THE NATIONAL ELECTRICITY SECTOR POLICY

Consultation Draft

APRIL 2026

THE AFFORDABLE BERMUDA AGENDA
Solutions for a More Affordable Bermuda

GOVERNMENT OF BERMUDA
Ministry of Home Affairs

Government of Bermuda

Ministry of Home Affairs

The National Electricity Sector

Policy of Bermuda

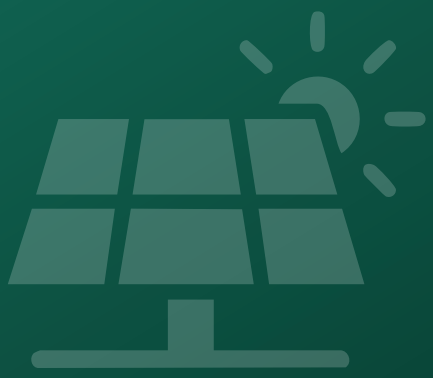
NESP 2026

April 7th , 2026

=

Contents

Introduction



1. Introduction

Bermuda, like many small island states, has long aspired to transition its electricity system toward a future powered predominantly by renewable energy. The Electricity sector plays a central role in supporting economic activity, social wellbeing, and national resilience. As a small island with no interconnection to neighbouring grids, Bermuda faces unique challenges in delivering reliable and affordable electricity while reducing its dependence on imported, carbon intensive fossil fuels. The target of achieving thirty-eight percent (38%) renewable generation set out in the National Electricity Sector Policy 2015 (NESP 2015) reflected both global climate commitments and Bermuda's strategic objective to reduce fuel imports. Renewable energy technologies such as solar photovoltaic (PV), offshore wind and emerging baseload renewable solutions were identified as offering a pathway toward a cleaner and more sustainable energy future.

Building on this foundation, the Regulatory Authority's (RA) 2019 Integrated Resource Plan (IRP) introduced a significantly more ambitious target of eighty-five per cent (85%) renewable electricity by 2035, relying on a combination of onshore solar PV, wind and biofuel-based baseload generation. Together, the NESP 2015 and the 2019 IRP established important policy and resource plan framework articulating a clear long-term ambition to increase renewable energy penetration and modernise Bermuda's electricity sector.

However, the practical constraints facing an isolated grid must be acknowledged. The intermittency of renewable generation, grid stability requirements, land constraints and the high costs of certain technologies present real challenges for Bermuda. While renewable energy must continue to play a growing role in the energy mix, the transition must be carefully managed to avoid imposing unsustainable costs on consumers or compromising the reliability and resilience of electricity supply. Electricity tariffs in Bermuda remain among the highest of developed nations in the Caribbean region, reflecting exposure to global fuel price volatility, the high fixed system costs, and the absence of regional interconnection. It is important to note that many Caribbean nations subsidise their electricity prices, artificially lowering them, however, regardless Bermuda's electricity prices remain well above national averages globally.

The NESP 2025 therefore adopts a pragmatic and balanced approach. Its objective is to reduce Bermuda's reliance on fossil fuels by increasing the share of renewable energy, while simultaneously ensuring affordability, equity, and system stability. The transition cannot occur "at any cost." Instead, all proposed investments are evaluated against their contribution to stabilizing tariffs, reducing fuel imports, cutting greenhouse gas emissions and strengthening grid resilience. The NESP 2025 emphasises evidence-based planning, least-cost system development and balanced decision making that protects consumers while enabling steady progress toward a lower-carbon electricity system.

The policy is deliberately technology-agnostic. Rather than prescribing specific generation technologies, capacity levels, or fixed carbon targets, it establishes clear principles to guide

planning and regulatory decisions through the Integrated Resource Planning process. Technologies and investments will be assessed based on their ability to contribute to affordability, reliability, emissions reduction, and system resilience, within the physical and economic constraints of Bermuda's isolated grid. Bermuda can realistically achieve 7% renewable energy target (RET) by 2030, 35% RET by 2040 and 50% RET by 2050, if the following capacities can be deployed affordably 16MW of onshore solar, 80MW of floating solar, 60MW of offshore wind and 35MW of distributed solar.

