dunsky
Energy + Climate

PEI ENERGY STRATEGY

Summary

Introduction

Prince Edward Island (PEI) stands at a pivotal moment in its energy transition. Since the release of its last energy strategy in 2017, energy consumption has increased and electricity demand has grown due to electrification of transportation and buildings, and population growth. These changes reflect new challenges on the province's energy systems, particularly during periods of winter peak demand, where continued growth in electricity demand are putting pressure on the electricity grid. Meanwhile, recent extreme weather events—such as post-tropical storms Dorian and Fiona—have underlined the need for a more resilient energy system that is adapted to changing climate patterns.

PEI remains committed to climate action, having adopted an ambitious goal of reaching net-zero by 2040. These commitments require a significant transformation in how energy is produced, delivered, and used across all sectors of PEI's economy while being mindful of the need to balance climate action, affordability, and energy system reliability. In 2023 the Province released its "PEI Energy Blueprint Discussion Paper" summarizing the state of energy within the province and suggesting key areas of focus for future energy planning.[1] This was followed by an extensive consultation process that included surveys, public and stakeholder sessions, and formal written submissions; all of which were summarized in the "PEI Energy Blueprint: What We Heard Report".[2] In 2024, the Province also undertook a review of the

[1] Prince Edward Island Energy Blueprint Discussion Paper, April 25, 2023. https://www.princeedwardisland.ca/en/publication/pei-energy-blueprint-discussion-paper

[2] Prince Edward Island Energy Blueprint - What We Heard Report, December 18, 2023. https://www.princeedwardisland.ca/en/publication/pei-energy-blueprint-what-we-heard-report

province's electrical service, the findings of which have also informed the actions contained in this strategy.[3]

In response to the challenges and opportunities presented by the evolving landscape, as well as the outcomes of province-wide consultation, Dunsky Energy + Climate Advisors (Dunsky) was retained to develop an updated energy strategy – building off the Province's previous work – and to chart a clear course for the next decade. This summary presents PEI's updated energy strategy for the 2026–2035 period.

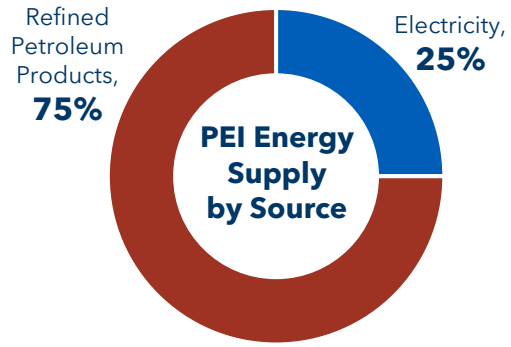
Current State

Prince Edward Island has experienced significant population growth in recent years. Between 2016 and 2023, the population increased from 142,907 to 173,787, representing a 22 per cent rise.[4] During the same timeframe, the total number of homes in the province grew from approximately 61,000 to 69,000 – a growth of approximately 13 per cent.[5] From 2017 to 2023, the number of vehicles on the road increased by five per cent, from approximately 113,800 to 119,500.[6]

Energy Use and Emissions

In 2022, about 75 per cent of the energy used in the province came from refined petroleum products (RPP) such as gasoline, diesel, propane, and heating oil.[7] Electricity made up the remaining 25 per cent. The use of electricity is growing and has increased by 16 per cent since 2016 but, RPP remain a substantial source of energy for transportation, home heating, and industrial operations. Transportation is the largest energy consuming sector in the province, making up 42 per cent of the

FIGURE 1. PEI ENERGY SUPPLY BY SOURCE [7]



[3] Prince Edward Island Energy Review, August 26, 2025. https://www.princeedwardisland.ca/en/publication/pei-energy-review

[4] Statistics Canada. 2023. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 15, 2023, and PEI 50th Annual Statistical Review 2023.

[5] NRCan Comprehensive Energy Use Database. https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP&sector=res&juris=pe&year=2022&rn=14&page=0

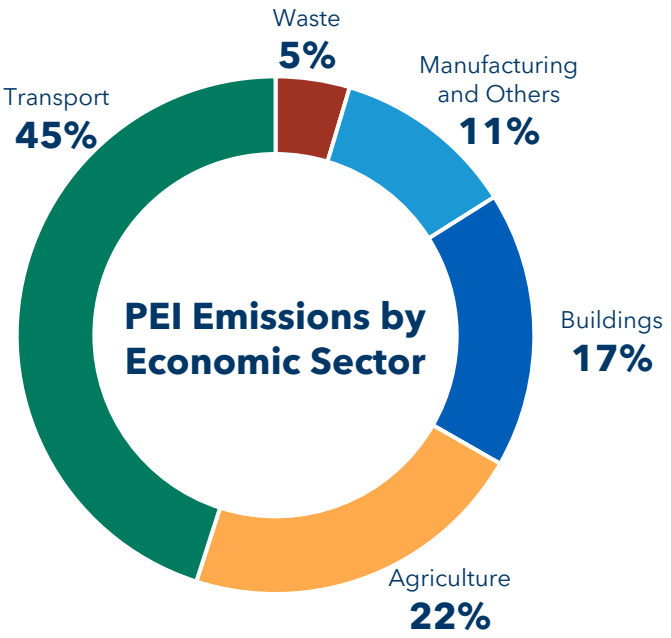
[6] Statistics Canada. Table 23-10-0308-01 Vehicle registrations, by type of vehicle and fuel type

[7] Canada's Energy Future, End Use Demand, Current Measures. https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2023-data-supplement/

total demand for energy in 2022, with the residential and industrial sectors accounting for about 25 per cent of provincial energy use.[7]

Even though the province's economy and population have been growing, greenhouse gas (GHG) emissions have been slowly going down over the past three years, with overall emissions, and emissions per person, remaining steady since 2016.[8] Transportation is the biggest source of GHG emissions in the province, making up 45 per cent of emissions in 2023.

FIGURE 2. PEI'S GHG EMISSIONS BY ECONOMIC SECTOR [8]



Emissions from buildings dropped by nine per cent over the past year thanks to efforts to improve energy efficiency and reduce the use of heating oil. Most of these reductions came from homes, showing that government programs and investments in household energy upgrades are helping to lower emissions. Today, 29 per cent of homes in the province still use heating oil as their main source of energy for home heating, down from 53 per cent in 2016.[9] The high number of homes still heated with oil along with continued use of gasoline and diesel vehicles, remain some of the biggest challenges to reaching the province's net-zero emissions goals.

Electricity Demand, Capacity, and Imports

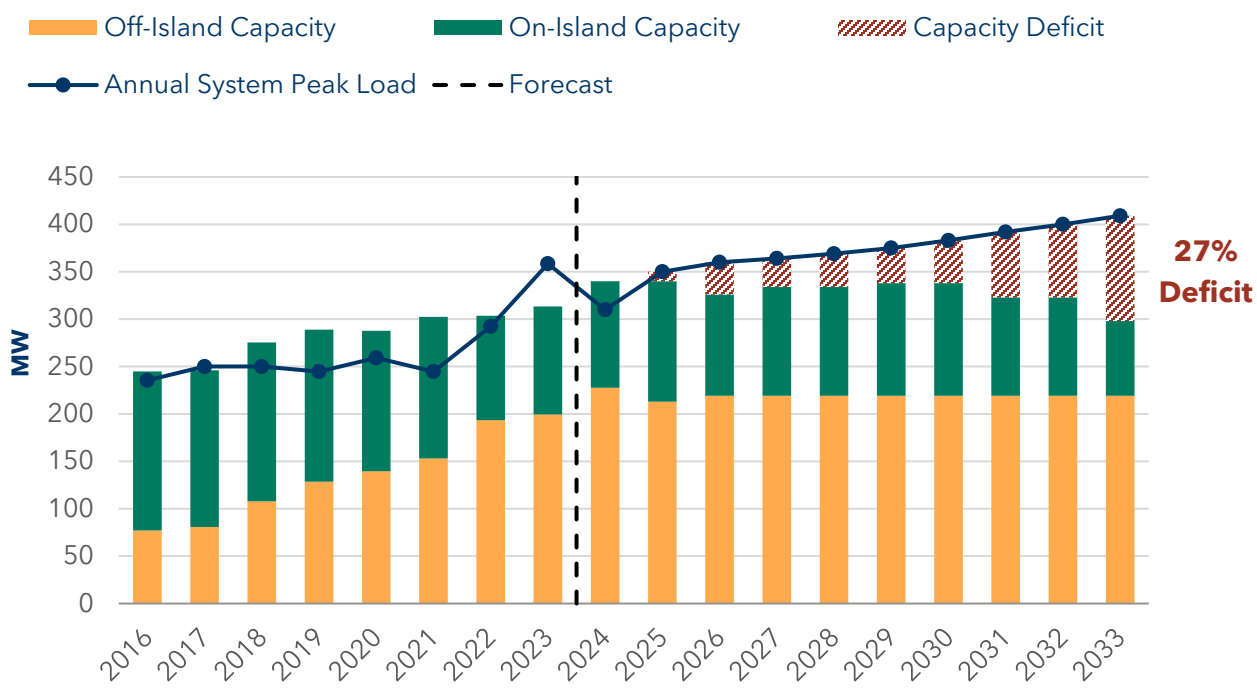
Electricity use in the province has grown quickly over the past 10 years. Maritime Electric, which provides power to about 90 per cent of homes and businesses in PEI, saw a 60 per cent increase in its annual peak electricity demand between 2014 and 2023. That demand is expected to grow by another 32 per cent between 2024 and 2033.[10] The province's fast population growth, in addition to new housing construction, have directly increased electricity use, with most new homes in PEI using electricity as their main source of heat.

[8] NIR 2025: Canada's National Inventory Report (NIR). Table A12-3: 1990-2023 GHG Emission Summary for Prince Edward Island.

[9] MQO Research, Inc. Prince Edward Island 2024 Home Energy Survey, April 2025.

[10] UE20742 – Supplemental Capital Budget Request for MECL's On-Island Capacity for Security of Supply Project

FIGURE 3. MARITIME ELECTRIC CAPACITY AND PEAK [10]



This rise in demand has been faster than the growth in local electricity generation. In 2023, the amount of electricity that was produced on the Island dropped to just 31 per cent of the utility's peak demand. This means PEI is relying more on electricity from neighbouring provinces. However, provinces like New Brunswick, Nova Scotia, and Québec are also facing their own energy challenges, increasing the risk of potential supply problems. As PEI approaches the limit of how much electricity it can import, relying on other provinces for its energy needs could become a long-term risk.

Most of PEI's electricity that is generated on the Island comes from renewable sources like wind and solar. Less than one per cent comes from fossil fuels. PEI is also reliant upon the long-standing partnership with New Brunswick (NB) which also boasts a clean supply in comparison to other parts of the country with over 67 per cent non-emitting generation, though still a higher proportion of generation from fossil fuel sources.[11] Since about two-thirds of PEI's electricity is imported from NB, the province's overall electricity supply has a higher carbon footprint. For this reason, it's important to build more clean energy in PEI, to both make the power supply more secure and help meet climate goals.

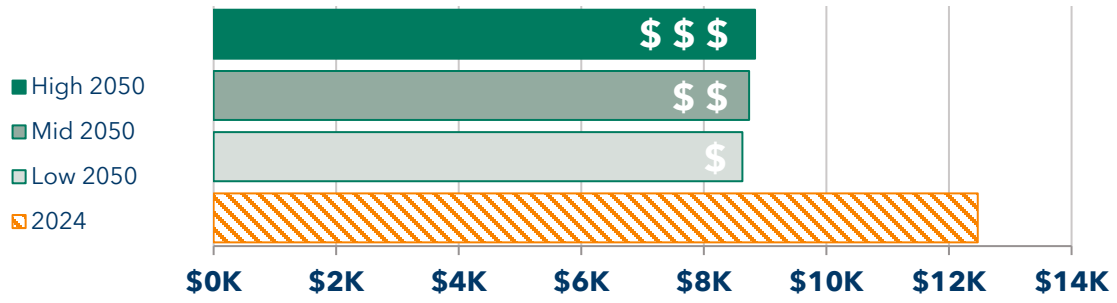
[11] NIR 2025: Canada's National Inventory Report (NIR). Table A13-3 and A13-5: 1990-2023 Electricity Generation and GHG Emission Details for Prince Edward Island and New Brunswick.

Affordability and Equity

Energy costs are a growing concern for many households. For many, high energy costs mean tough choices between paying for heat or other essentials like food. Vulnerable groups such as seniors, newcomers, and single-parent families are especially at risk, often living in older homes that are less energy efficient. According to the 2023 Canadian Income Survey, nearly seven per cent of PEI residents live below the low-income cut-off.[12] These households spend more of their income on basic needs and face greater energy challenges.

A recent study by the Transition Accelerator estimates that electricity rates could rise by 14 to 23 per cent by 2050, compared to 2024 prices (after adjusting for inflation).[13] However, switching away from expensive fossil fuel systems like oil boilers and gas-powered vehicles will help reduce overall energy costs for households. When considering a household's entire energy wallet (all costs associated with purchasing, operating, and maintaining the energy and technology needed for household energy needs), the study found that the average household in PEI could spend about 30 per cent less on energy in 2050 than in 2024 by switching to electricity.

FIGURE 4. MEDIAN ANNUAL ENERGY WALLET [13]



Lower-income households will feel the impact of rising electricity costs more than others. Research from Efficiency Canada shows that 26 per cent of households in the province spend over six per cent of their income on home energy, among the highest rates in Canada. This doesn't include transportation costs, which can be even more unpredictable.[14] To support all people living on PEI, future energy plans must focus on making clean energy affordable and reliable, while helping households transition away from fossil fuels like heating oil and gasoline.

---

[12] Prince Edward Island 51st Annual Statistical Review 2024. Source: Statistics Canada. Table 11-10-0135-01 Low-income statistics by age, sex and economic family type. https://www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf

[13] Martin, N., Bowie, D., Fakhoury, R., and Kabbara, M. (2024). Household Energy Affordability in a Net-Zero Future. Electrifying Canada.

