



PRINCE EDWARD ISLAND

September 2020

A Path Towards Net Zero (2040)

Proposed Framework - A Discussion Document for Islanders



Caring for Our Island

A Discussion Document for Islanders

What do we need to do to ensure
a sustainable future for Prince Edward Island?

The following document includes potential priorities
for a long-term vision towards Net Zero for PEI.

The proposed direction builds on PEI's strengths and positive
impact to-date, while recognizing important national trends.

The intent is to hear about potential solutions from Islanders
that will lead to the development of a plan for a sustainable
future—PEI's Path Towards Net Zero (2040).

We look forward to receiving the input of Islanders as
we work together to define and action the best path forward.

The Honourable Steven Myers
Minister of Transportation, Infrastructure and Energy

Tell Us What You Think

A Discussion Document for Islanders

What is needed for:

- ❑ PEI to become Canada's first Net Zero Province
- ❑ Islanders, businesses, organizations, and communities to play an even bigger part in PEI's solution(s)
- ❑ Increased engagement of Islanders, businesses, communities, and municipalities

Let's be bold!



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Image Source: Jamie McCaffrey, flickr.com/photos/15609463@N03/7841164544/

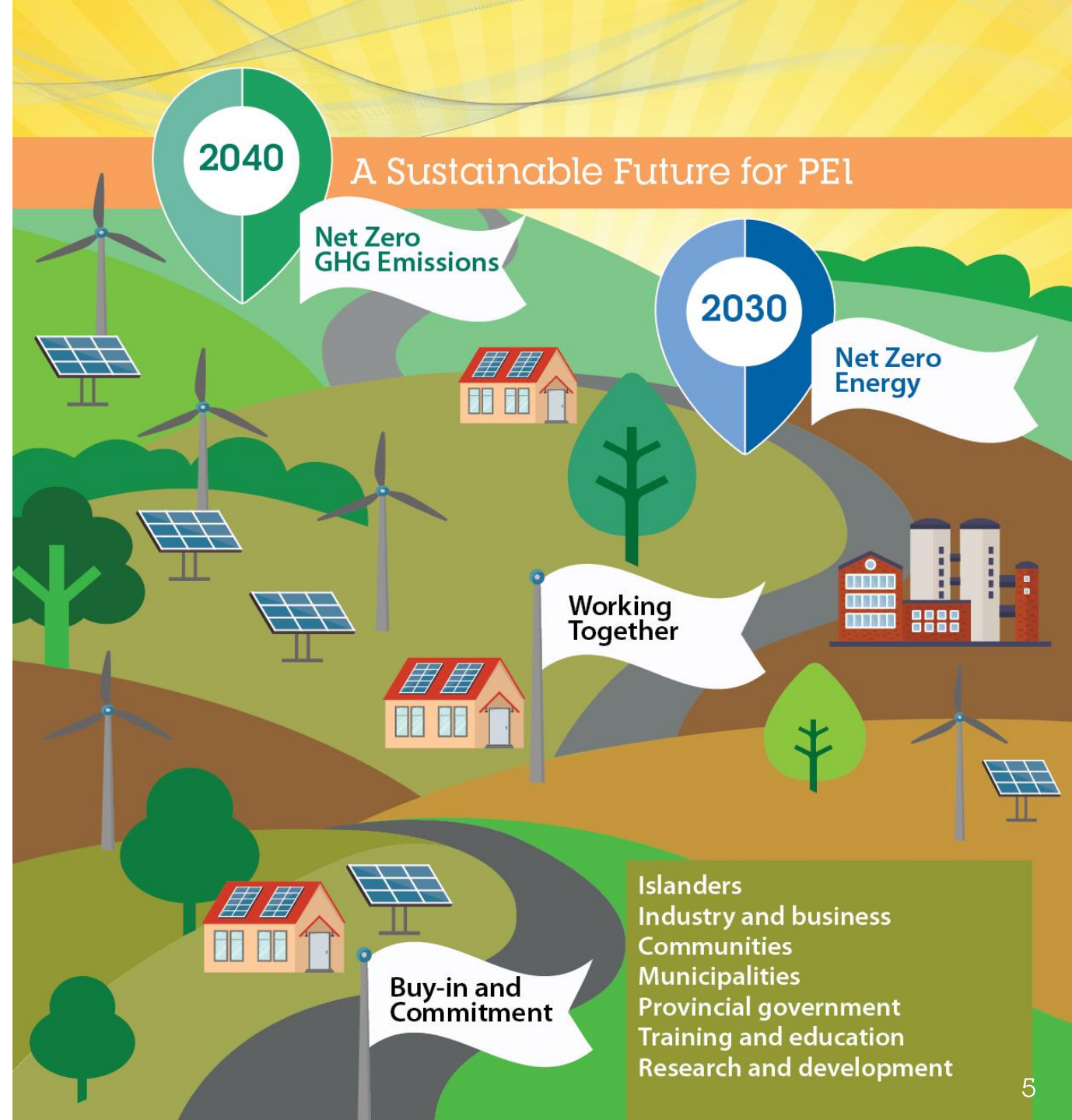
A Vision for Our Island

Vision

To become
Canada's first Net Zero Province
- a model for Islanders to be proud
of and for others to follow

* GHG = Greenhouse gas

A Discussion Document for Islanders



A Vision for Our Island

means working together to accelerate
PEI's Path Towards Net Zero

A Bold 20-year Plan
to be the first Province
in Canada to achieve
Net Zero GHG Emissions

2020

2030

2040

2050

PRINCE EDWARD ISLAND'S PATH TOWARDS NET ZERO

Net Zero GHG Emissions
- Canada's Target

PEI First in Canada
Net Zero GHG Emissions

Produce no more GHGs than
our land, ocean, and technologies can absorb

Reduced GHG Emissions - Target of 1.2 Megatonnes
Net Zero Energy