	Installed Capacity (MW)	Capacity Factor (%)	Annual Energy (MWh)	% Of Total Energy
Onshore Utility Scale Solar	16	18%	25,246	4%
Floating Solar	60	18%	94,673	14%
Offshore Wind	60	40%	210,384	32%
Distributed Generation	40	14%	49,090	7%
Balcony Solar	10	10%	8,766	1%
Total Renewables	**186**		**388,158**	**59%**
Remaining Energy	Peak		271,842	41%
Island Energy Requirements			**660,000**	

1.1 Purpose of the Updated Policy

The NESP 2015 marked an important milestone for Bermuda's electricity sector. It provided the foundation upon which the Electricity Act 2016 (EA 2016) was developed and offered the RA a clear articulation of the Ministry's vision for the sector. The EA 2016 set out the principles for how the electricity sector should be regulated, while also establishing an aspirational generation matrix intended to guide the transition away from complete reliance on fossil fuels. This early policy framework was instrumental in establishing a modern electricity regulatory regime, strengthening sector governance, and ensuring that Bermuda's energy future was subject to independent oversight.

Since the adoption of the NESP 2015, Bermuda has experienced several structural changes that have reshaped the electricity landscape. There are many causes for increasing prices such as persistent increases in fuel costs, rising costs associated with regulatory compliance and sector administration, and the continued expansion of distributed generation (DG), particularly rooftop

solar PV. While distributed generation has created new opportunities for energy autonomy at the household, commercial and industrial levels, it has also contributed to a sustained reduction in kilowatt-hour sales for the grid operator. This erosion of sales volumes combined with volatility in global fuel prices, has placed sustained upward pressure on electricity tariffs. As a result, affordability has become an increasingly pressing concern for residents and businesses, with grid-reliant customers – particularly those unable to invest in DG- bearing a disproportionate share of system costs.

These pressures, together with broader global trends in decarbonisation, digitalisation and power sector reform, have made clear that Bermuda's electricity policy and rate design framework must evolve. Under its statutory mandate, the Ministry responsible for Energy has determined that affordability and equity must be elevated as core policy objectives. While reducing Bermuda's dependence on imported, carbon intensive fossil fuels remain a central strategic goal, this transition must be managed in a manner that does not exacerbate cost burdens for vulnerable consumers who remain wholly dependent on the grid.

Accordingly, the NESP 2025 represents a deliberate shift away from prescriptive and aspirational generation matrices toward a policy framework centred on affordability, reliability, and equity, while continuing to support a progressive reduction in fossil fuel dependence, acknowledging however that fossil fuels will remain part of Bermuda's energy mix. The policy adopts a technology-agnostic approach and does not seek to predetermine the outcomes of the Integrated Resource Planning (IRP) process. Instead, it provides strategic policy direction to inform the IRP, enabling a pragmatic, adaptive and holistic framework for Bermuda's electricity sector and rate design through 2045. Ultimately, The NESP 2026 aims to deliver an electricity system that is affordable, reliable, resilient, sustainable, and equitable, guided by least-cost planning principles.

1.2 National Development Goals, Climate Commitments and Just Energy Transition Alignment

Bermuda's transition toward a more sustainable and lower-carbon electricity system will be guided by the principles of a Just Energy Transition. This approach recognises that the transformation of the energy sector is not solely a technical or economic undertaking, but a broader societal transition that must be inclusive, equitable, and fair.

The Government reaffirms that Bermuda's journey toward a low carbon future must not only be 'economically' viable but also fair, inclusive, and people centred. In aligning national development goals and climate commitments with electricity sector policy, particular attention will be given to ensuring that the benefits of decarbonisation are shared equitably, while minimising adverse impacts on workers, communities, and vulnerable populations.