[14] Efficiency Canada, Energy Poverty in Canada. https://www.efficiencycanada.org/energy-poverty-in-canada/

Vision and Objectives

In light of the ongoing changes that have occurred over the last decade as well as the current context and future ambitions, PEI's vision for its energy future is to:

> ***Embrace change while ensuring the energy system is reliable and affordable, in a manner that is sustainable and leaves no community behind.***

This vision recognizes the need for continued modernization of PEI's energy systems while reinforcing the Province's core commitment to fairness, resilience, and sustainability. It also recognizes that the energy transition must be as inclusive as it is ambitious—delivering tangible benefits to all people living on PEI, particularly vulnerable, underserved, and Indigenous communities, as well as creating space for Island businesses to remain economically competitive.

The strategy is structured around four key objectives:

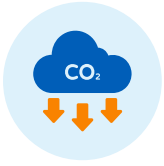
Reliability

Ensure a reliable and resilient energy system that can meet growing demand, withstand climate-related disruptions, and deliver consistent service to all communities.

Affordability & Equity

Maintain affordability and embed equity across all energy policies and programs, ensuring no community is left behind in the transition.

Sustainability



Build a balanced, low-carbon supply mix with clean fuels to accelerate the transition to a net-zero energy system that enhances energy security and reduces emissions.

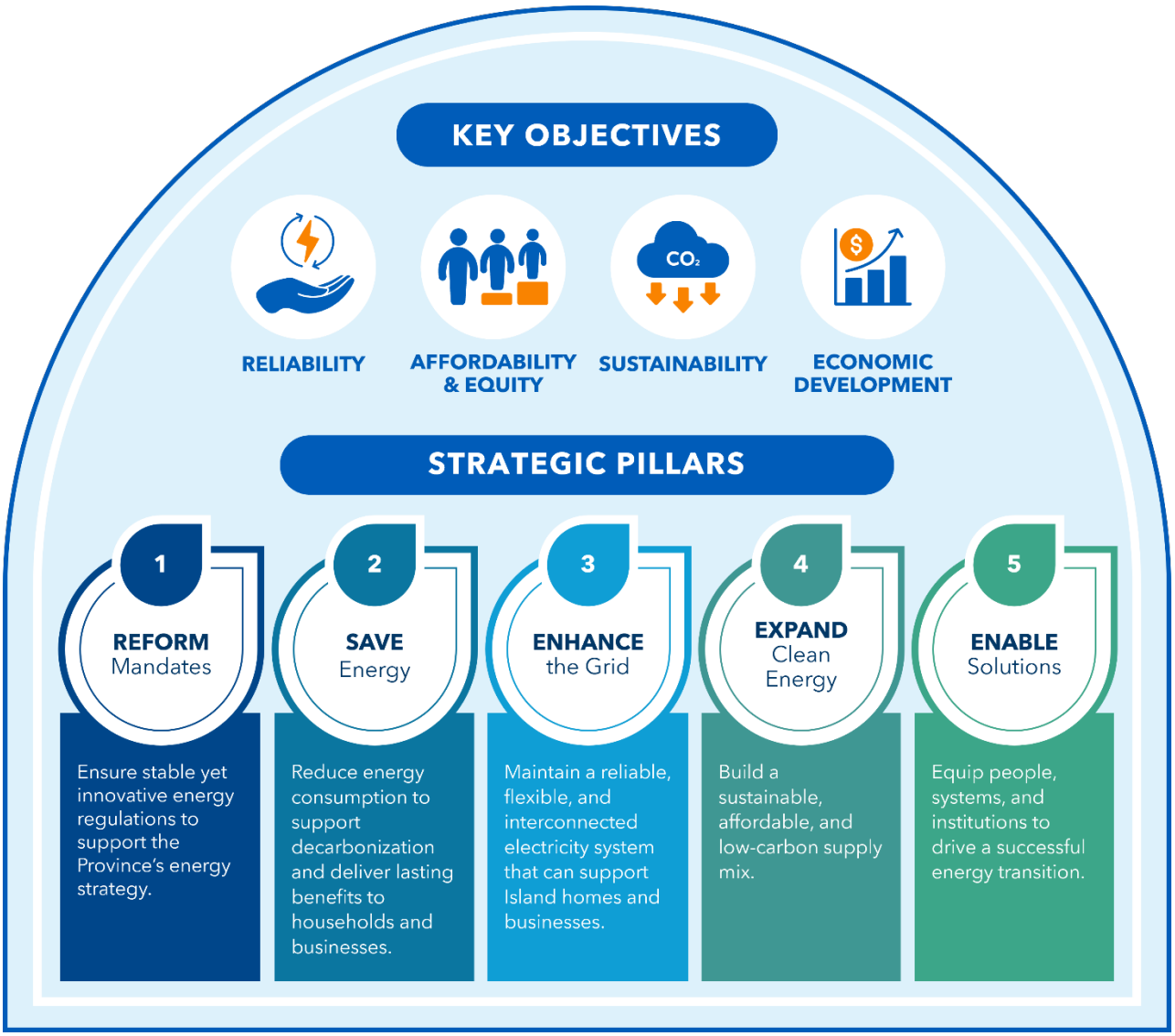
Economic Development

Leverage PEI's local expertise and economic potential to grow clean energy jobs, businesses, and innovation in communities across the province.

Recommendations

The following recommended strategies and actions reflect the Province's commitment to the key objectives of Reliability, Affordability & Equity, Sustainability, and Economic Development, which were identified through the strategy development process.

Together, they represent the policy, programmatic, and regulatory priorities that will shape PEI's energy system over the next decade. In total, there are 20 actions under five strategic pillars, including a foundational action to develop an implementation roadmap that will guide the delivery of other actions.



1

Reform Mandates

Ensure foundational stability and innovation in the regulatory space to support the Province's energy strategy.

As PEI moves toward a cleaner and more sustainable energy system, the institutions that manage and regulate the energy system need to be ready to support that change. This includes updating how decisions are made, improving public oversight, and making sure the system works fairly for everyone. The changes recommended will help protect consumers, support innovation, and make sure future energy investments are fair and in the best interest of all people living on PEI. Proposed actions include:

ACTION 1.1 – Strengthen Consumer Protections and Equity to ensure that all customers, especially those from vulnerable or underrepresented groups, are heard in energy decisions. By doing so, the benefits and costs of the clean energy transition will be shared more equally, improving affordability and participation.

ACTION 1.2 – Modernize a Responsive Regulatory Process to create clearer processes, timelines, and expertise for faster and higher-quality decision-making, allowing the regulator to keep pace with new technologies and speed up the development of local, clean energy projects.

ACTION 1.3 – Launch a Demonstration and Innovation Hub to provide a space for testing new energy ideas, technologies, and policies in real-world conditions before permanent adoption. This approach reduces risk, encourages collaboration, and turns climate goals into practical solutions.

ACTION 1.4 – Formalize a Total Energy System Planning Process to coordinate planning for all energy sources, including electricity, fossil fuels, and emerging clean fuels, under one clear framework. Doing so will ensure decisions balance short-term needs with long-term goals.

2

Save Energy

Reduce energy consumption to support decarbonization and deliver lasting benefits to households and businesses.

Using less energy is one of the fastest and most affordable ways for PEI to meet its climate and energy goals. By investing in equipment and building upgrades, and programs that help people and businesses use energy more efficiently, PEI can avoid expensive upgrades to the electricity system. The Save Energy pillar supports a stronger, well-funded approach to demand-side management (DSM) through updated policies, regulations, and programs. Proposed actions include:

ACTION 2.1 – Modernize the DSM Framework to ensure that energy savings are maximized, fairly distributed, and aligned with emerging system and policy needs. This may include updating targets to reflect energy goals or changing the definition of DSM.

ACTION 2.2 – Expand Investment in DSM by increasing and sustaining funding, especially for low-income and underserved communities. Doing so will enable deeper energy retrofits, broader participation, and support non-energy improvements such as better health, comfort, and housing quality.

ACTION 2.3 – Strategically Pursue Beneficial Electrification by focusing on high impact uses like heat pumps and electric vehicles while managing new electric loads and recognizing that electrification isn't practical for all sectors. Additionally, pair electrification with energy conservation to help reduce emissions, lower costs, protect the grid, and bring long-term benefits to communities, businesses, and the environment.

ACTION 2.4 – Strengthen Building Regulations by adopting updated energy codes and electrical standards that improve energy efficiency, safety, and readiness for renewables and electric vehicles. This ensures new and existing buildings use less energy and better prepared for a net-zero future.

ACTION 2.5 – Increase Investments in Transportation to accelerate the shift to zero-emission vehicles and reduce emissions from the transportation sector. Coordinate this with land-use planning and transit improvements to lower energy demand, reduce emissions, and build a more resilient and equitable transportation system.

3

Enhance the Grid

Maintain a reliable, flexible, and interconnected electricity system that can support Island homes and businesses.

PEI's electricity system needs upgrades to keep up with growing demand and support the shift to clean energy. Despite lots of local, clean electricity, backup power and stronger infrastructure are needed to ensure reliable supply. Upgrading transmission and distribution lines, adding energy storage, and building smarter grid systems are recommended to accomplish this. The Enhance the Grid pillar focuses on working with utilities and other partners to build a modern, reliable, and flexible electricity grid. Proposed actions include:

ACTION 3.1 – Upgrade and Expand Transmission Infrastructure to improve reliability and support clean energy growth. This might include replacing aging transmission cables, increasing regional connections with neighbouring provinces, and building new high-voltage lines. This will require coordination with provincial and federal partners and can result in better collaboration with neighbouring provinces, unlocking new renewable energy projects.

ACTION 3.2 – Upgrade and Expand Distribution Infrastructure to improve reliability and support clean energy projects across all communities. This will help prevent outages, improve power quality, and ensure that clean energy technologies are accessible everywhere. A stronger distribution system also supports local economic growth and helps prepare the grid for increasing electricity demand.

ACTION 3.3 – Accelerate the Rollout of Load Flexibility Programs that help shift electricity use to times with less electricity use (off-peak times), easing pressure on the grid and reducing the need for costly upgrades. Technologies like smart meters and vehicle-to-grid systems can give customers more control over their energy use while supporting clean energy integration. These programs can also empower consumers to actively participate in energy management.

4

Expand Clean Energy

Build a sustainable, affordable, and low-carbon supply mix.

As PEI electrifies heating, transportation, and industry, it must ensure that the energy powering this transition is clean, reliable, and locally or regionally sourced. In this way, PEI can cut emissions, reduce dependence on fossil fuels, and protect people living on PEI from global energy price swings. Setting long-term goals for renewable energy and storage will be key. The Expand Clean Energy pillar focuses on increasing the supply of both on-Island and non-emitting energy to meet growing demand and support energy independence and security. Proposed actions include:

ACTION 4.1 – Establish Targets for On-Island Generation and Storage to guide investment and meet growing electricity demand. Through this, the province can make sure there's enough reliable power available during times of high demand. Including equity-focused goals, like Indigenous-led or community-owned projects, helps ensure the benefits of clean energy are shared fairly.

ACTION 4.2 – Reduce Reliance on Fossil Fuels by supporting the strategic use of clean fuels like biomass and renewable diesel. These fuels can help lower emissions in sectors where electrification technology is still in development, such as rural heating, transportation, and industrial processes.

ACTION 4.3 – Explore Emerging Technologies like long-duration storage, clean hydrogen, and small modular reactors to address energy challenges not fully addressed by today's renewables and storage options. Early exploration and partnerships can help PEI innovate, attract investment, and build local expertise. Supporting these technologies also strengthens energy security.

5

Enable Solutions

Equip people, systems, and institutions to drive a successful energy transition.

Clean energy technologies are essential, but they only work if the people and institutions behind them are ready to deliver. That means preparing PEI's workforce, supporting government departments, and making sure programs are inclusive and practical. The Enable Solutions pillar focuses on building the skills, tools, and coordination needed to make PEI's energy strategy work in real life—not just on paper. Proposed actions include:

ACTION 5.1 – Invest in Training and Workforce Development to make sure PEI has the skilled workers needed to deliver clean energy projects and upgrades. As more electricians, engineers, and building contractors are needed, targeted programs can help fill gaps and create local jobs. These efforts also support equity by including training opportunities for women, Indigenous peoples, and other underrepresented groups. Without targeted investments in training, upskilling programs, and industry partnerships, these gaps risk delaying projects, increasing costs, and limiting access to low-carbon technologies.

ACTION 5.2 – Engage and Empower Local Community Leaders to help connect energy policies with community needs. By supporting programs that build leadership, especially in underrepresented communities, PEI can increase participation in clean energy efforts and make solutions more inclusive and locally grounded. Strong community leadership helps ensure energy programs are practical, trusted, and widely supported.

ACTION 5.3 – Leverage Data and Transparency to support smarter planning and build public trust. Making energy data more accessible, such as building performance and electricity use, helps communities, businesses, and governments make informed choices. Clear and timely information also ensures decisions are based on evidence, progress is tracked, and the public stays informed and involved.

ACTION 5.4 – Enhance Energy Literacy so that people and communities can make informed choices and actively take part in the energy transition. A well-coordinated and inclusive approach to education across government, utilities, and community groups can help explain complex topics like electrification and rate design. Tailor communication to the needs of different groups to ensure people remain engaged in and informed of PEI's energy goals.

Implementation Roadmap

The PEI Energy Strategy outlines actions to guide the province's energy transition but is not a detailed implementation plan. Developing this plan will help focus efforts on the most urgent and cost-effective actions, based on readiness, risks, and opportunities. To move from strategy to action, PEI will need a clear plan that sets priorities, timelines, lead actors, budgets, and next steps.