Reduce reliance on imported fossil fuels and increase renewable energy use,
giving the Island cleaner energy and more independence
Accelerate opportunities to capture carbon and offset GHG emissions
Foster innovation, grow our economy, and create good jobs for Islanders

Great Progress Made To-Date

Growing reputation and Island brand
Strengths in renewable energy development and generation
Proven innovation, leadership, and investment
Local commitment to energy conservation and efficiency

A Vision for Our Island

We All Have an Impact on GHG Emissions

Greenhouse Gas (GHG) emissions are added to the atmosphere through human and natural activities

Sources of GHG emissions include:

- Our cars, trucks, buses and boats, also off-road vehicles and other transportation
- Our homes and buildings, especially if using fossil fuels for heating
- Agriculture (e.g., tilling and soil management practices, livestock, manure management, fertilizer use)
- Industrial processes and manufacturing
- Waste

How to achieve Net Zero GHG emissions:

- Reduce the amount of GHG released into the atmosphere, and
- Offset remaining GHG emissions produced by removing carbon

A Vision for Our Island

Ways We Can Work Together Towards Net Zero

Conservation

- Energy (building methods, use)
- Agriculture and land management practices
- Improved quality of natural environment
- Waste minimization



Efficiency

- Improved energy efficiency for homes and buildings and appliances (heating, retrofits, upgrades and new builds)
- On-farm management practices
- Technologies and innovative techniques
- More efficient use of materials, water and waste (including use of landfills)



Land Use and Carbon Removal

- Land use planning to shape the patterns of energy use and development within communities (e.g., “workplace clusters”)
- Increased use of natural carbon sinks (carbon sequestration)
- Use of existing and new technologies to capture, store, and/or use carbon
- Trading carbon emission credits, helping to create a cleaner environment for all



