum of 30 per cent with revenues towards a new fund.**

Moving towards a sustainable energy future requires investment. By cancelling current subsidies to the fossil fuel industry, our tax dollars could instead be invested in clean energy measures. In Norway, fossil fuel extraction companies are taxed a minimum of 30 per cent, up to as high as 78 per cent. These tax dollars are invested into a fund that contributes to eliminating government debt, providing free education, creating a generous pension fund, developing renewable energy, and other social goods.

Conversely, Canada boasts some of the lowest fossil fuel royalty rates in the world. Royalty regimes and development taxation systems in the Atlantic Canadian provinces are loosely defined and unevenly applied. Royalty breaks and improperly enforced taxation are subsidies for fossil fuel extraction companies, limiting the already unimpressive returns to Atlantic Canadians.

Despite political rhetoric, there is little evidence of the actual benefit to Atlantic Canadians from development that poses serious risks to our health, our children, and our marine and terrestrial ecosystems. There is no transparency about royalties being collected by regional governments, and so people wanting to find royalty returns for a particular resource are met with confusion and bureaucratic barriers. There are no long-term systems in place that funnel royalties into uses that benefit people now and for the future. Nor have our governments created an emergency fund to cover accidents or unforeseen impacts of resource development.

The region has an obligation to develop a system that ensures Atlantic Canadians, present and future, benefit directly from the development of their resources and that the negative impacts of development are balanced by investment in sustainable energy and social programmes.

<sup>2</sup> Demerse, Clare and Erin Flanagan. "Climate Implications of the Proposed Energy East Pipeline." *Pembina Institute*. Feb. 14 2014. <<http://www.pembina.org/reports/energy-east-climate-implications.pdf>>

## STEP 3

# Up the Ante on Renewable Energy, Energy Conservation and Energy Efficiency

### Goal: Commit to de-carbonizing our electricity systems as quickly as possible

Electricity systems are the low-hanging fruit of climate pollution reduction. The transition to 100 per cent emission-free electricity is a critical piece of meeting the goal of reducing our emissions as quickly as possible.

Renewable energy is generated using the wind, sun and tides as well as some water, geothermal and biomass resources. As we transition off of fossil fuels, a mix of these sources will play a vital role in meeting our energy needs, particularly in the electricity sector. This mix will include some large scale power projects (such as wind and solar farms and tidal power facilities), many smaller-scale projects (such as single wind turbines and some biomass projects) and forms of decentralized energy (like solar panels on residential roofs).

Indian Island, a First Nations community perched on New Brunswick's eastern coastline, is an impressive example of a culturally grounded response to climate change. In consultation with community elders, Indian Island developed a comprehensive adaptation plan that spans the next 100 years. It is also developing a local wind energy project to get the community off of fossil fuels.

Nova Scotia's goal to acquire 40 per cent of its electricity from renewable sources by 2020 makes it a regional leader in renewable energy development. Annapolis County in Nova Scotia has put forth a community economic development strategy that includes the goal of clean and renewable energy self-sufficiency by 2050. The Fundy Ocean Research Centre for Energy (FORCE), based in Nova Scotia, is a centre of excellence on research into in-stream tidal energy and operates Canada's foremost test site for tidal energy technologies.

*Below: Under sea cable at the FORCE tidal energy site in Bay of Fundy. Photo by David Dodge, Green Energy Futures CC-by-nc-sa 2.0*



As with all energy production, these projects will have impacts, both desired and undesired. These impacts must be balanced with an understanding of the impacts of the fossil fuels we are transitioning away from, as well as the clear intent to minimize negative social and environmental impacts of new projects. Democratizing these systems is critical. Communities must have a say in and directly benefit from energy projects that happen near them. There are also distinct advantages to renewable power projects under public ownership (such as a provincial utility or municipality) and community ownership (such as a cooperative), including keeping profits local, maximizing social benefits, prioritizing conservation and ensuring energy security.<sup>3</sup>

3 Harden-Donahue, Andrea and Andrea Peart. "Green Decent and Public." *Council of Canadians and Canadian Labour Congress*. Dec. 2009. <<http://canadians.org/documents/climatejustice/green-decent-public.pdf>>

The cleanest, cheapest energy of all is the energy we don't use. Lowering overall demand for energy involves consuming less and improving energy efficiency. Every dollar spent on energy efficiency saves the electricity system two dollars in future investment. Improving efficiency includes retrofitting houses, schools, hospitals, and commercial and industrial buildings with energy-efficient windows, better insulation and high-efficiency appliances. Electricity utilities can play an important role by implementing systems that encourage consumers to reduce their level of demand as well as modify their patterns of power use. This can involve public conservation awareness campaigns and variable pricing to reduce demand at peak times.