Moving Forward Together

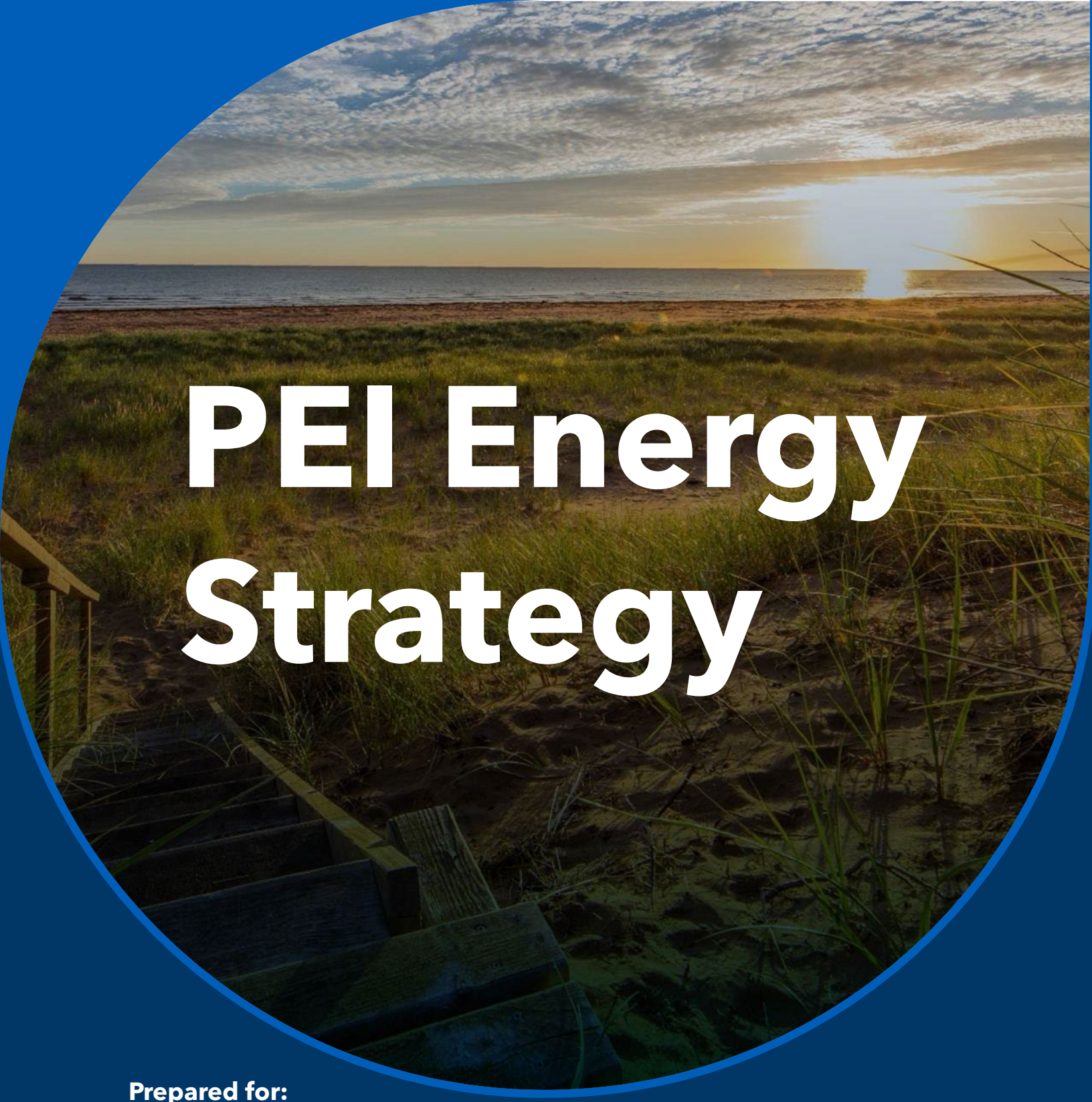
Prince Edward Island has made strong progress in its energy transition, especially in electrification and reducing fossil fuel use. However, electricity demand is now growing faster than supply. The Province faces an urgent challenge to secure reliable energy and has a unique opportunity to build a cleaner, fairer, and more resilient energy future.

The PEI Energy Strategy sets out a clear vision and goals across four focus areas: reliability, affordability and equity, sustainability, and economic development. To move forward, PEI must develop a detailed implementation roadmap that turns strategy into action—with clear priorities, timelines, and coordination across government, utilities, and communities. The actions identified within each focus area have been included because they directly support and advance the Province's overarching objectives, as outlined in the table below.

SUMMARY OF ENERGY STRATEGY ACTIONS

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
1.1	Strengthen Consumer Protections & Equity	○	●	○	○
1.2	Modernize a Responsive Regulatory Process	◐	●	●	○
1.3	Launch a Demonstration and Innovation Hub	◐	●	●	●
1.4	Formalize a Total Energy System Planning Process	●	◐	○	◐
2.1	Modernize the DSM Framework	◐	●	●	○
2.2	Expand Investment in DSM	●	●	●	◐
2.3	Strategically Pursue Beneficial Electrification	●	●	●	●
2.4	Strengthen Building Regulations	●	○	●	○
2.5	Increase Investments in Transportation	◐	●	●	●
3.1	Upgrade and Expand Transmission Infrastructure	●	◐	○	●
3.2	Upgrade Distribution Infrastructure	●	◐	○	●
3.3	Accelerate the Rollout of Load Flexibility Programs	●	○	●	◐
4.1	Establish Targets for On-Island Generation & Storage	●	●	●	○
4.2	Reduce Reliance on Fossil Fuels	●	●	●	◐
4.3	Explore Emerging Technologies	●	○	●	●
5.1	Invest in Training and Workforce Development	●	●	○	●
5.2	Engage and Empower Local Community Leaders	○	●	○	◐
5.3	Leverage Data and Transparency	●	◐	◐	◐
5.4	Enhance Energy Literacy	○	●	○	○

● Significant Progress ◐ Moderate Progress ○ Minimal Progress



PEI Energy Strategy

Prepared for:

Government of Prince Edward Island
Environment, Energy and Climate Action

August 2025

dunsky
Energy + Climate

Submitted to:

Environment, Energy and Climate Action
PEI Energy Corporation
11 Kent Street
Charlottetown, PE, C1A 7N8

www.princeedwardisland.ca
+1 902 368 5044

Prepared by:

Dunsky Energy + Climate Advisors
50 Ste-Catherine St. West, suite 420
Montreal, QC, H2X 3V4

www.dunsky.com | info@dunsky.com
+ 1 514 504 9030

About Dunsky

Dunsky supports leading governments, utilities, corporations and others across North America in their efforts to accelerate **the clean energy transition**, effectively and responsibly.

With deep expertise across the Buildings, Mobility, Industry and Energy sectors, we support our clients in two ways: through rigorous **Analysis** (of technical, economic and market opportunities) and by designing or assessing **Strategies** (plans, programs and policies) to achieve success.

Executive Summary

Prince Edward Island (PEI) is entering a pivotal phase in its energy transition. Since the release of its last energy strategy in 2017, the province has experienced rapid population growth and a sharp increase in electricity demand—particularly during winter peaks. These trends have placed growing pressure on PEI's energy infrastructure and revealed emerging capacity and reliability concerns, including a rising dependence on off-Island electricity imports and a projected shortfall in on-Island generation. These developments require proactive planning and investment to ensure that the province can meet future energy needs reliably, affordably, and sustainably.

To address these challenges and support its legislated goal of achieving net-zero emissions by 2040, the Government of PEI, with support from Dunsky Energy + Climate Advisors, has developed an energy strategy for the 2026–2035 period. This strategy builds on prior government work, including the 2023 "*Energy Blueprint Discussion Paper*" and "*What We Heard*" reports, providing a foundation to guide future energy system decisions and investments.

The strategy is guided by four overarching objectives: to build a **sustainable, low-carbon supply mix**; maintain **affordability and enhance equity** across all energy policies and programs; ensure a **reliable and resilient energy system**; and to leverage PEI's local expertise and **economic potential**. These objectives serve as the foundation for all recommended actions and are intended to ensure that the energy transition delivers broad, lasting benefits for all Islanders.

To achieve these objectives, the strategy is organized around five strategic pillars and includes 20 recommended actions. Each pillar reflects a core area of focus for PEI's energy future and provides a framework for transforming PEI's energy system over the next decade in keeping with reaching the Province's legislated targets of no more than 1.2 megatonnes of greenhouse gas (GHG) emissions yearly by 2030 and achieving net-zero emissions across the province by 2040.

1 **Reform Mandates** addresses the foundational structures that govern PEI's energy system. It focuses on modernizing regulatory processes, strengthening consumer protections, and establishing a more integrated and transparent approach to energy planning including regional collaboration. This pillar ensures that institutions are equipped to lead the transition effectively and equitably, while enabling innovation and accountability across the sector.

2 **Save Energy** targets the reduction of overall energy consumption through efficiency, conservation, and electrification readiness. By lowering demand, this pillar helps manage system costs, reduce emissions, and improve affordability. It also supports the transition

away from fossil fuels in buildings and transportation, while ensuring that energy savings are distributed equitably.

3 **Enhance the Grid** focuses on building a more reliable, flexible, and modern electricity system. As electricity becomes the backbone of PEI's net-zero future, this pillar emphasizes the need to upgrade transmission and distribution infrastructure, improve regional interconnections, and deploy smart grid technologies that can support clean energy integration and growing demand.

4 **Expand Clean Energy** supports the development of a sustainable and secure energy supply. It promotes increased on-Island renewable generation and storage, the strategic use of clean fuels, and the exploration of emerging technologies. This pillar aims to reduce reliance on fossil fuels, diversify energy sources, and ensure that clean energy is accessible.

5 **Enable Solutions** provides the cross-cutting supports necessary to implement the strategy successfully. It includes investments in workforce development, community engagement, data transparency, and energy literacy. This pillar ensures that people living and working on PEI are informed, empowered, and equipped to participate in the energy transition, and that institutions have the capacity to deliver on the strategy's goals.

This strategy represents the beginning of a longer-term process to transform PEI's energy system. The next step is to develop a detailed implementation plan that will prioritize actions, assign responsibilities, and establish timelines and performance metrics. This work will be closely coordinated with the forthcoming Net-Zero Action Plan (NZAP), ensuring alignment between energy system planning and broader climate objectives. Together, these efforts will provide a cohesive roadmap to guide PEI to achieving its 2040 goals.

Table of Contents

Glossary

Advanced Metering Infrastructure: A system of smart meters, communication networks, and data management tools that enables two-way communication between utilities and customers, allowing for real-time monitoring, billing, and management of electricity usage.

Business: An organization or entity engaged in commercial, industrial, or professional activities, which may consume energy and participate in energy efficiency or clean energy programs.

Electricity: A form of energy resulting from the movement of electrons, used to power homes, businesses, and industries. It can be generated from various sources including fossil fuels, renewables, and nuclear energy.

Energy: The capacity to do work. In the context of an energy strategy, it refers to all forms of energy used on PEI such as electricity, fossil fuels and biomass.

Energy Efficiency: The practice of using less energy to perform the same task or produce the same outcome, often through improved technologies or behaviors that reduce waste and lower emissions.

Energy Insecurity: A comprehensive term that refers to the inability of a household to access an adequate amount of energy required to meet their needs. Households with a high-energy cost burden (spend 6%+ household income), and other socio-economic vulnerabilities tend to make households more susceptible.

Capacity: The maximum output that a power generation or transmission system can produce or carry, typically measured in megawatts (MW).

Climate-Sensitive Livelihood Sectors: Sectors such as agriculture, fisheries, and tourism that are particularly vulnerable to the impacts of climate change and may require targeted adaptation and energy transition strategies.

Demand: The total amount of energy required by users at a given time. It fluctuates throughout the day and across seasons, influencing energy planning and infrastructure needs.

Demand Response: Programs or technologies that encourage consumers to reduce or shift their electricity use during periods of peak demand in response to price signals or grid needs.

Demand Side Management: Strategies and programs aimed at influencing how and when energy is used by consumers to improve efficiency, reduce peak demand, and support grid reliability.

Distributed Energy Resources: Small-scale energy systems (such as rooftop solar, battery storage, etc.) located close to where energy is used.

Greenhouse Gas Emissions: Gases such as carbon dioxide and methane that trap heat in the atmosphere and contribute to climate change, often released through energy production and use.

Industry: The sector of the economy involved in the manufacturing and production of goods, often energy-intensive and a significant consumer of energy.

Jurisdiction-specific Test: A test, as defined by the National Standard Practice Manual (NSPM), used by program administrators that addresses all the traditional components of cost-effectiveness testing but, with explicit consideration of the specific policy framework for a particular jurisdiction.

Long-duration Storage: Energy storage technologies capable of storing energy for extended periods, typically from eight or more hours to several days or weeks, to help balance supply and demand.

Net Energy Metering: A billing arrangement that allows customers with renewable energy systems (such as rooftop solar) to receive credit/compensation for excess electricity they generate and send back to the grid.

Net-Zero: A goal in which the total greenhouse gas emissions produced are balanced by the amount removed or offset so that no additional greenhouse gases accumulate in the atmosphere, limiting further contribution to climate change.

Power: The rate at which energy is used or produced, typically expressed in kilowatts (kW) or megawatts (MW) and the unit by which Demand is measured.

Power-efficient Design: Strategies to limit buildings' electricity use, ensuring that power demands stay within the constraints of buildings' electrical services (i.e., their connections to the electrical grid) and other infrastructure.

Small Modular Reactor: A compact, scalable nuclear reactor design that can be built in factories and assembled on-site, offering flexibility and potentially lower costs compared to traditional reactors.

Underserved Communities: Groups or populations that have historically had limited access to affordable, reliable, and clean energy services, often due to geographic, economic, or social barriers.

Vehicle-Grid Integration: Technologies and strategies that enable electric vehicles to communicate with and provide services to the electricity grid, such as load balancing and energy storage.

Minister's Message

Islanders continue to work hard doing their part to reduce carbon emissions and adapt to climate change. Government must also do its part by implementing a strong coordinated, long-term approach to securing an energy supply that is reliable, affordable, and sustainable.

Since the release of the last provincial energy strategy in 2017, PEI has experienced unprecedented disruptions to our energy supply. The aftermath of post-tropical storms Dorian and Fiona along with instances of extreme temperatures have revealed some of the vulnerabilities that need to be addressed and have provided valuable insight that has been integrated into this new strategy that will guide us into future.

The work ahead of us is local, regional and national in nature. This strategy lays out a path to ensure we play a strong role in the region as well. PEI is ready, willing, and able to advance a transformative regional energy project. Enhancing energy generation and transmission across Atlantic Canada contributes to our own energy security and that of the entire country.

Now is the time to reshape our energy system. It is not an easy task to take on the challenges we are facing, but through leveraging our local expertise, economic potential, and proven resilience as an Island community, we can rise to the occasion. This will involve updating the rules that govern and regulate the energy sector. We also need a continued emphasis on energy efficiency, because the cheapest form of energy is still the energy that we do not consume.