Renewable Sources

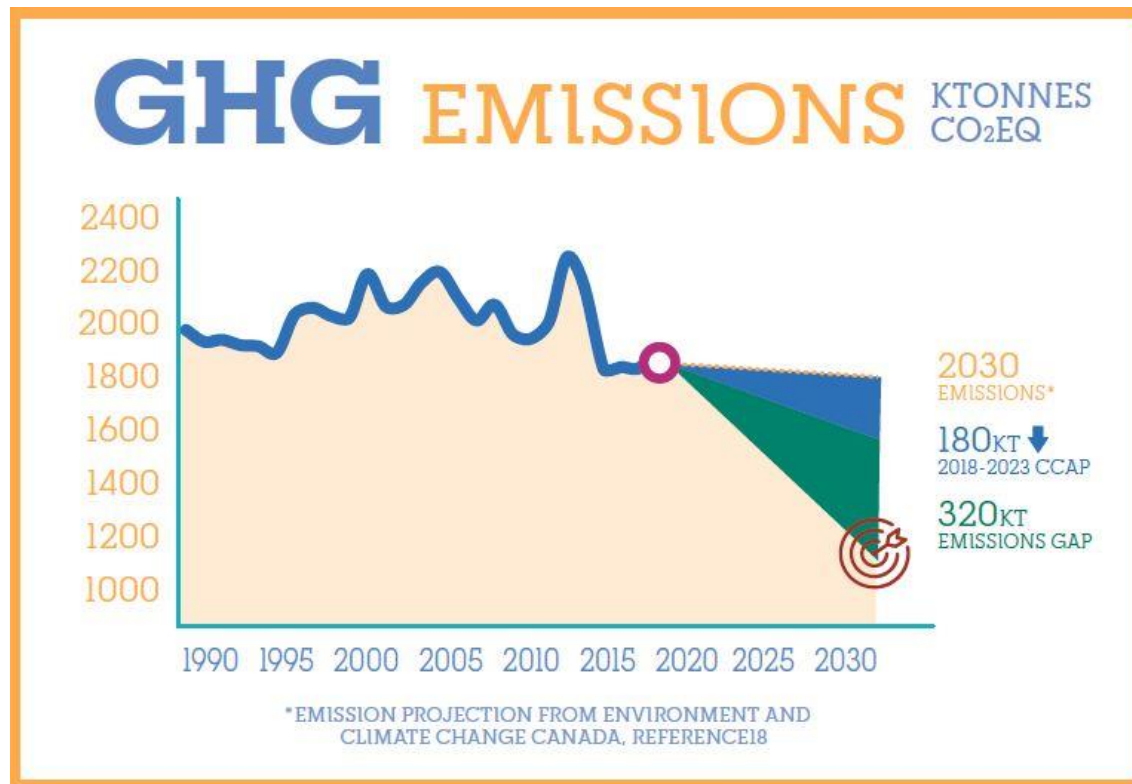
- Transition from fossil fuels to renewable energy sources (e.g., wind, solar, geothermal, biomass)
- Renewable energy generation
- Clean fuels
- Electrification of transportation
- Active transit infrastructure



A Vision for Our Island

Our Path Towards Net Zero

We are moving towards our 2030 GHG emissions target



Together we can advance
our path to achieve
the 2040 Net Zero Target

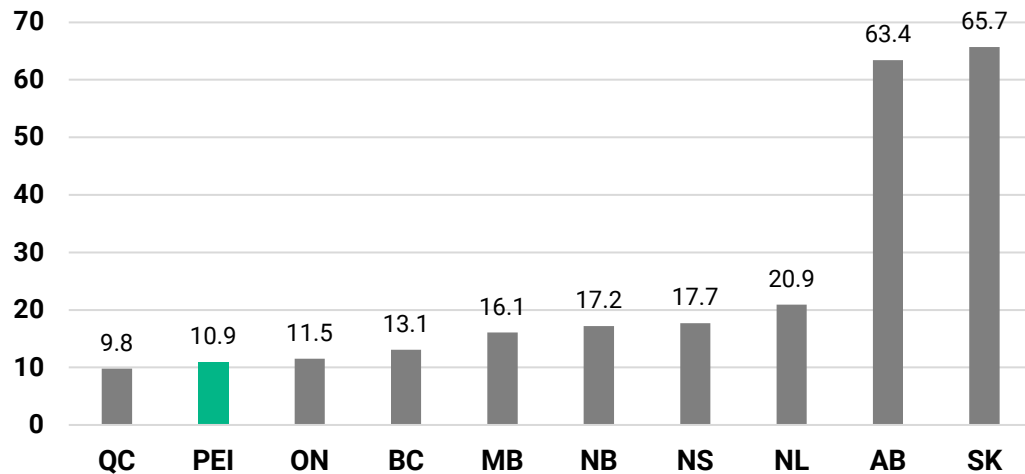
Legislated target through Climate Leadership Act 2019

Where We Are Today

PEI is doing well, but as Islanders we can, and must, do more

PEI has the **Second Lowest** Per Person **Total GHG** Emissions of any Province in Canada

