# Hsin Our Power



# ATLANTIC LOOP DEMYSTIFIER

# It's in Our Power

Together we can build a future where renewable energy is shared across borders between the Atlantic provinces, making electricity more reliable, affordable and resilient for Atlantic Canadians.

# Let's bring Nova Scotia into the clean energy future with a regional energy strategy.

Nova Scotia's electricity system isn't working for rate-payers or the planet. A shared electricity system that's more consistent so the lights stay on is in our power. Learn how it's in our power to make energy fair, reliable, and affordable by integrating our systems across Nova Scotia, New Brunswick and Newfoundland & Labrador.

- Nova Scotia has immense untapped solar and wind energy potential we can share with our neighbours.
- Hydroelectric power from Quebec could help support our energy needs with the wind doesn't blow or the sun doesn't shine.
- We need to pressure our elected officials to build a better energy future for our province.



# The Atlantic Loop would deliver existing hydroelectricity capacity from Quebec and Newfoundland & Labrador by building out transmission infrastructure.

This will allow Nova Scotia and New Brunswick to access reliable renewable electricity, supplementing local renewable power generation as needed. Thus, allowing those provinces to remove coal and gas electrical generation. While the details of exactly how to execute this idea are ongoing, the federal government has offered to support the project with money from the infrastructure bank.

# A crucial part of the proposed "Loop" is The Maritime Link, delivering up to 500 MW of electricity to Nova Scotia via a 180 km subsea cable.

This cable connects to the Labrador-Island Link, which connects Newfoundland to the Muskrat Falls hydroelectric plant. Future projects could increase transmission capacity, making for a smoother rollout of renewables with more straightforward electricity sharing across the region. Ultimately the goal should be to reduce our reliance on fossil fuels in the most expedient and cost-effective manner possible. Projects like "The Loop" could be a great way to make that happen.

For more information

Assessing Net-Zero Electricity Supply and Demand Models in the Atlantic Loop - Ecology Action Centre Clean Power Roadmap for Atlantic Canada - Natural Resources Canada



#### Keeping you in "The Loop": upping your electricity sharing knowledge

# Why do we need to increase electricity sharing and transmission between provinces?

## Whether it's countries, communities, or companies, we're stronger together than we are apart.

This is also true when it comes to electricity generation. That's where ideas like the Atlantic Regional Transmission Loop can increase access to renewable energy while helping the entire region reduce carbon emissions.



Renewables like wind and solar can vary, depending on the day. This becomes less of a concern when we increase our ability to share electricity with neighbouring provinces. With a shared system, we can provide renewable electricity to those outside Nova Scotia when generation is high, while importing clean electricity from our neighbours when we need it.



Power generation and distribution-sharing will help more people enjoy the benefits of reliable, clean energy while keeping electricity rates affordable.

#### **UP NEXT**

What sharing electricity across Atlantic Canada would look like

For more information

Clean Power Roadmap for Atlantic Canada Final Report - Natural Resources Canada



# Sharing Power Across the Atlantic Provinces



#### A day in the life of a great big Loop

# What does a clean energy future look like in Nova Scotia with The Loop?

Let's imagine it's July 7th, 2030.



It's sunrise, the dawn of a fresh summer day in Nova Scotia. It's a bit hotter than we're used to, but with a mix of sun and clouds and a steady breeze from the southeast, today should be a pleasant Sunday. The tens of thousands of electric vehicles in driveways and garages across the province have been charged using hydroelectricity generated from Quebec and Labrador, coupled with local wind generation.



The sun is beginning to add its power to the grid with distributed solar panels across the province, ranging from systems on the rooftops of people's homes, to systems on big-box stores and warehouses, to community solar gardens. Coupled with the breeze generating wind power in Nova Scotia's numerous on-shore wind farms dotting the countryside, thousands of morning coffees are busy brewing with 100% renewable energy.







Even if it's hot and humid, families are out enjoying the afternoon. The air is cleaner too, especially now that coal has been phased out. As the wind and sun peak on the grid, battery storage units charge in anticipation of the evening's demand, and excess clean electricity can find customers in New Brunswick thanks to the interconnected Loop.





The mid-afternoon heat has meant more energy demand to cool houses and businesses. Wider distribution of heat pumps and insulation means that the people of Nova Scotia can stay cool without adding pressure to the grid. Even though the price per kilowatt may be a bit higher than before, the efficiency gains, while no longer having to pay for coal, oil and gas means we're paying less for energy while increasing our overall quality of life.







The wind has calmed slightly, and the sun's intensity has lessened just as people are at home cooking Sunday dinner (with many seeing the environmental and health benefits of having switched to induction cooktops). Lights stay on, meals get cooked, and shows get watched, thanks to the energy flowing from Quebec and Newfoundland and Labrador, and the grid storage batteries fully charged by the sun and wind.