A reliable, affordable, and forward-looking energy system will play an integral role in supporting the needs of Islanders and helping our communities and businesses grow. Enhancing the grid will be a big step in improving resiliency and empowering consumers in making smart energy choices. More renewable generation, storage, and clean fuels will be crucial in meeting the needs of all customers.

Finally, we need the help of Islanders to meet all these goals. Workforce development, community engagement, data transparency, and energy literacy are all essential elements to ensure residents and communities are empowered in the energy transition.

Thank you to my staff and others across government for remaining resolute in the pursuit of a better energy system. I am also grateful to our local utilities, Indigenous leaders and all partners who participated in the development of this strategy. Most importantly, I appreciate the work of all Islanders making daily energy choices to reduce emissions as we work toward a stronger and more reliable energy system.

Gilles Arsenault, Minister
Environment, Energy and Climate Action

Introduction

Prince Edward Island (PEI) stands at a pivotal moment in its energy transition. Since the release of its last energy strategy in 2017, the province has experienced rapid and widespread change. Energy consumption has increased and electricity demand has surged due to electrification, and population growth. These changes reflect new and urgent challenges on the province's energy systems, particularly during winter peaks where continued increases in electricity demand are putting pressure on the electricity grid. Meanwhile, recent extreme weather events—such as post-tropical storms Dorian and Fiona—have underlined the need for a more resilient energy system that is adapted to changing climate patterns.

PEI remains committed to climate action, having adopted an ambitious goal of reaching net-zero by 2040. These commitments require transformative change in how energy is produced, delivered, and used across all sectors of PEI's economy while being mindful of the needs to balance climate action, affordability, and system reliability. As part of this process, in 2023 the Province released its *"PEI Energy Blueprint Discussion Paper"* summarizing the evolving state of energy within the province and suggesting key areas of focus for future energy planning.[1] This was followed by an extensive consultation process that included surveys, public and stakeholder sessions, and formal written submissions; all of which were summarized in the *"PEI Energy Blueprint: What We Heard Report"*.[2] In 2024, the Province also undertook a review of the province's electrical service, the findings of which have also informed the actions contained in this strategy.[3]

In response to the challenges and opportunities presented by the evolving landscape, as well as the outcomes of province-wide consultation, Dunsky Energy + Climate Advisors (Dunsky) was retained to develop an updated energy strategy – building off the Province's prior work – and chart a clear course for the decade ahead. This updated energy strategy for the 2026–2035 period and includes:

- A brief overview of the current energy landscape within the province, highlighting the challenges and opportunities that have emerged since the *"Provincial Energy Strategy 2016/17"*.
- An updated vision for PEI's energy future, grounded in the principles of reliability, affordability, and sustainable economic development.

---

[1] Prince Edward Island Energy Blueprint Discussion Paper, April 25, 2023. https://www.princeedwardisland.ca/en/publication/pei-energy-blueprint-discussion-paper

[2] Prince Edward Island Energy Blueprint - What We Heard Report, December 18, 2023. https://www.princeedwardisland.ca/en/publication/pei-energy-blueprint-what-we-heard-report

[3] Prince Edward Island Energy Review, August 26, 2025. https://www.princeedwardisland.ca/en/publication/pei-energy-review

- A series of recommended strategies and actions organized into five pillars, reflecting the Province's commitment to a clean energy transition that benefits all Islanders.
- A summary of next steps to ensure successful implementation of the strategy, including the development of an implementation roadmap and a monitoring and renewal plan to guide progress over the next decade.

PEI's Net-Zero Action Plan

In parallel to the development of the Energy Strategy, PEI is also in the process of preparing a Net-Zero Action Plan (NZAP), which will be released in Spring 2026, and will complement—but remain distinct from—the Energy Strategy. These initiatives have been developed with close coordination to ensure alignment and cohesion across focus areas. The Energy Strategy provides a high-level set of priorities for the province's energy system over the next decade. The NZAP, when completed, will provide a detailed, sector-by-sector analysis of actions to identify pathways to meet PEI's legislated 2040 net-zero target. These initiatives will work in tandem to support cohesive and coordinated planning, pointing to the most effective implementation approach to meet PEI's long-term goals.

Current State

Prince Edward Island has experienced significant population growth in recent years. Between 2016 and 2023, the population increased from 142,907 to 173,787, representing a 22 per cent rise.[4] During the same timeframe, the total number of homes in the province grew from approximately 61,000 to 69,000 – a growth of approximately 13 per cent.[5] From 2017 to 2023, the number of vehicles on the road increased by 5 per cent, from approximately 113,800 to 119,500.[6]

As of 2022, single-family homes make up 69 per cent of all households in PEI. This housing profile is significant in shaping energy consumption patterns, especially given the continued reliance on fossil fuels for residential heating.[5]

Since the last Energy Strategy was released in 2017, population growth, economic development, and public policy goals – alongside innovation within the energy sector – have reshaped PEI's energy system – leading to new challenges and opportunities going forward.

Energy Use and Emissions

In 2022, refined petroleum products (RPP) including gasoline, diesel, propane, and heating oil, supplied nearly two-thirds (75 per cent) of all provincial energy demand.[7] In the same year, electricity accounted for the remaining 25 per cent of total energy supply. The amount of the province's total energy use being supplied by electricity is steadily increasing, up 16

FIGURE 1. PEI ENERGY SUPPLY BY SOURCE [7]

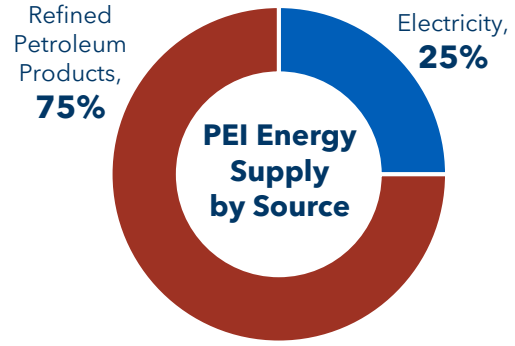
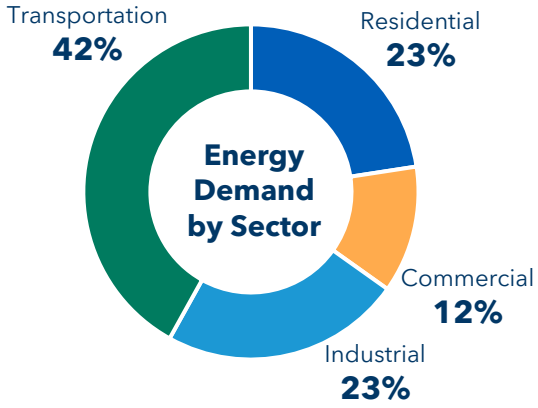


FIGURE 2. PEI ENERGY DEMAND BY SECTOR (2022) [7]



[4] Statistics Canada. 2023. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 15, 2023, and PEI 50th Annual Statistical Review 2023.

[5] NRCan Comprehensive Energy Use Database. https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP&sector=res&juris=pe&year=2022&rn=14&page=0

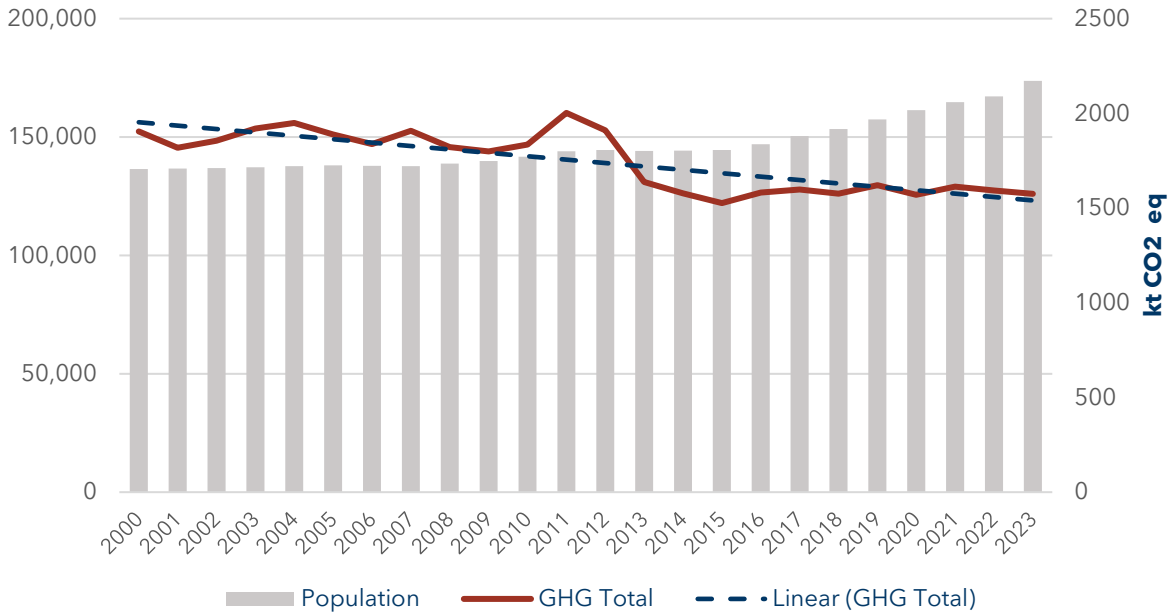
[6] Statistics Canada. Table 23-10-0308-01 Vehicle registrations, by type of vehicle and fuel type

per cent since 2016, but RPPs continue to underpin energy consumption across multiple sectors including transportation, residential heating, and industry.

Transportation is the largest energy-consuming sector in PEI, accounting for 42 per cent of total energy demand in 2022 (Figure 2).[7] The residential and industrial sectors each represent approximately a quarter of provincial energy demand.

Despite continued economic and population growth, total provincial and per capita GHG emissions have been on a slight but steady decline for the last three years, and have remained relatively consistent since 2016 (Figure 3).[8]

FIGURE 3. PEI'S GHG EMISSIONS BY POPULATION [8]



The transportation sector is PEI's largest source of GHG emissions, responsible for 45 per cent of the province's emissions in 2023 (Figure 4). Emissions in this sector increased by 6 per cent over the previous year, driven primarily by increases in passenger transport and freight activity.[9]

Through a concerted effort to implement energy efficiency improvements and transition away from heating oil, PEI's building sector emissions dropped nine per cent over the last year. The

[7] Canada's Energy Future, End Use Demand, Current Measures. https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2023-data-supplement/

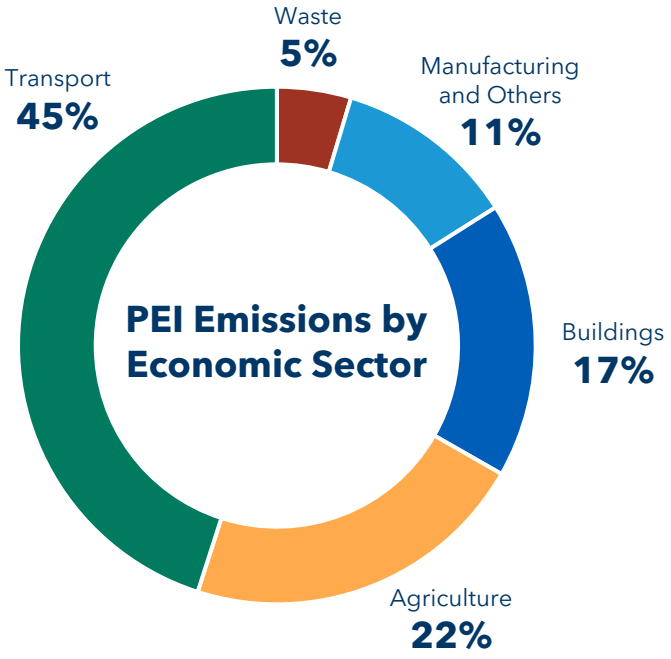
[8] NIR 2025: Canada's National Inventory Report (NIR). Table A12-3: 1990-2023 GHG Emission Summary for Prince Edward Island.

[9] Off-road vehicles are intended for use on unpaved or private terrain such as ATVs or sector-specific machinery e.g., farming equipment.

most significant emissions reductions in the sector can be attributed to the residential buildings sub-sector. This demonstrates that provincial mitigation policies and investments in household energy efficiency are essential to achieving our GHG reduction targets.

Currently 29 per cent of residential properties use heating oil as their primary energy source for home heating, down from 53 per cent in 2016.[10] The continued reliance on internal combustion engine vehicles as the primary form of motor-vehicle transportation within the province combined with the relatively high share of oil-based space heating continues to pose the most significant challenge to achieving the Province's net-zero emissions goals.