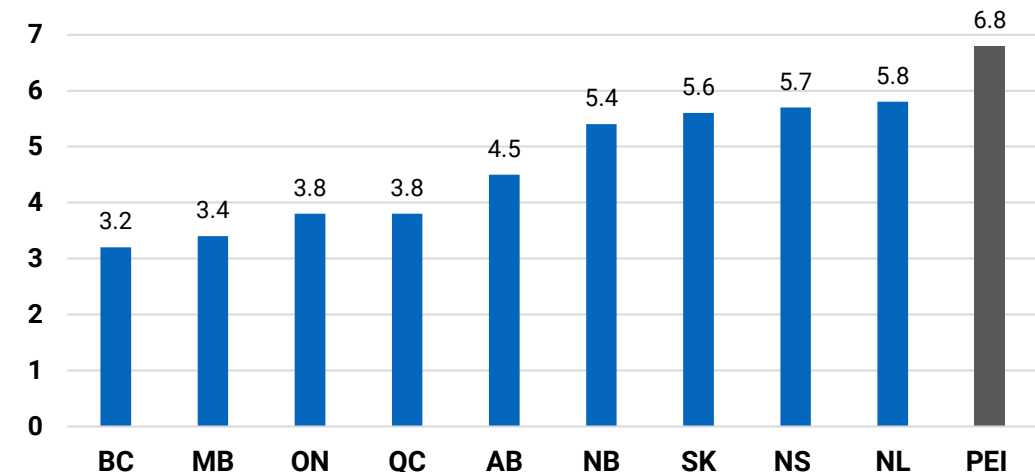
Per Person Total GHG Emissions by Province
(tonnes of CO₂ equivalent) - 2018



GHG emission per person is presented by province for 2018
Source: Environment and Climate Change Canada Data. Canada's official GHG inventory

PEI has the **Highest** Per Person **Household** GHG Emissions of any Province in Canada

Per Person Total Households GHG Emissions by Province
(tonnes of CO₂ equivalent) - 2017

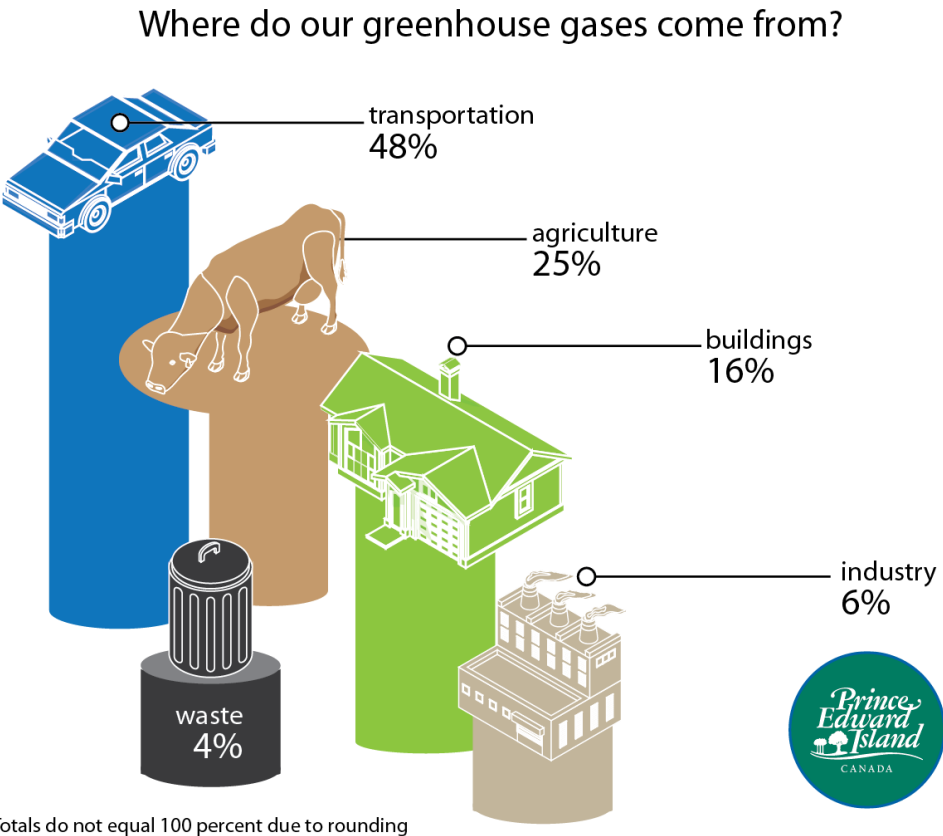


Source: Statistics Canada, Census of Population, 2017
Statistics Canada, Physical flow account for GHG emissions, Table 38-10-0097-01