The sun has set and the steady winds during the day have given way to still air on a muggy night. Heat pumps keep families efficient while their EVs stay plugged in, readying their batteries overnight for tomorrow's commute. Demand for electricity during the night is more than it used to be. But the interconnected grid means renewable energy is meeting 109% of Nova Scotia's electricity needs today, with the extra energy being sold to our neighbours. Electricity sharing and efficiency programs mean more reliable renewable energy and cleaner air, all while paying less for energy overall. Life is better in a clean energy future, thanks partly to electricity sharing made possible by a project like The Atlantic Loop.



UP NEXT Why we need to stop using coal entirely

#### Let's keep our energy clean

The transition away from fossil fuels like coal, oil and gas will mean relying on more electric energy to power our homes and businesses.

#### The ugly truth about coal

About half of Nova Scotia's electricity comes from coal. Coal powered the industrial revolution and, to be fair to coal, it was truly innovative technology back in the 1800s. But it's absurd for anyone to advocate for coal in the 21st century, akin to insisting on whale blubber to fuel street lamps. After 200+ years, energy has moved on. Even if coal weren't causing global warming, we'd still need to stop using it. Here are just a few glaring coal problems that few people don't know about.

# Fossil fuel pollution kills 8.7 million people a year

That's more than smoking and malaria combined. And coal is the biggest killer because it's the dirtiest. Everything from asthma to heart disease, to cancer and even blindness, can be linked to pollution from fossil fuels like coal.



#### Distributed energy can help Nova Scotia get to 90% renewable-powered clean energy

Currently, Nova Scotia's goal is to supply 90% of our electricity needs with renewables by 2035. Putting this plan in action to integrate renewables and low-carbon energy sources at a quicker pace means Nova Scotia will be able to completely end its coal dependence. We'll meet 90% of our electricity needs with renewables by 2030 while dramatically lowering carbon emissions an important step to tackling climate change and toward a more livable future for us and for future generations.

-> Read our **Renewable Energy Demystifier**.

#### For more information

Clean Power Roadmap for Atlantic Canada Final Report - Natural Resources Canada Provincial and Territorial Energy Profiles - Nova Scotia - Canada Energy Regulator Global Mortality From Outdoor Fine Particle Pollution Generated by Fossil Fuel Combustion: Results From Geos-Chem - Science Direct

Assessing Net-Zero Electricity Supply and Demand Models in the Atlantic Loop - Ecology Action Centre **UP NEXT** 

Read the different ways we can work towards a clean energy future

#### A project like The Atlantic Loop can help us take action on climate change



#### You have more power than you think.

You might be wondering, "What can I do?" Climate change is a collective problem, and it will take collective action to address it. Whether you install solar or simply help us promote renewable energy, utilities don't have the final word on energy. Nova Scotians can help the Ecology Action Centre advocate for cleaner energy generation through initiatives like the Atlantic Loop, and sharing energy by connecting with our provincial neighbours. It's in our power to create a more reliable and fairer energy system for everyone in Nova Scotia.



#### We can tackle energy poverty.

Imagine choosing between groceries and heating your home. This kind of grim decision is a sad reality for many in our province. Energy poverty can exacerbate other challenges, like health, addiction and mental health. In a healthy, fair, renewablepowered community, we'd all share the peace of mind that comes with energy security.



## And bring Nova Scotia into the clean energy future.

Nova Scotia has a responsibility to do its part to ensure a sustainable future. According to the world's leading climate scientists, we need "deep, rapid and sustained greenhouse gas emissions reductions in all sectors." A transition to clean, renewable energy is the first step to avoiding the worst outcomes of global warming. At stake is a habitable Nova Scotia—a habitable planet—for those of us alive today and for generations to come.



## But we need your help to make sure our government leads the charge

The seated governments write policies that can support—or hinder—Nova Scotia's progress to generating more clean, renewable electricity.

Our leaders have to take a bold stand to build a better energy future.

Letters and emails to your MLA or MP on renewable energy issues can help, as they make energy decisions that affect us all.

> UP NEXT But the biggest thing you can do? Stay engaged to stay informed.

Ecology Action Centre | Energy

For more information

Energy Poverty - The Homeless Hub <u>Urgent Climate Action Can Secure a Liveable Future For All</u> - Intergovernmental Panel on Climate Change

# Let us support you in advocating for cleaner, renewable-powered energy

At the Ecology Action Centre, we're advocating loudly for energy policies that ensure that Nova Scotia is power by 90% renewables in 2030.

### Stay connected and learn about other ways to engage.

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