FIGURE 4. PEI'S GHG EMISSIONS BY ECONOMIC SECTOR [8]



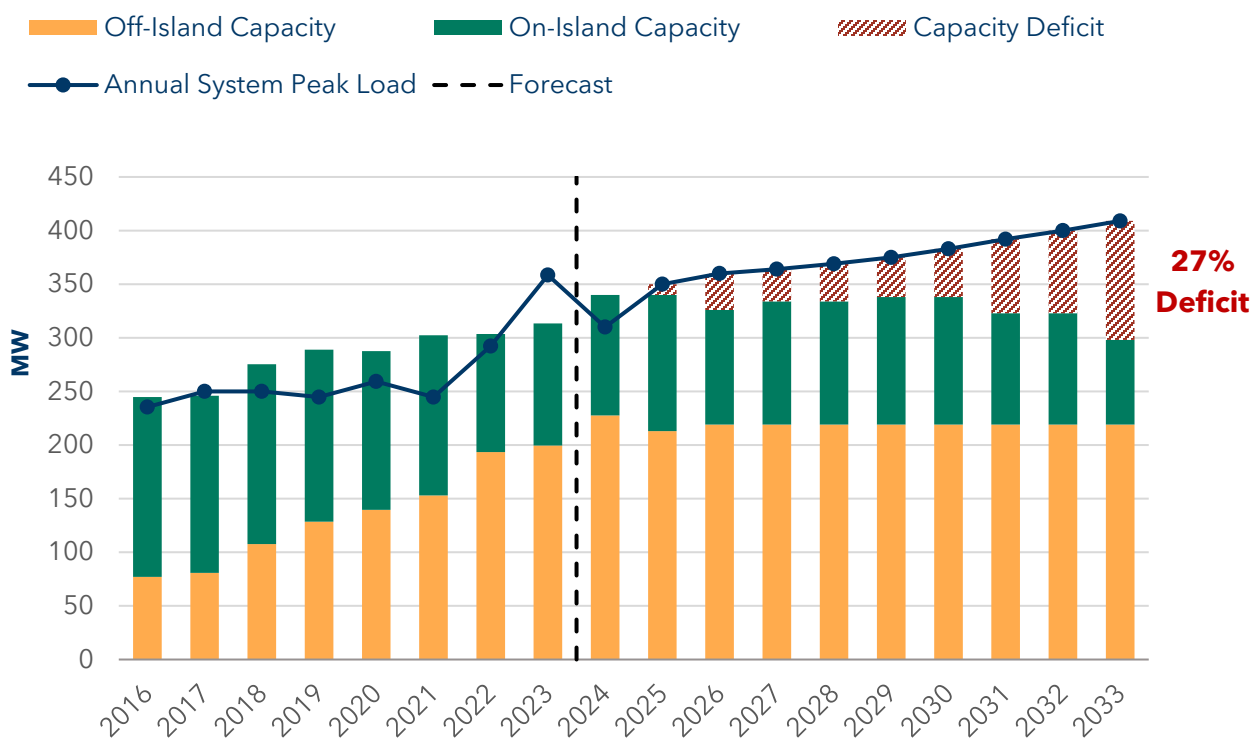
Electricity Demand, Capacity, and Imports

Electricity demand in PEI has risen sharply over the past decade. Maritime Electric, which supplies approximately 90 per cent of the province's electric utility customers, has experienced a 60 per cent increase in its annual system peak demand between 2014 and 2023. This is forecasted to increase by a further 32 per cent from 2024 to 2033 (Figure 5). As noted in a recent regulatory filing by Maritime Electric, "The province's rapid population growth and associated housing starts has directly impacted Maritime Electric's customer load, as most new construction on PEI uses electricity as a primary source of heat."[11] This growth in demand has outpaced new generation capacity. Combined with the recent retirement of the Charlottetown Steam Plant, the amount of on-Island capacity resources fell to 31 per cent of the utility's system peak in 2023, thereby increasing the dependence on off-island generation, and elevating reliability risks to PEI's electricity supply.

[10] MQO Research, Inc. Prince Edward Island 2024 Home Energy Survey, April 2025.

[11] UE20742 – Supplemental Capital Budget Request for MECL's On-Island Capacity for Security of Supply Project

FIGURE 5. MARITIME ELECTRIC CAPACITY AND PEAK [11]



The decrease in on-Island resources combined with increasing demand has contributed to a projected capacity shortfall (as shown in Figure 5). While the electric transmission connection to the mainland remains critical, it also makes PEI vulnerable to interprovincial supply challenges. As New Brunswick, Nova Scotia, Québec and others face their own energy constraints, this reliance could pose a long-term electricity security risk for PEI; particularly as PEI reaches the maximum transmission capacity limits for off-Island supply.

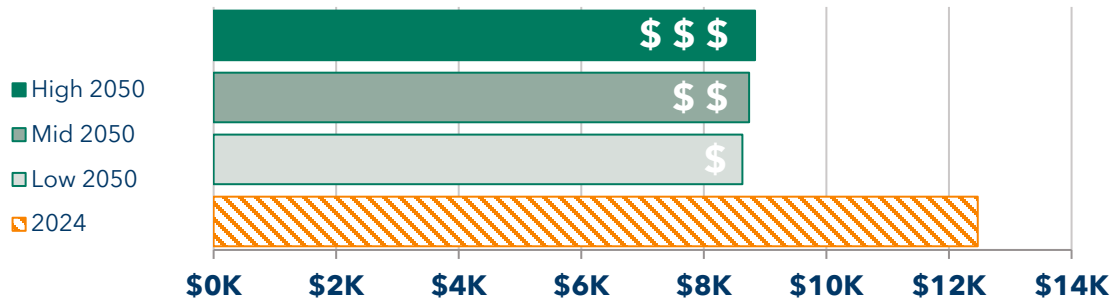
Additionally, PEI's on-Island electricity generation is dominated by renewable resources, primarily wind and solar, with less than one per cent coming from fossil-fueled sources. This clean supply results in the third lowest generation intensity among all provinces and territories of just 7.2 grams of GHG per kilowatt-hour (g GHG/kWh).[12] PEI is also reliant upon the long-standing partnership with New Brunswick (NB) which also boasts a clean supply in comparison to other parts of the country with over 67 per cent non-emitting generation, though still a higher generation intensity of 226 g GHG/kWh.[12] Since roughly two-thirds of PEI's electricity is imported from NB, the province's overall supply mix is more carbon-intensive than its on-Island generation profile. Thus, expanding on-Island generation is key to achieving both energy security and provincial climate goals.

[12] NIR 2025: Canada's National Inventory Report (NIR). Table A13-3 and A13-5: 1990-2023 Electricity Generation and GHG Emission Details for Prince Edward Island and New Brunswick.

Affordability and Equity

Energy affordability is another pressing concern. From 2016 to 2023, the average monthly residential cost of electricity rose by 15 per cent.[13] During the same time frame, gasoline prices rose approximately 50 per cent.[14] A recent study published by the Transition Accelerator projected that retail electricity rates will increase by 14 to 23 per cent by 2050 (compared to 2024, net of inflation).[15] However, the impact of higher electricity rates on total household energy costs will be alleviated by the transition away from costly fossil fuel technologies such as fuel oil boiler systems and internal combustion engine vehicles. When considering a household's entire energy wallet (all costs associated with purchasing, operating, and maintaining the energy and technology needed for household energy needs), the Transition Accelerator observed that the average household in PEI will experience approximately 30 per cent reduction in 2050 compared to 2024 (Figure 6).

FIGURE 6. MEDIAN ANNUAL ENERGY WALLET [15]



The increase in electricity costs will affect all Island residents and businesses, but will disproportionately affect lower-income households which have a lowered capacity to absorb increased energy costs. Recent research conducted by Efficiency Canada found that PEI has one of the highest percentages of households experiencing 'high energy cost burden' in Canada.[16] Twenty six per cent of households in the province are spending more than six per cent of their income on home energy costs. This does not include transportation related energy costs, which can be even more volatile in terms of cost fluctuations. The impact on individuals in these households goes beyond bank balances and can lead to difficult trade-offs between energy and other necessities, such as food, and are more likely to be

[13] PEI Statistical Review. https://www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf

[14] Canada's Energy Future, End Use Prices, Current Measures. https://apps.cer-rec.gc.ca/ftrppndc/dflt.aspx?GoCTemplateCulture=en-CA

[15] Martin, N., Bowie, D., Fakhoury, R., and Kabbara, M. (2024). Household Energy Affordability in a Net-Zero Future. Electrifying Canada.

[16] Efficiency Canada, Energy Poverty in Canada. https://www.efficiencycanada.org/energy-poverty-in-canada/

experienced by vulnerable communities (seniors, newcomers, single-parents) who are already more likely to be facing health challenges and unstable housing.[17]

According to the 2023 Canadian Income Survey, 6.9 per cent of PEI's population is below the low-income cut-off (before tax), and households whose income is below this threshold are expected to spend 20 per cent more of their before-tax income on essentials such as food, shelter, and clothing.[18] These households face higher energy burdens, particularly in older, less energy-efficient homes. The reality of objectively high energy costs in the province, coupled with pre-existing vulnerabilities in terms of income, health, and housing, is leading to a growing number of PEI residents experiencing household energy insecurity.

Ensuring equitable access to affordable, clean energy will be a critical consideration in any future energy strategy. The Strategy's future implementation plans must consider not only the current net energy cost impact of switching homes, businesses and vehicles from GHG emitting energy sources (such as heating oil and gasoline), but it must also point to longer term solutions to ensure that increases in electricity demand can be met affordably and reliably.

[17] Statistics Canada. Housing Statistics in Canada, Estimation of Energy Poverty Rates Using the 2021 Census of Population, February 20, 2024. https://www150.statcan.gc.ca/n1/pub/46-28-0001/2024001/article/00001-eng.htm

[18] Prince Edward Island 51st Annual Statistical Review 2024. Source: Statistics Canada. Table 11-10-0135-01 Low-income statistics by age, sex and economic family type. https://www.princeedwardisland.ca/sites/default/files/publications/web_asr.pdf

Vision and Objectives

In light of the ongoing changes that have occurred over the last decade as well as the current context and future ambitions, PEI's vision for its energy future is to:

> ***Embrace change while ensuring the energy system is reliable and affordable, in a manner that is sustainable and leaves no community behind.***

This vision recognizes the need for continued modernization of PEI's energy systems while reinforcing the Province's core commitment to fairness, resilience, and sustainability. It also recognizes that the energy transition must be as inclusive as it is ambitious—delivering tangible benefits to all people living on PEI, particularly vulnerable, underserved, and Indigenous communities, as well as creating space for Island businesses to remain economically competitive.

The strategy is structured around four key objectives:

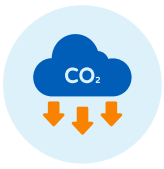
Reliability

Ensure a reliable and resilient energy system that can meet growing demand, withstand climate-related disruptions, and deliver consistent service to all communities.

Affordability & Equity

Maintain affordability and embed equity across all energy policies and programs, ensuring no community is left behind in the transition.

Sustainability



Build a balanced, low-carbon supply mix with clean fuels to accelerate the transition to a net-zero energy system that enhances energy security and reduces emissions.

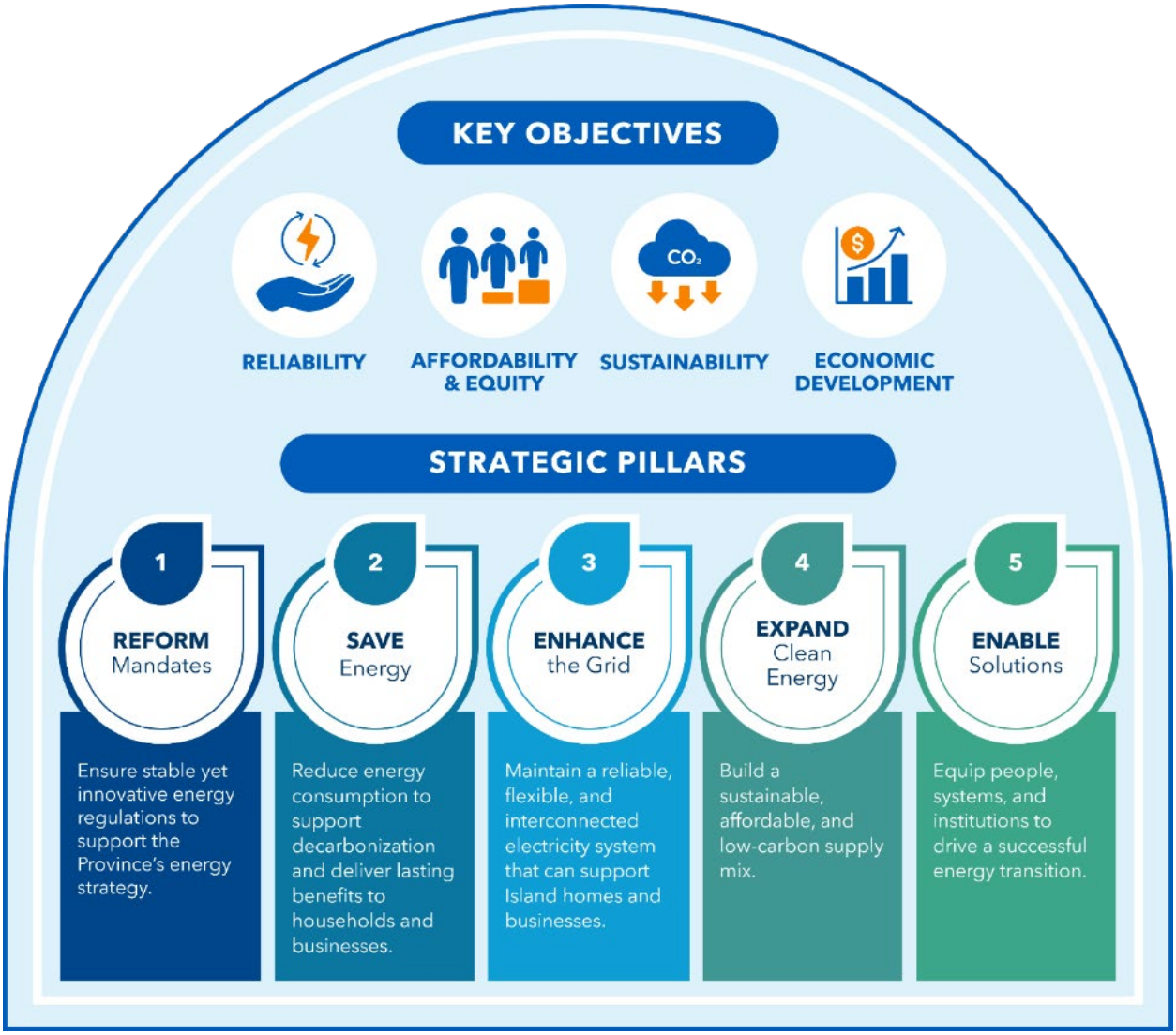
Economic Development

Leverage PEI's local expertise and economic potential to grow clean energy jobs, businesses, and innovation in communities across the province.

Recommendations

The following recommended strategies and actions reflect the Province's commitment to the key objectives of Reliability, Affordability & Equity, Sustainability, and Economic Development, which were identified through the strategy development process.

Together, they represent the policy, programmatic, and regulatory priorities that will shape PEI's energy system over the next decade. In total, there are 20 actions under five strategic pillars, including a foundational action to develop an implementation roadmap that will guide the delivery of all other actions.



1

Reform Mandates

Ensure foundational stability and innovation in the regulatory space to support the Province's energy strategy.

As PEI transitions toward a more sustainable, low-carbon energy system, the institutions that govern, regulate, and serve the energy sector must be equipped to lead that transition effectively and efficiently. Reforming the mandates, processes, and support structures that shape the province's energy landscape will be essential to ensuring clarity of purpose and timely decision-making, and equitable outcomes across all elements of the strategy. Critically, updating the province's electricity infrastructure will require significant investment which may put upward pressure on electricity rates. Mandate reform will serve to ensure any resulting price increases are reasonable, equitable, maintain Island business competitiveness and are in the best interests of all people living on PEI.