Where We Are Today

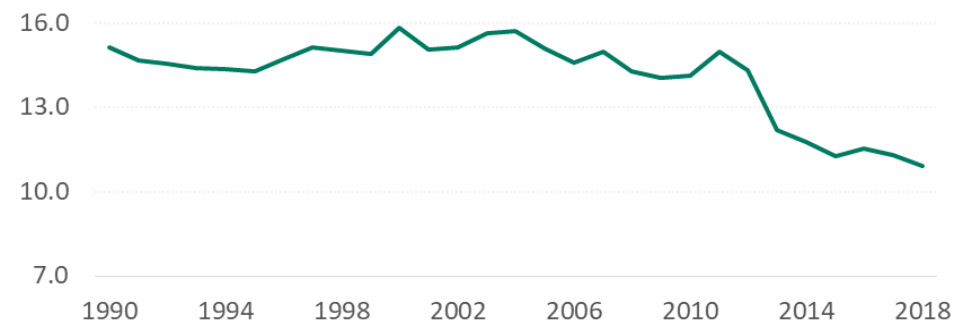
47% of PEI's GHG Emissions come from Transportation

Sources of GHG Emissions in PEI (2019)



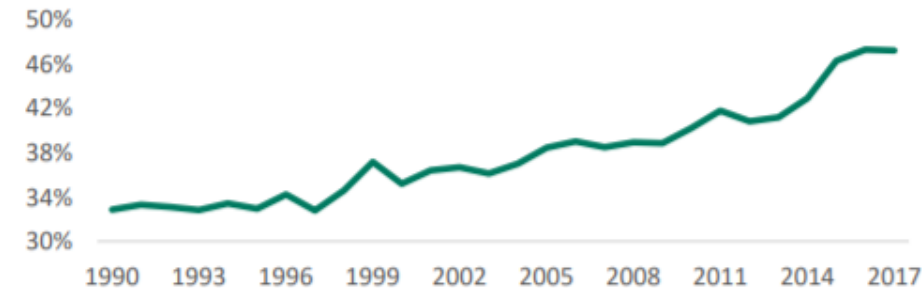
Per Person Total GHG Emissions is Declining in PEI

Per Person Total GHG Emissions (tonnes of CO₂ equivalent) - 1990 to 2018



Source: Environment and Climate Change Canada Data

Transportation emissions as a percentage of all emissions in PEI have been increasing