The Just Energy Transition principles outlined in this section serve as cross-cutting considerations that inform, , the core objectives of the NESP 2026. Their application within the

electricity sector will be limited to areas within the Ministry's and RA's statutory mandates, with broader social-policy elements addressed through whole-of-government coordination

The Just Energy Transition framework for Bermuda is anchored in the following key policy pillars:

1. **Workforce Development and Reskilling**

   The transition to a lower carbon energy system will require new technical, operational and professional skills. The Government, in partnership with industry stakeholders and training institutions, will promote workforce development, reskilling, and youth engagement to prepare Bermudians for employment in clean energy technologies, grid operations, energy services and emerging sectors.

2. **Social and Economic Inclusion**

   Energy affordability and access will remain central considerations in all policy and regulatory decisions. Targeted mechanisms will be developed to support lower income households, facilitate equitable access to renewable energy opportunities such as community solar, and prevent disproportionate cost burdens on consumers who remain reliant on the grid.

3. **Community Empowerment and Participation**

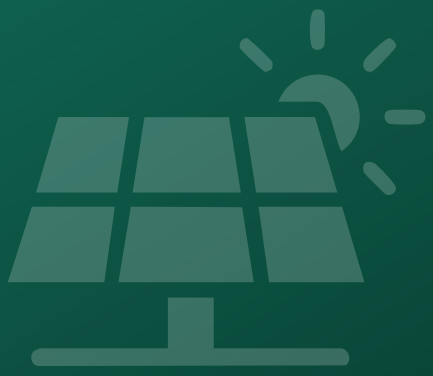
   Communities will be educated in energy planning and supported to develop local energy initiatives that enhance resilience and self-sufficiency. The Government will promote public awareness and encourage the participation of residents, small businesses, and civil society organizations in advancing the energy transition through advancing educational efforts.

4. **Environmental and Climate Justice**

   The transition will seek to reduce pollution, protect ecosystems, and ensure that environmental benefits such as improved air quality and public health are distributed equitably.

The Government reaffirms that Bermuda's journey toward a low carbon future must not only be economical viable but also fair, inclusive, and people centred, ensuring that economic opportunity, social equity, and environmental stewardship advance together as the foundation of Bermuda's energy transformation.

Context



2. Context

2.1 Historical Overview

The NESP 2015 established the framework for the modernization of Bermuda's electricity sector and articulated the Government's vision for a secure, affordable, and sustainable energy future. The policy set a target of achieving thirty-eight (38%) renewable energy generation by 2035 and introduced the concept of integrating low carbon fuels as firm generation capacity to support grid reliability. At the time, this approach was considered both technically and economically appropriate for an isolated island system characterized by high dependence on imported fossil fuels and limited land availability.

The policy recognized that renewable energy alone could not immediately provide the stability, inertia and frequency control required to maintain a continuous and reliable electricity supply. Accordingly, transitional low carbon fuels such as liquid natural gas (LNG) were identified as potential substitutes for heavy fuel oil (HFO) enabling emissions reductions while facilitating the gradual integration of intermittent renewable technologies.

In alignment with the NESP 2015, the utility prepared the first Integrated Resource Plan (IRP) in 2018 under the oversight of the RA. The 2018 IRP proposal, developed by Bermuda Electric Light Company (BELCO) with technical support from Leidos Engineering, assessed multiple generation pathways. This analysis concluded that conversion of the North Power Station and other suitable existing assets to LNG represented the most cost-effective strategy for reducing emissions, improving fuel diversity, and establishing a firm platform for future renewable energy development.

Following public consultation, the Regulatory Authority issued its amended and approved IRP in June 2019. The approved IRP removed the proposed LNG conversion and instead recommended an accelerated transition toward renewable energy generation, with a target of approximately eighty-five percent (85%) renewables by 2035. This represented a significant departure from the NESP 2015, which emphasized the role of low carbon fuels in supporting reliability during the transition.