OBJECTIVES ADDRESSED BY 'REFORM MANDATES' ACTIONS

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
1.1	Strengthen Consumer Protections & Equity	○	●	○	○
1.2	Modernize a Responsive Regulatory Process	◐	●	●	○
1.3	Launch Demonstration and Innovation Hub	◐	●	●	●
1.4	Formalize a Total Energy System Planning Process	●	◐	○	◐

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

The **Reform Mandates** pillar focuses primarily on the activities related to the public utility regulator – the Island Regulatory and Appeals Commission (IRAC) – as well as establishing a modernized province-wide, integrated total energy system planning process, as summarized in this section.

By strengthening consumer protections, updating regulatory processes, and creating flexible innovation pathways, PEI can align itself with leading jurisdictions and build the institutional foundation needed to implement its energy strategy equitably.

Action 1.1

STRENGTHEN CONSUMER PROTECTIONS AND EQUITY

Ensuring that all customers are represented and advocated for will demonstrate fairness and accountability, increasing public confidence in the energy transition and associated policies. It also supports more equitable decarbonization by reducing systemic barriers to participation in energy governance and decarbonization efforts and ensuring fair distribution of both the benefits and burdens of the energy transition. This enhances affordability and participation by ensuring more voices—especially those from vulnerable or underrepresented communities—are reflected in program design and rate decisions. Activities may include:

- **Creating an Office of the Consumer Advocate (OCA)** to formally represent residential and underrepresented consumers in regulatory, policy, and program development forums, as announced in the 2025 Speech from the Throne.
- **Formalizing emergency consumer protection measures** that utilities already practice such as prohibiting disconnection bans during crises and the winter season, adopting flexible bill payment options, and rapid-response assistance programs to establish trust among ratepayers and safeguard energy access for those most at risk during emergencies.
- **Improving access for meaningful participation in the regulatory process** such as including plain-language communications, multilingual and culturally appropriate outreach, and the creation of procedural supports to enable underrepresented or resource-constrained intervenors—such as community groups, Indigenous organizations, or small businesses—to effectively engage.

Action 1.2

MODERNIZE A RESPONSIVE REGULATORY PROCESS

Ensuring the Island's regulatory processes are responsive to an evolving energy system is critical. Clear statutory timelines and processes for IRAC can improve both the pace and quality of decision-making. This will reduce uncertainty for utilities, project developers, and communities, accelerating the deployment of clean energy technologies and infrastructure needed to meet climate and electrification targets. Furthermore, enhancing institutional expertise ensures regulators can assess increasingly complex issues using current data and multidisciplinary analysis, reducing overreliance on external actors and supporting more robust outcomes. Activities may include:

- **Expanding the scope of the regulatory review (where appropriate):** Consider broadening IRAC's energy mandate to include climate, equity, innovation, and long-term system planning alongside traditional cost and reliability concerns. This would involve setting new performance standards related to these objectives and establishing efficient and effective reporting requirements.
- **Introducing statutory timelines.** Establish clear timeframes for decision-making to provide regulatory certainty and reduce delays in critical energy infrastructure or program approvals that could impact the pace of electrification.
- **Increasing institutional expertise and capacity.** Build in-house technical, economic, climate, and community engagement knowledge to handle complex, multidisciplinary issues, or require IRAC to engage external expertise.
- **Clarifying adjudicated vs. non-adjudicated processes** to increase transparency surrounding process and requirements, differentiate when formal hearings are needed versus when more flexible, consulting/guidance approaches are appropriate, streamlining proceedings and lowering participation barriers. A review of the PEI Energy Commission's 2012 report *"Charting Our Electricity Future"* may act as a suitable launching pad for continued action in this area.
- **Enhancing regional cooperation** between provinces to better align regional regulations, policy development, regulators, and planning recognizing that working together may help evolve the energy system more efficiently.

Action 1.3

LAUNCH A DEMONSTRATION AND INNOVATION HUB

Demonstration and innovation hubs offer a structured yet flexible environment for testing novel regulatory, market, and technological approaches—without requiring permanent legislative or regulatory changes upfront.

By enabling controlled experimentation, a demonstration and innovation hub creates space for regulators, utilities, innovators, and communities to pilot new ideas such as income-tested rates or revised net metering structures ("Net Metering 2.0") models under real-world conditions. An innovation hub helps de-risk emerging technologies or regulatory models, gather empirical evidence, and iteratively refine policy design before broader implementation, reducing both financial and political risk. Furthermore, they can foster cross-sector collaboration and innovation by inviting participation from new market entrants, community energy groups, and Indigenous-led energy projects. For example, given the small size and unique governance structures, First Nations may present an ideal host/partner for small-scale pilot projects and research initiatives where potential benefits may align with community priorities.

Ultimately, this can help to bridge the gap between ambitious goals—such as decarbonization, resilience, and affordability—and the often-rigid structures of traditional utility regulation, enabling a more adaptive and forward-looking regulatory ecosystem.

Action 1.4

FORMALIZE A TOTAL ENERGY SYSTEM PLANNING PROCESS

The current process for advancing energy-related policies, programs, rates, and projects is through a mix of legislation and regulation; Maritime Electric and Summerside Electric system integrated planning, rate applications and/or system and grid needs applications; energy efficiency plans; PEI Energy Corporation or merchant renewable energy developments; discussions in regional forums; and other ad hoc initiatives. Importantly, this planning process is not limited to electricity alone—it encompasses the broader energy system, ensuring that decisions are made holistically across all energy sources and uses. This includes considerations for fossil fuels (e.g., oil, propane, gasoline, diesel), and emerging low-carbon alternatives like hydrogen, biofuels, and renewable natural gas.

All have implications for ratepayers and taxpayers and can have cross-cutting impacts. For example, PEI has become a leader in terms of heating electrification via heat pump adoption. Commensurate investment in supply-side resources and energy conservation programming to help manage demand is needed.

An economy-wide, total energy system planning process that engages key stakeholders through a defined governance structure and annual planning and reporting framework would help bring the various pieces into a cohesive structure that can address short-term needs in the context of a longer-term plan.

2

Save Energy

Reduce energy consumption to support decarbonization and deliver lasting benefits to households and businesses.

Reducing energy consumption through targeted investments in efficiency, conservation, and electrification readiness is one of the most immediate and cost-effective ways for PEI to meet its energy strategy objectives. As an island with limited energy production capacity and high dependence on imported fuels, PEI faces unique challenges in managing energy costs, maintaining system reliability, and reducing emissions. Reducing demand across sectors helps limit the need for expensive grid and generation upgrades, while also making it easier to integrate clean energy as the province decarbonizes for example, by optimizing fuel use in agricultural or industrial operations through improved equipment efficiency or implementing building envelope improvements. These long-term reductions in consumption deliver value by offsetting rate increases brought on by system investments, mitigating rising costs for ratepayers, improving energy security, business competitiveness, and ensuring that every unit of energy used serves the province's economic and climate goals.

OBJECTIVES ADDRESSED BY 'SAVE ENERGY' ACTIONS

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
2.1	Modernize the DSM Framework	◐	●	●	○
2.2	Expand Investment in DSM	●	●	●	◐
2.3	Strategically Pursue Beneficial Electrification	●	●	●	●
2.4	Strengthen Building Regulations	●	○	●	○
2.5	Increase Investments in Transportation	◐	●	●	●

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

The **Save Energy** pillar aims to advance a modernized and well-funded demand-side management (DSM) framework through a combination of policy, regulations, and programs, as summarized in this section.

Action 2.1

MODERNIZE THE DSM FRAMEWORK

Updating PEI's DSM framework helps ensure that energy savings are maximized, equitably distributed, and aligned with emerging system and policy needs. This may include updating targets to reflect long-term decarbonization and peak demand savings/objectives; revisiting the definition of eligible DSM measures allows inclusion of modern solutions; incorporating equity explicitly—whether through targeted program design, community-driven initiatives, or differentiated incentives; revising cost-effectiveness testing methodologies to better reflect jurisdiction specific conditions as well as capture non-energy benefits, such as health, resilience, and GHG reductions.

The DSM framework should consider the appropriate roles for PEI Energy Corporation, the Province and the electric utilities to ensure the most effective delivery of DSM programs. This may involve considerations of how roles need to evolve as the DSM portfolio becomes increasingly focused on capacity benefits and distributed energy resources.

Together, these updates position DSM not as a legacy compliance tool, but as a strategic, flexible lever to manage demand, reduce emissions, avoid costly infrastructure, and deliver equitable outcomes—core to advancing provincial energy system goals. Activities may include:

- **Updating the definition of DSM and eligible measures** to include some or all of electrification-enabling upgrades, flexible demand resources, storage, and distributed generation.
- **Revising cost-effectiveness testing methodologies** by adopting a jurisdiction-specific test (JST) that incorporates PEI specific policy considerations as well as a broader suite of benefits (e.g., avoided emissions, health, resilience, distribution system value) to ensure symmetry between the impacts being considered. A JST will allow for focus to be placed on measures that will be the most impactful for PEI specifically such as those that balance consumption and peak demand.
- **Setting DSM targets that align with long-term system planning and climate goals** including specific objectives for energy savings, peak reduction, and emissions mitigation.

Action 2.2

EXPAND INVESTMENT IN DEMAND SIDE MANAGEMENT

Increased and sustained DSM funding generally but especially for low-income and historically underserved communities enables deeper retrofits, broader participation, and the integration of measures that not only reduce energy use but also improve health, comfort, and housing quality. In addition to ensuring that energy efficiency is the priority energy resource on PEI, introducing relative investment targets (e.g., ensuring a specific portion of DSM budgets are dedicated to equity-priority groups or geographies) helps address affordability issues. Activities may include:

- **Integrating equity into DSM program design and delivery** through prioritization of underserved communities, inclusive engagement, and differentiated offerings.
- **Establishing relative investment targets for equity-priority populations** by allocating a minimum share of DSM budgets to low-income households, Indigenous communities, or high energy-burden areas.
- **Bundling affordability and efficiency outcomes** through program models that combine bill reductions, health improvements, and housing upgrades.
- **Embedding affordability considerations into DSM planning and evaluation** including metrics such as bill impact, energy burden reduction, and service quality for vulnerable groups.

Action 2.3

STRATEGICALLY PURSUE BENEFICIAL ELECTRIFICATION

Focusing on high-impact applications—such as replacing fossil fuel-based heating with optimized heat pump deployment and supporting the uptake of electric vehicles (EVs) – will help lower overall emissions while reducing household and business energy costs over time. Strategic electrification goes beyond simple fuel-switching; it requires coordinated action to ensure new electric loads are efficiently integrated, managed, and timed to align with renewable generation and grid capacity. This includes targeting deployment in buildings and vehicles where the carbon and cost savings are greatest, and designing incentives, infrastructure, and planning approaches that unlock these benefits while avoiding unnecessary system strain.

However, electrification is not equally feasible across all sectors. Agriculture, aquaculture, fisheries, and other industrial operations—particularly in rural and coastal areas—face unique barriers such as limited grid access, high infrastructure upgrade costs, and resilience concerns during extreme weather events. These climate-sensitive livelihood sectors often rely on specialized equipment and fuel-based processes that are currently difficult to electrify due

to technological or economic constraints. As such, energy strategies must account for these realities by exploring complementary solutions such as fuel efficiency improvements, hybrid systems, and targeted support for innovation in low-carbon technologies tailored to these sectors.

Beneficial electrification can also be paired with energy conservation measures (e.g., insulation and air sealing) to ensure the grid impacts of widespread electrification are minimized. This not only reduces the potential strain on the grid, but can improve the net energy cost benefit for customers. When done right, beneficial electrification can provide value for utilities, the grid, the environment, and customers by reducing long-term grid costs, supporting local economic development, and improving air quality and public health—advancing multiple pillars of a comprehensive energy strategy. Activities may include:

- **Targeting deployment of heat pumps and building electrification in priority segments** such as oil-heated homes, rental units, multi-family residential buildings, rural areas, low-income housing, or businesses and commercial operations, and easy to electrify industrial segments to maximize GHG reductions and affordability and mitigate grid impacts. Electrification programs should be updated to take a holistic approach, coupling heating equipment replacements with improved air-sealing, envelope and load flexibility measures to help mitigate peak demands on the electricity system.
- **Scale EV adoption through coordinated infrastructure planning** by providing support for home, workplace, business, and public charging that aligns with grid capacity and decarbonization goals.
- **Promoting grid-integrated and optimized electrification** through demand flexibility, time-of-use (TOU) rates (e.g., EV rates, on/off-peak rates), and smart controls to align new electric loads with renewable energy availability and peak management.
- **Advancing strategic electrification in hard-to-electrify sectors** by identifying niche applications where electrification is technically and economically viable and providing targeted support for infrastructure upgrades, equipment conversion, and load management solutions. Programs should prioritize operations with predictable energy use and high resilience needs and include technical and financial assistance to overcome barriers like limited access, high upfront costs, and vulnerability to power disruptions.
- **Prioritizing equity in rate design and electrification programs** by ensuring low-income households, renters, and underserved communities can access and benefit from the transition to electric technologies. This includes ensuring equitable access not only to efficient electric heating equipment, but also to the smart controls devices that are needed to participate in load flexibility programs and time varied rates that can lead to further bill savings.

Action 2.4

STRENGTHEN BUILDING REGULATIONS

Building energy codes can drive market transformation at scale—reducing energy consumption in new buildings by setting insulation requirements and equipment standards. The National Building Code (NBC) and Nation Energy Code for Buildings (NECB) present a multi-tier framework for a cost-effective, enforceable, and equitable pathway to achieving climate and energy efficiency goals in newly constructed buildings. The Canadian Electrical Code (CEC) complements building codes by setting safety and performance standards for electrical installations (e.g., solar and battery storage), ensuring that energy-efficient technologies are integrated safely and effectively. Currently PEI has adopted Tier 1 of the NBC/NECB and should develop a plan to gradually adopt higher tiers that align with its goal of a net-zero future.[19] There may be opportunities to leverage the federal Code Acceleration Fund to support the adoption of higher code tiers more quickly and reduce the burden on local code authorities.