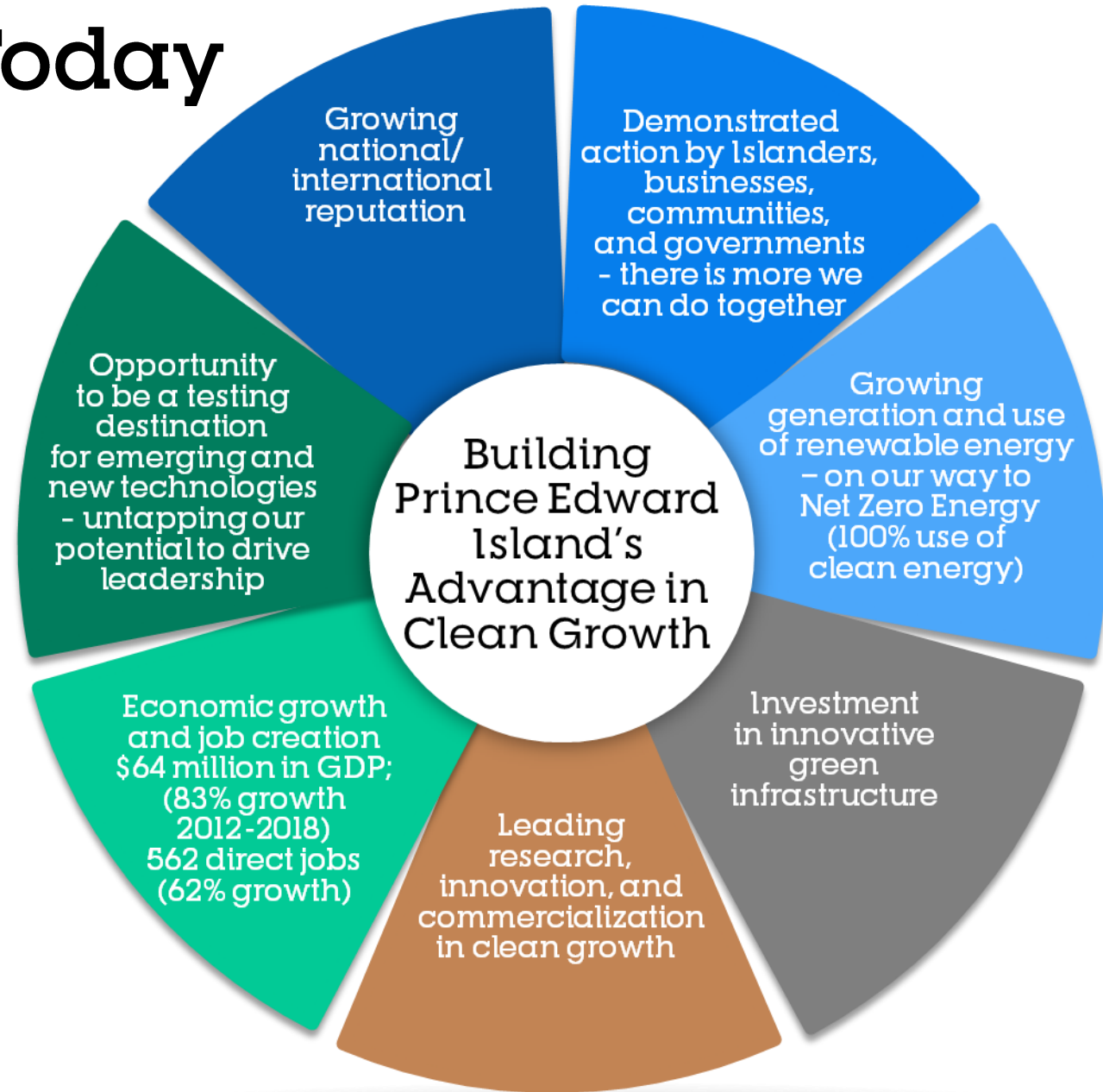


Emissions from the transportation sector have been increasing. Transportation emissions have increased by 37% from 1990 to 2017 (from 0.67 Mt CO₂ eq to 0.86 Mt CO₂ eq).

Data from Table A12-3: GHG Emissions for Prince Edward Island by Canadian Economic Sector, 1990-2017, National Inventory Report (2017).

Where We Are Today

Our Strengths

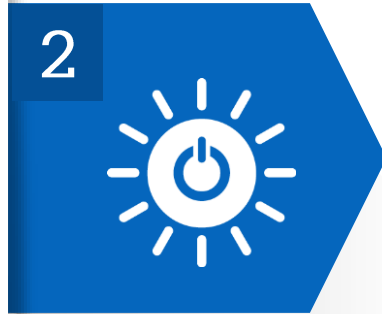


Proposed Direction

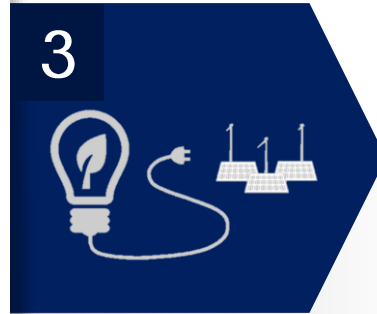
Guiding Principles



Every Islander has a voice and opportunity to contribute to a sustainable future for Prince Edward Island



Affordable energy solutions are available to Islanders



Our energy supply is secure and sustainable



We work together to positively impact the social, economic and environmental sustainability of our Island



We lead in advancing Canada's priorities and commitments

Proposed Direction - Path Towards Net Zero 2040

Five Strategic Pillars

Sustainable Living

Supporting Islanders and communities

Sustainable Communities and Businesses

Empowering sustainable models for energy, land and water

Sustainable Energy

Pursuing sustainable energy and emerging technologies

Research, Innovation, and Economic Growth

Driving success on the path towards net zero

Sustainable Government

Leading by example

We Envision...

All Islanders having access to affordable and reliable energy solutions, and together, reducing energy consumption.

Innovative approaches to community and business-led sustainable development.

100% clean energy use (Net Zero Energy) by 2030, leveraging PEI's leadership in sustainable energy generation.

A thriving clean growth cluster that attracts innovators, investors, and problem solvers and creates economic growth and jobs.