Efficiency Nova Scotia Corporation (ENSC) is Canada's first independent efficiency utility. Established in 2010, ENSC is an award-winning institution helping Nova Scotians save energy. Nova Scotia's singular commitment to efficiency makes it a North American leader in energy conservation, having reduced electricity consumption by 5.5 per cent over four years. ENSC has created 1200 jobs in the province in this time. Efficiency New Brunswick (ENB) was the first dedicated efficiency agency in Canada, established in 2005. Unfortunately, the New Brunswick government has dramatically reduced funding to ENB over the years, limiting the benefits New Brunswickers experience from this formerly leading institution.

*The Nunatsiavut Government is showing innovative leadership on energy efficiency in Nain, Labrador. It recently committed \$700,000 to conducting energy audits and efficiency retrofits in the homes of one of Labrador's northernmost communities.*

## STEP 4

### Deal with the Region's Biggest Polluter, Our Transportation System

#### **Goal: Establish a maritime transit authority**

Transportation represents the largest gap in Atlantic Canada's attempts to meet its climate pollution reduction goals. Given the settlement pattern of the Atlantic provinces, any successful transportation strategy must be regional in nature. Bringing the provinces together for a regional transportation strategy would make Atlantic Canada a national leader.

Dealing with the challenge of moving Atlantic Canadians in ways that are reliable, accessible and cleaner will require creativity. One idea is a Maritime Transit Agency shared by Nova Scotia, New Brunswick and Prince Edward Island. Such an agency would be publicly organized and supported to provide inter-community bus service according to set standards for frequency and service coverage. Bus service has, on average, the lowest climate pollution per passenger, and is accessible to a diverse range of people of varying income, ages and ability levels.

The Saskatchewan Transportation Company provides bus service to 290 communities across Saskatchewan. Together, the Maritime provinces have a greater population and smaller land area than Saskatchewan.

*GoMaritimes is a website in development that, once complete, will help Maritimers plan trips in and between the three Maritime provinces using sustainable transit options.*

*The grassroots Wind to Wheels project aims to link Nova Scotia's rapid wind development directly to vehicle electrification.*

## STEP 5

# Modernize Our Electricity Systems by Making them Regional and Responsive

### Goal: Commit to regional cooperation on power pooling

As Atlantic Canadian provinces develop renewable energy, they are quickly coming up against the limits of how much intermittent energy their grids can balance. Creating an Atlantic Power Pool would allow provincial utilities to maintain their independence while vastly expanding the balancing region so that each province is able to develop and incorporate more intermittent renewable energy.

A modern electricity system can respond, in real-time, to consumer use patterns and help balance energy demand with electricity generation from a variety of sources.

We must overhaul aging energy systems and strengthen our provincial grids while making them more regionally interconnected. Our plans should include developing mechanisms that will allow a solar farm in New Brunswick to meet demand in Nova Scotia, while hydroelectricity from Newfoundland & Labrador balances wind power in Prince Edward Island.

*Prince Edward Island is particularly challenged by the intermittence of its wind resources as it must rely on the New Brunswick grid to balance electricity supply with on-island demand. The province and its communities are developing a variety of creative energy storage projects that provide leading examples to other provinces in the region. The provincially funded Wind-Hydrogen Village is Canada's first grid-independent storage system for northern and remote communities. The city of Summerside, PEI is able to rely on wind energy for 50 per cent of its electricity supply by using thermal storage units in community members' homes to balance supply with demand.*

*New Brunswick has established itself as the regional leader in smart grid research and development. In July 2012, the province announced a partnership with Siemens to develop a Smart Grid Centre of Competence, as well as a comprehensive smart grid program for the province. This initiative was kickstarted during the final stages of PowerShift Atlantic (PSA), a region-wide energy research project based out of New Brunswick. PSA conducted smart grid pilot projects in each of the Atlantic provinces that helped establish means of integrating wind energy and balancing electricity demand at various points on the electrical grid.*

*The Atlantic Energy Gateway Initiative, which brought together regional governments and utilities, calculated that Atlantic Canada could save \$9 million by creating a regional balancing system.*

# TAKE ACTION

Spread the word – a sustainable energy future for Atlantic Canada is possible! Talk to your family, friends and colleagues. Share this vision with them, and add your own ideas!

Call your municipal councillor, provincial and federal representatives. Ask them what they will do to enact these five steps towards a sustainable energy future in Atlantic Canada:

1. Reject the Energy East pipeline, permanently ban fracking and enact a moratorium on oil and gas exploration and drilling in the Gulf of St. Lawrence.
2. End and re-direct all subsidies to Atlantic fossil fuel extraction industries. Tax oil and gas development companies at a minimum of 30 per cent with revenues towards a new fund.
3. Commit to de-carbonizing our electricity systems as quickly as possible.
4. Establish a maritime transit authority.
5. Commit to regional cooperation on power pooling.



Activists rally against dirty energy in Halifax, NS

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