These measures also help mitigate the impact of electrification on grid reliability or affordability. The province can also future-proof new and existing buildings by integrating renewables-ready and EV-readiness for new construction as well as mandates for energy- and power-efficient design. These advanced building requirements will ensure that buildings are not only less energy-intensive but also better equipped to operate in a net-zero energy and emissions landscape. Activities may include:

- **Encouraging power-efficient design standards** for both existing and new construction buildings such as optimizing and right-sizing loads, implementing energy management systems, and introducing energy storage solutions.
- **Fostering new construction practices that exceed minimum energy efficiency standards** through rebates or special certifications for high-performance homes/builds.
- **Supporting futureproofed new construction such as EV-ready infrastructure** in new residential and commercial buildings to avoid excessive future retrofit costs and enable EV adoption.[20]

[19] Building and Development in PEI, May 16, 2025. https://www.princeedwardisland.ca/en/information/housing-land-and-communities/building-and-development-in-pei

[20] Federation of Canadian Municipalities' Green Municipal Fund (GMF) and the Low Carbon Cities (LC3) network. Dunsky Energy + Climate Advisors, 'Futureproofing Multifamily Buildings for EV Charging'. https://greenmunicipalfund.ca/resources/futureproofing-multifamily-buildings-ev-charging

Action 2.5

INCREASE INVESTMENTS IN TRANSPORTATION

Accelerating the adoption of zero-emission vehicles (ZEVs) is critical to achieving deep decarbonization in the transportation sector. Identifying the lowest-cost pathways across different vehicle segments—such as light-duty, medium- and heavy-duty, and off-road vehicles—is essential to guide targeted policies, investments, and infrastructure planning. Expanding public EV charging infrastructure accelerates the adoption of ZEVs, while managed charging helps align electricity demand with renewable supply and off-peak periods, minimizing grid stress and infrastructure costs. At the same time, strategic land-use planning and community design has a role to play in reducing reliance on personal vehicle use and advancing mode shift. Prioritizing investments in transit and active transportation - lowers overall energy demand, reduces emissions, and fosters a more resilient, affordable, and equitable transportation network. Integrating transportation planning with energy system planning ensures that new electric loads are anticipated and optimized, rather than reactive.

Taken together, these measures support grid stability, economic development, and improved public health. Activities may include:

- **Expand EV charging infrastructure** to support equitable and widespread adoption of electric vehicles across urban, rural, and underserved areas.
- **Implement managed charging solutions** that incentivize charging during off-peak hours and integrate vehicle-grid technologies to support system balancing.
- **Support modal shifts and compact community development** by removing minimum parking requirements and/or introducing low/zero-emission zones to reduce transportation-related emissions at the source.
- **Reduce dependence on personal vehicles** by investing in improved transit and active transportation infrastructure and land-use planning to promote healthier more sustainable modes of transportation by design.

4

Enhance the Grid

Maintain a reliable, flexible, and interconnected electricity system that can support Island homes and businesses.

Currently, over 80 per cent of PEI's electricity supply is generated from clean energy sources such as wind, solar, hydro and nuclear, which includes imports from New Brunswick. These variable generation sources can however pose challenges to electricity supply and reliability unless the supply is complemented with dispatchable generation sources. To address this challenge and provide for the steadily growing demand for electricity in the province, both generation, and transmission and distribution infrastructure must be modernized and expanded.

Greater regional interconnectivity, energy storage and smart grid capabilities can help maintain system reliability and unlock the full value of clean energy resources. As PEI moves toward a net-zero future, electricity will power a growing share of heating, transportation, and industry—placing unprecedented demands on the grid. Strengthening the grid is not just about keeping the lights on; it is about ensuring that clean electricity can be delivered where and when it is needed.

OBJECTIVES ADDRESSED BY 'ENHANCE THE GRID'

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
3.1	Upgrade and Expand Transmission Infrastructure	●	◐	○	●
3.2	Upgrade Distribution Infrastructure	●	◐	○	●
3.3	Accelerate the Rollout of Load Flexibility Programs	●	○	●	◐

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

Enhancing the grid through strengthened transmission and distribution infrastructure also positions PEI to make the most of its regional context. Better interconnections allow the province to draw on surplus renewable energy from neighboring jurisdictions and reduce its

reliance on local, carbon-intensive generation during peak periods. A smarter grid—capable of managing flexible loads, integrating distributed energy resources, and responding in real time—can lower system costs, improve resilience during extreme weather events, and give consumers more control over their energy use.

While these upgrades are essential, they will require significant investments. The government will need to work with the electric utilities to identify and prioritize needs, support great regional cooperation (through initiatives such as regional transmission upgrades), and align the province's energy strategy and implementation plan with the utilities' ability to invest in the needed infrastructure. Careful planning and coordination will be critical to focus on the most strategic investments, thereby ensuring that the province's electricity supply remains affordable and reliable.

Recognizing that electricity supply, even in times of peak demand, must be reliable, the government supports the installation of dispatchable generators on the Island. These units would not be expected to provide baseload energy, but would instead provide security of supply in times of high demand or reduced supply from clean resources.

The **Enhance the Grid** pillar is focused on working with the provincial utilities and other stakeholders to identify priorities to support the buildout and maintenance of a modern, responsive grid. Reliability and adaptation are paramount – without them, the clean energy transition and a net-zero economy could be undermined.

Action 3.1

UPGRADE AND EXPAND TRANSMISSION INFRASTRUCTURE

Improving regional interconnectivity enhances PEI's ability to benefit from regional generation, which can balance on-Island resources and enhance reliability. Targeted investments—such as replacing aging transmission cables, increasing capacity between regions, and building new high-voltage lines—help unlock new energy projects, and improve system reliability as demand grows with electrification. Strong federal-provincial collaboration will be required to achieve interprovincial transmission planning and investment. Activities may include:

- **Enhance regional interconnectivity** including PEI's connection to New Brunswick via its transmission cables is critical. The province should prioritize upgrades to this aging infrastructure, which are foundational to the province's energy security, while also exploring opportunities to optimize resource sharing and renewable integration. This could involve the government actively engaging with the federal government and neighbouring provinces to enhance regional interconnectivity such as through the regional transmission upgrades and/or other opportunities that can increase the ability to transfer clean power to and from PEI in the future.

- **Replace aging or undersized transmission infrastructure** to reduce congestion, improve reliability, and extend asset life in critical corridors on PEI. New investments should focus on adapting the system to evolving needs and climactic conditions and unlocking renewable generation potential in hard to reach or underutilized areas.
- **Design for climate resilience and system redundancy** to ensure reliable electricity delivery during extreme weather and grid disruptions.

Action 3.2

UPGRADE AND EXPAND DISTRIBUTION INFRASTRUCTURE

Strengthening the distribution system – whether through vegetation management, voltage regulation, automation, or other investments – also improves the province's ability to support low-carbon technologies equitably, avoiding scenarios where only some communities can benefit due to infrastructure constraints. A strong distribution system provides reliability and resilience by preventing outages and improving power quality as well as economic development by supporting new and expanding business opportunities. Activities may include:

- **Upgrade aging and capacity-constrained infrastructure** to improve climate resilience, reliability and prepare for increased load from electrification of heating and transportation.
- **Expand three-phase infrastructure,** particularly in rural areas to enable deployment of modern electric technologies and Distributed Energy Resources (DERs) on farms and other industrial applications.
- **Investing in system modernization technologies** such as automated switching, voltage control, and fault detection to improve responsiveness and reduce outage duration.

Action 3.3

ACCELERATE THE ROLLOUT OF LOAD FLEXIBILITY PROGRAMS

Advancing the implementation of demand response (DR) programs and time varied rates (TVR) rates that reduce or shift peak demand can ease pressure on the grid, defer costly infrastructure upgrades, and support the integration of clean energy resources. Smart grid systems can also unlock the potential of EVs as flexible assets, including through vehicle-grid-integration (VGI) or vehicle-to-grid (V2G) capabilities that allow stored energy to flow back into the system during critical periods. When implemented correctly, with transparency and trust, these technologies can empower consumers to actively participate in energy management while increasing system resilience, supporting renewable integration, and emissions reductions. Activities may include:

- **Accelerating the deployment of Advanced Metering Infrastructure (AMI)** to enable granular, real-time consumption data and support more sophisticated demand-side programs.
- **Implementing demand response and load flexibility programs** that reduce peak load, shift demand, and engage customers in system optimization through pricing, automation, and feedback
- **Exploring and piloting vehicle-to-grid (V2G) and other distributed storage solutions** that leverage EVs and batteries as system resources to provide both flexibility and resilience.

4

Expand Clean Energy

Build a sustainable, affordable, and low-carbon supply mix.

As PEI electrifies heating, transportation, and industry, it must ensure that the energy powering this transformation is clean, reliable, and locally or regionally sourced. Expanding clean energy supply—through both proven and emerging technologies—will allow the province to reduce emissions across the economy while shielding Islanders from volatile global energy markets.

To meet these goals, PEI will need to establish a clear and coordinated vision for clean energy development. Setting long-term targets for on-Island renewable generation and storage provides market certainty and directs investment to where it is needed most. Enabling innovation through the exploration of emerging technologies and strategic use of clean fuels can expand decarbonization pathways in harder-to-electrify sectors. At the same time, minimizing permitting and siting barriers is critical to accelerating deployment at the scale and pace required.

OBJECTIVES ADDRESSED BY 'EXPAND CLEAN ENERGY' ACTIONS

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
4.1	Establish Targets for On-Island Generation & Storage	●	●	●	○
4.2	Reduce Reliance on Fossil Fuels	●	●	●	◐
4.3	Explore Emerging Technologies	●	○	●	●

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

The **Expand Clean Energy** pillar focuses on the supply of energy – on-Island and to the extent possible, non-emitting in order to meet growing demand, reduce reliance on fossil fuels, and boost energy independence and security goals.

Action 4.1

ESTABLISH TARGETS FOR ON-ISLAND GENERATION AND STORAGE

Targets based on capacity additions—rather than just energy output—ensure that the system builds sufficient flexible, dispatchable resources to meet growing peak and electrified demand. This could include a mix of variable and dispatchable clean energy sources, with sufficient energy storage to meet the province's peak capacity needs. Mandating equity-specific targets—such as requirements for Indigenous-led projects, community ownership, or deployment in underserved regions—is an option for ensuring the clean energy transition delivers broadly shared benefits.

Policy mechanisms such as net energy metering (NEM) or legislated procurement mandates can institutionalize these goals, providing certainty for developers and helping integrate renewables and storage as core planning resources. However, future NEM frameworks need to be developed based on a clear understanding of the value that energy storage and other distributed resources can provide to the utility grid.

Given PEI's current electricity capacity constraints and critical near-term reliability concerns, new on-Island generation will not necessarily be non-emitting. That said, in its entirety, the PEI energy strategy can reduce the need for fossil generation – limiting use to peak periods and creating off-ramps to cleaner fuels going forward (e.g., renewable diesel). Activities may include:

- **Establishing capacity-based renewable and storage targets:** To ensure sufficient clean supply is available to meet peak and growing electrified loads. Comprehensive modeling studies will allow the province to determine the capacity needed over time as well as where on the grid to target new projects. This can also establish how much conventional generation will still be required to ensure system reliability, and the degree to which cost-effective investments in regional transmission, energy storage, load flexibility and on-Island renewables can reduce the need for new GHG emitting peak load generation on the island. In addition, regulatory changes that can increase the rate of investment in renewable energy should be explored, such as options for PEI utilities to invest in new utility scale wind and solar generation, and seeking solutions reduce permitting and siting restrictions.
- **Assess and update the NEM program** to ensure it continues to support the growth of solar, batteries, and other small-scale energy systems, while also fairly reflecting the value these systems bring to the grid. Consider analyzing the true value of solar and storage to support updates to the NEM program and make sure costs are distributed equitably between those who participate and those who do not.
- **Include equity-specific sub-targets** to require a portion of energy procurement to come from Indigenous, community-led, and geographically diverse project development.

Action 4.2

REDUCE RELIANCE ON FOSSIL FUELS

The strategic use of clean fuels – such as biomass and renewable diesel – can support sectors and applications less suited to electrification. These fuels can provide emissions reductions in heating, transportation, and industrial processes, especially in rural or hard-to-electrify settings. The use of clean fuels can also create economic development opportunities in agriculture, forestry, and waste management. Importantly, advancing clean fuels in parallel with electrification can also be a transitionary solution for sectors where technologies are nascent or still in the R&D phase (such as industry). This ensures a broader and more inclusive energy transition that reaches all sectors and geographies in the near- and mid-term. Activities may include:

- **Assessing the availability and sustainability of clean fuel feedstocks** including biomass, agricultural and forestry residues, and organic waste, to determine regional production potential and constraints.
- **Identifying sectors and regions where clean fuels offer the greatest value** such as rural communities, agricultural operations, or other industrial applications that have the resources to handle large quantities for feedstock.
- **Evaluating the potential for additional district thermal energy network systems**, building on PEI's experience using the technology for efficient, centralized heating and cooling—particularly in more densely populated areas and public infrastructure.
- **Developing policy frameworks that encourage the responsible deployment of clean fuels**, aiming for regulatory alignment regionally, while accounting for feedstock sustainability, supply chains, waste management, land use frameworks, etc.

Action 4.3

EXPLORE EMERGING TECHNOLOGIES

Technologies such as long-duration storage, small modular reactors (SMRs), and clean hydrogen offer solutions to challenges not fully addressed by today's renewables and storage options—such as providing firm, dispatchable power, and decarbonizing hard-to-electrify sectors. Early exploration through pilot projects, partnerships with off-island partners, and regulatory readiness can position the province to capitalize on breakthroughs, attract investment, and build local expertise.

Support for emerging solutions also helps hedge against uncertainty and ensure energy security as electricity demand grows and legacy assets retire. Activities may include:

- **Investigating long-duration storage technologies** that could enhance grid reliability and help manage renewable variability over extended timeframes.
- **Advancing research & development (R&D) initiatives** to test feasibility, improve cost-competitiveness, and build local capacity for promising new technologies.
- **Establishing regulatory readiness and flexible planning frameworks** that can accommodate new technologies (e.g., permitting and adequately valuing the benefits) and are harmonized or co-developed with other provinces in the region as their potential role in the energy system becomes clearer.
- **Exploring the feasibility of biofuels to decarbonize hard-to-electrify sectors** such as agriculture, aquaculture, fisheries, and other industrial operations. This includes analyzing feedstock availability, potential production methods, and compatibility with existing equipment.
- **Assessing opportunities for SMRs** by exploring the potential for SMRs as a source of firm, non-emitting power by monitoring regional developments and identifying opportunities for collaboration with other jurisdictions.
- **Exploring opportunities for clean hydrogen** in areas where electrification may be less viable such as long duration energy storage, high-temperature industrial processes, and heavy-duty transportation.