Government leadership that inspires our Island as we implement an accelerated path towards our 2040 Net Zero target.



A Discussion Document for Islanders

Sustainable Living

Supporting Islanders and communities



We envision all Islanders having access to affordable and reliable energy solutions, and together, reducing energy consumption.

PROPOSED PRIORITIES

1. Accelerate investment in next-generation green infrastructure
2. Work with Islanders to maximize energy savings and efficiency gains for residential, commercial, and institutional improvements and buildings
3. Transition to low-emission transportation and active living solutions
4. Advance community-based approaches to integrating land use and energy planning

Sustainable Communities and Businesses

Empowering sustainable models for energy, land, and water



We envision innovative approaches to community and business-led sustainable development.

PROPOSED PRIORITIES

1. Develop and invest in innovative community-led initiatives for sustainable and energy generation models
2. Successfully implement a Sustainable Community Hub model that attracts people and businesses
3. Accelerate innovation and adoption of advanced technologies, practices, and processes in agriculture, fisheries, and aquaculture, partnering with cleantech and biotech companies
4. Build a Clean Growth Business Hub that helps businesses set and achieve sustainable targets

Sustainable Energy

Pursuing sustainable energy and emerging technologies



We envision 100% clean energy use (Net Zero Energy) by 2030, leveraging PEI's leadership in sustainable energy generation.

PROPOSED PRIORITIES

1. Develop and invest in a long-term energy self-sufficient roadmap that ensures a reliable and sustainable energy supply
2. Grow PEI's position as a global leader in clean and renewable energy generation –as part of a strong PEI brand
3. Foster innovation and investment in emerging technologies and local economic development
4. Transform the workforce to support a green economy

Research, Innovation, and Economic Growth

Driving success on the path towards net zero



We envision a thriving clean growth cluster that attracts innovators, investors, and problem solvers and creates economic growth and jobs.

PROPOSED PRIORITIES

1. Aggressively accelerate PEI's path to net zero, through a new entity—PEI Energy Academy, that will transform challenges into solutions and new ideas, and showcase technologies
2. Actively pursue opportunities where PEI can become a living laboratory to test and implement new and emerging technologies and approaches
3. Drive cleantech sector growth, leveraging and further attracting expertise and leadership, through an industry-led cluster and cross-sector collaboration
4. Accelerate investment in R&D projects focused on cleantech and biotech, including enhancements to carbon capture and innovative carbon capture, storage, and usage technologies

Sustainable Government

Leading by example



We envision government leadership that inspires our Island as we implement an accelerated path towards our 2040 Net Zero target.

PROPOSED PRIORITIES

1. Build early momentum through immediate action that will have a long-term, sustainable impact
2. Commit to strategic long-term investments that will accelerate our progress towards GHG targets
3. Promote clean growth and PEI's global leadership, resulting in new prospecting of talent, innovation, and businesses as well as economic growth
4. Collaborate across all government departments and agencies



Moving Forward

Incorporate the feedback received from Islanders into the development of PEI's Path Towards Net Zero Plan

Continue with modelling, analysis, and optimization to support the identification of priorities

Update policies, regulations, and legislation, as necessary

Prioritize strategic investments for the next five years

Align government's response across all departments

Collaborate with the federal government

Develop a long-term financial investment strategy

Engage Islanders to advance priorities

Integrate a monitoring, evaluation, and reporting process to guide the implementation of priorities

The Next 5 Years – Bold Initiatives

The next 5 years are critical to advance PEI's Path to Net Zero (2040):

1. Be leaders in greening government fleets
2. Build green (or near net zero) state of the-art infrastructure investment
3. Invest in an island-wide electric bus system through partnerships
4. Position PEI as a leader in clean growth through a one-of-its kind in Canada, PEI Energy Academy hub and collaborative cluster
5. Partner with Federal Government to establish a 5-year fund to create models of sustainable communities across the province
6. Proactively partner to make PEI a test site for transportation solutions
7. Make key investments in R&D and innovation for carbon reduction and capture advancements in agriculture, fisheries, and aquaculture
8. Achieve Net Zero Energy by 2030!



We Want to Hear from You

1. Looking at the next 5 years, what bold initiatives and ideas are needed for PEI to become Canada's first Net Zero Province?
2. How do we engage more people, businesses, and communities?

A Bold 20-year Plan
to be the first Province
in Canada to achieve
Net Zero GHG Emissions