5

Enable Solutions

Equip people, systems, and institutions to drive a successful energy transition.

While clean technologies and infrastructure are central to the transition, their success depends on the readiness of the people and institutions tasked with their design, implementation, and operations. This includes all government departments which are supporting the transition and may need support in understanding the energy sector. Prioritizing the enabling solutions will ensure that the transition is not only technically feasible but possible to implement. To get there, PEI must prepare its workforce for the scale and complexity of work ahead. This includes building an adequately skilled labour pool, empowering local leaders, and ensuring that programs are inclusive, wide-reaching, and tailored to on-the-ground realities. Transparent access to data and modelling will help inform smarter planning decisions while building trust in the process. And a coordinated communications strategy will ensure that all stakeholders—from ratepayers to regulators—understand their role in the transition and are equipped to participate meaningfully.

OBJECTIVES ADDRESSED BY 'ENABLE SOLUTIONS' ACTIONS

STRATEGIC ACTIONS		Reliability	Affordability & Equity	Sustainability	Economic Development
5.1	Invest in Training and Workforce Development	●	●	○	●
5.2	Engage and Empower Local Community Leaders	○	●	○	◐
5.3	Leverage Data and Transparency	●	◐	◐	◐
5.4	Enhance Energy Literacy	○	●	○	○

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

The **Enable Solutions** pillar elevates the crosscutting solutions such that they are not seen as side efforts, but instead are recognized as the connective tissue that will hold PEI's energy strategy together and help the Province achieve its key objectives.

Action 5.1

INVEST IN TRAINING AND WORKFORCE DEVELOPMENT

A skilled, prepared, and adequately resourced workforce is essential to achieving PEI's energy strategy, ensuring the successful delivery of infrastructure upgrades, clean energy projects, and programs at the pace and scale required. As electrification, energy efficiency, and grid modernization accelerate, workforce gaps are emerging across critical roles—such as electricians, linesmen, educators, engineers, and building envelope contractors. In parallel, similar assessments should be conducted to identify workforce needs for businesses and industry, particularly in climate-sensitive livelihood sectors. Without targeted investments in training, upskilling programs, and industry partnerships, these gaps risk delaying projects, increasing costs, and limiting equitable access to low-carbon technologies.

Workforce development also supports broader economic development goals, creating high-quality, local jobs and building capacity in Indigenous and equity-seeking communities. The Province should continue its existing commitment to Equal by 30, working towards equal pay, equal leadership and equal opportunities for women, and other marginalized groups, in the clean energy sector by 2030- by including programs targeted specifically towards women and other marginalized groups.[21] Activities may include:

- **Identifying and forecasting workforce needs** including trades, technical, engineering, and policy roles needed for electrification, efficiency, and clean energy deployment. It will also be important to evaluate on-Island capacity and resources to inform targeted local workforce development and to identify strategic partnerships and available trades that are located outside the province.
- **Expanding training and certification programs** for in-demand roles such as linesmen, buildings contractors, EV charging technicians, etc. and pursuing co-op placements or on-the-job upskilling to help less experienced workers enter the workforce smoothly and competently.
- **Partnering with industry, educational institutions, and Indigenous organizations** to co-design programs that align with local employment opportunities and regional energy needs.
- **Supporting reskilling and upskilling initiatives** that enable workers in traditional fossil fuel or adjacent sectors to transition into clean energy careers. Support could also be provided to increase expertise for existing workforce to deepen their expertise as demand for their skills and knowledge expands with widespread adoption.

[21] Equal by 30 (https://www.equalby30.org/) is a commitment by public and private sector organizations to work towards equal pay, equal leadership and equal opportunities for women, and other marginalized groups, in the clean energy sector by 2030. https://www.princeedwardisland.ca/en/news/pei-committed-to-equal-by-30

Action 5.2

ENGAGE AND EMPOWER LOCAL COMMUNITY LEADERS

Community leaders play a vital role in bridging the gap between policy and people—helping to build awareness, tailor solutions to local needs, and increase participation in initiatives like energy efficiency, electrification, and distributed energy. By investing in community leadership and funding programs (e.g., Climate Challenge, Community Renewable Energy Generation, and the Cleantech Research and Innovation Funds) – especially among those from equity-deserving and underrepresented groups – the province can build long-term local capacity, foster co-ownership of clean energy efforts, and reach populations that are often overlooked in conventional planning and engagement processes. Engagement and collaboration are critically important to enable more responsive and adaptive implementation, ensuring that energy solutions are not only technically viable but socially grounded and culturally relevant. Activities may include:

- **Establishing leadership training and support programs** for individuals from equity-seeking, Indigenous, and underserved communities as well as for climate-sensitive livelihood sectors to engage in energy planning and program delivery.
- **Integrating community-led insights into policy processes** to ensure decision-making reflects lived experience and local energy priorities.
- **Fostering long-term partnerships with businesses, community, and Indigenous organizations** to embed equity and community representation in energy project ownership, governance, and delivery structures. These partnerships can also provide opportunities to leverage external resources such as the Federal Indigenous Loan Guarantee Program by collaborating with Indigenous communities as equity partners on major energy projects.
- **Creating funding pathways and advisory roles for community leaders** to shape the design and implementation of local energy initiatives, including efficiency, clean heating, and transportation programs.
- **Supporting peer-to-peer outreach and grassroots networks** that empower trusted local voices to inform and engage their communities on energy opportunities.

Action 5.3

LEVERAGE DATA AND TRANSPARENCY

Robust data systems and transparent communication are foundational to delivering a province's energy strategy; ensuring decisions are evidence-based, outcomes are measurable, and the public remains informed and engaged. Improved access to granular, timely, and standardized energy data supports accurate forecasting, infrastructure planning,

and climate reporting across electricity, fuels, and end-use sectors. Transparent energy system information, such as building energy performance and usage patterns, enables better public accountability, enhances local participation in planning, and empowers consumers to make informed energy choices. Initiatives such as building labelling, open energy datasets, and real-time event communications can increase trust in institutions and make the energy system more responsive to both long-term needs and short-term disruptions. Activities may include:

- **Improving access to system-level and customer-level energy data** to support integrated planning, emissions tracking, and resource optimization across sectors.
- **Building cross-government data sharing and governance frameworks** that enable coordination across ministries, agencies, and levels of government involved in the energy transition.
- **Developing building energy performance labelling and disclosure policies** to drive market transformation and enable informed decisions by homeowners, tenants, and investors.
- **Implementing real-time or near-real-time communication protocols** for outages, extreme events, and system conditions to enhance public awareness and preparedness.

Action 5.4

ENHANCE ENERGY LITERACY

Enhancing energy literacy is essential to implementing the energy strategy, enabling individuals and communities to make informed decisions and actively engage in the energy transition. A well-coordinated and inclusive public education approach—spanning government, utilities, community organizations, and industry—can demystify complex topics like electrification, energy efficiency, rate design, and emerging low-carbon technologies. Consistent, cross-sector messaging allows for tailored outreach that reflects regional, cultural, and demographic differences, ensuring all groups have access to relevant information and support. By fostering understanding, trust, and meaningful participation, energy literacy initiatives can counter misinformation, align public expectations, and empower households and businesses to play a proactive role in achieving PEI's energy goals. Activities may include:

- **Developing a cross-sector communications framework** that aligns messaging and outreach efforts across government, utilities, municipalities, and community partners.
- **Creating public education campaigns on key energy transition topics** including electrification, clean technologies, rate structures, energy efficiency, and climate goals.
- **Tailoring outreach to diverse audiences and regions** using multilingual, culturally appropriate materials and delivery channels that reflect local contexts and needs.
- **Building feedback mechanisms into communications strategies** to ensure two-way dialogue and adapt messaging based on public understanding and concerns.

Implementation Roadmap

The PEI Energy Strategy is not intended to be a detailed implementation plan. It lays the groundwork for a series of high-level actions where the Province should set its focus. The strategy does not provide sequencing, targets, budgets, program designs, or operational plans for each action. However, some needs will inevitably emerge as more urgent or timely. Given this, a detailed implementation plan will be necessary to both prioritize actions and ensure the lowest reasonable cost solutions are implemented. It will do so by analyzing the readiness, risks, opportunities, and costs associated with each action to hone in on the actions and outcomes that are most critical to PEI's energy reliability, and continued transition to a net-zero future.

Therefore, to round out the list of 20 actions and support the successful implementation of this strategy, it recommended the Province begin the **development of a robust implementation plan** that includes the following:

- **Prioritize Actions and Set Timelines:** Establishing a clear sequence of actions (e.g., less than 1 year, 2-4 years, 5+ years etc.) provides structure to the energy strategy's execution. Timelines should reflect the urgency of key priorities, dependencies between actions, and the pace at which regulatory or infrastructure changes can realistically occur. Setting interim milestones also supports regular progress tracking and adaptive management.
- **Classify Action Type:** Categorizing each action by its type (Policy, Legislative, Program, or Planning/Strategic) helps determine the appropriate process, level of authority, and stakeholder engagement required. Legislative changes may need public consultation and debate, while programmatic initiatives might involve direct delivery or partnerships. Understanding the nature of each action also aids in assigning resources and aligning it with government cycles.
- **Assign Roles & Responsibilities:** Successful implementation depends on clearly defining who is responsible for leading, supporting, and coordinating each action. This includes identifying roles for government departments (including Climate Change Coordinators), regulators, utilities, municipalities, Indigenous governments, and community partners. Clarifying responsibilities reduces duplication, ensures accountability, and helps align mandates across institutions.
- **Evaluate Capacity:** Assessing whether the institutions and partners responsible for implementation have the necessary workforce, expertise, data, and tools is essential for realistic planning. Where gaps exist, strategies should include investments in training, institutional development, and/or external resourcing.
- **Assess Implementation Cost:** Estimating the financial requirements for each action—whether capital investments, operational costs, or administrative resources—supports effective budgeting and funding strategies. It also enables decision-makers to weigh trade-offs, prioritize investments, and pursue external funding opportunities (e.g., federal grants) where applicable.

Moving Forward Together

Prince Edward Island has taken meaningful steps toward its energy transition, making strong progress on electrification and reducing dependence on some fossil fuels. However, demand for electricity is now outpacing the addition of new capacity, placing growing strain on the province's energy system. With neighboring jurisdictions like New Brunswick also facing capacity constraints in the mid-term, PEI's current reliance on imported electricity is also becoming increasingly uncertain. The Province now faces both a pressing challenge—to secure reliable supply in the near term—and a pivotal opportunity to begin building the foundation of a decarbonized, equitable, and economically resilient energy future.

The PEI Energy Strategy establishes a clear vision and set of objectives that serve as a foundation for its four strategic focus areas: Reliability, Affordability and Equity, Sustainability, and Economic Development. The actions identified within each focus area have been included because they directly support and advance the Province's overarching objectives, as outlined in the table below.

SUMMARY OF ENERGY STRATEGY ACTIONS

	STRATEGIC ACTIONS	Reliability	Affordability & Equity	Sustainability	Economic Development
1.1	Strengthen Consumer Protections & Equity	○	●	○	○
1.2	Modernize a Responsive Regulatory Process	◐	●	●	○
1.3	Launch a Demonstration and Innovation Hub	◐	●	●	●
1.4	Formalize a Total Energy System Planning Process	●	◐	○	◐
2.1	Modernize the DSM Framework	◐	●	●	○
2.2	Expand Investment in DSM	●	●	●	◐
2.3	Strategically Pursue Beneficial Electrification	●	●	●	●
2.4	Strengthen Building Regulations	●	○	●	○
2.5	Increase Investments in Transportation	◐	●	●	●
3.1	Upgrade and Expand Transmission Infrastructure	●	◐	○	●
3.2	Upgrade Distribution Infrastructure	●	◐	○	●
3.3	Accelerate the Rollout of Load Flexibility Programs	●	○	●	◐
4.1	Establish Targets for On-Island Generation & Storage	●	●	●	○
4.2	Reduce Reliance on Fossil Fuels	●	●	●	◐
4.3	Explore Emerging Technologies	●	○	●	●
5.1	Invest in Training and Workforce Development	●	●	○	●
5.2	Engage and Empower Local Community Leaders	○	●	○	◐
5.3	Leverage Data and Transparency	●	◐	◐	◐
5.4	Enhance Energy Literacy	○	●	○	○

● Significant Progress ◐ Moderate Progress ○ Minimal Progress

To realize the goals outlined in this strategy, PEI must act immediately. The next step is to develop a detailed implementation roadmap that translates the strategic recommendations into clear actions, timelines, and accountabilities. This roadmap will guide the province through the next critical decade by prioritizing key actions, sequencing investment, and ensuring alignment across agencies, utilities, and communities.

Given the urgency of PEI's energy needs and the pace at which the energy landscape is evolving, it will be equally essential to establish a comprehensive monitoring and renewal plan. This plan should track progress on each action using clearly defined metrics, methodologies, and data sources, and should provide the flexibility to adapt as market conditions, technologies, or policies change. It must include a commitment to regular public reporting through existing channels such as the PEIEC Annual Report, the Minister's Report on Climate Change Risks and Progress Towards Targets, or other mechanisms (where alignment exists) and a full strategy review and update at least every five years. With this approach, PEI can remain accountable, responsive, and prepared; ensuring that the provincial energy system evolves in step with the Island's needs and ambitions.

Prince Edward Island is at a pivotal turning point. With its own commitment to achieving net-zero emissions by 2040, the province must now take decisive action to ensure that its energy system can meet growing demand while advancing its core goals of reliability, affordability and equity, sustainability, and economic development.

"NO DISCLAIMERS" POLICY

This report was prepared by Dunsky Energy + Climate Advisors, an independent firm focused on the clean energy transition and committed to quality, integrity and unbiased analysis and counsel. Our findings and recommendations are based on the best information available at the time the work was conducted as well as our experts' professional judgment.

Dunsky is proud to stand by our work.