This shift occurred following a change in Government in June 2017 with the new administration placing greater emphasis on environmental sustainability and rapid renewable energy deployment. It is therefore possible that the policy direction reflected in the approved 2019 IRP was influenced by evolving political priorities and public sentiment.

The divergence between the NESP 2015 Policy and the approved 2019 IRP has since contributed to uncertainty the optimal energy transition pathway for Bermuda. The NESP 2025 seeks to address this misalignment by reaffirming a pragmatic, least cost, and system-resilient approach to achieving long-term energy security, sustainability, and affordability.

2.2 Developments Since NESP 2015

Since the adoption of the NESP 2015, Bermuda has experienced several structural changes that have reshaped the electricity sector. One of the most significant developments has been the rapid growth of DG, particularly rooftop solar PV. While DG has expanded opportunities for energy autonomy at the household and commercial level, it has also contributed to a sustained reduction in kilowatt-hour sales for the Transmission Distribution and Retail (TD&R) Licensee. This decline in sales, combined with volatility in global fuel prices, and other factors discussed in Section 3, has placed sustained upward pressure on the retail tariff. As a result, electricity affordability has become an increasing concern for households and businesses, with grid-reliant customers – particularly those unable to invest in DG – bearing a disproportionate share of system costs.

Following the NESP 2015, the RA implemented a retail tariff methodology that enabled the TD&R Licensee to recover fixed costs and earn a regulated rate of return through electricity sales. While this framework enhanced transparency and regulatory discipline, it also exposed structural vulnerabilities. As distributed generation and energy efficiency reduced sales volumes, the recovery of fixed system costs was increasingly concentrated over a shrinking consumption base, placing upward pressure on average tariffs. Between 2017 and 2025, distributed solar PV capacity more than doubled increasing from approximately from 7 MW_{DC} to over 14.3 $MW_{DC.}$ This growth while positive from a decarbonisation perspective, reduced grid sales and intensified the feedback loop between rising tariffs, energy efficiency adoption, and further sales erosion. The retail tariff methodology allowed the TD&R Licensee to recover its fixed costs regardless of declining sales, the result was increasing pressure on the average retail tariff.

These dynamics have been compounded by Bermuda's continued exposure to volatile international fuel markets. Heavy reliance on imported fossil fuels has amplified price risk and contributed further to tariff escalation.

Another limitation of the NESP 2015 was its lack of explicit guidance on the adoption of emerging and innovative technologies that were commercially available at the time. This constrained the RA and the IRP process to formally assess alternative storage technologies, offshore renewables and other novel solutions. In response, the Ministry has developed innovation sandbox legislation enabling the issuance of Innovation Licences for non-commercial technologies that demonstrate potential strategic value to Bermuda.

Together, these developments underscore the need for a revised policy framework that addresses structural tariff pressures, supports innovation, and manages renewable energy integration in a way that protects affordability and equity.

Bermuda's electricity sector remains characterized by high dependence on imported fossil fuels, limited land availability and a small consumer base. These structural conditions expose

the island to global energy price volatility and high fixed infrastructure costs. Electricity tariffs remain high relative to comparable island jurisdictions, driven by fuel price volatility and fixed system costs. . Addressing affordability therefore requires careful management of technology pathways, tariff structures, and the equitable distribution of costs and benefits across all consumers. The NESP 2025 therefore places affordability, equity, and innovation at the core of electricity sector reform, ensuring that decarbonisation proceeds in a manner that strengthens resilience without imposing disproportionate burdens on grid-dependent customers. Affordability shall remain a core policy objective, supported through cost-efficient system development and regulatory oversight

Figure 1 below shows the increase in the rates over the 6 years between 2020 and 2025 and projects for the next two years based on Rate Review cases from the RA. There is a clear and noticeable trend upward which has since steadied in 2026. Section 3 will discuss further the reasons for this increase.

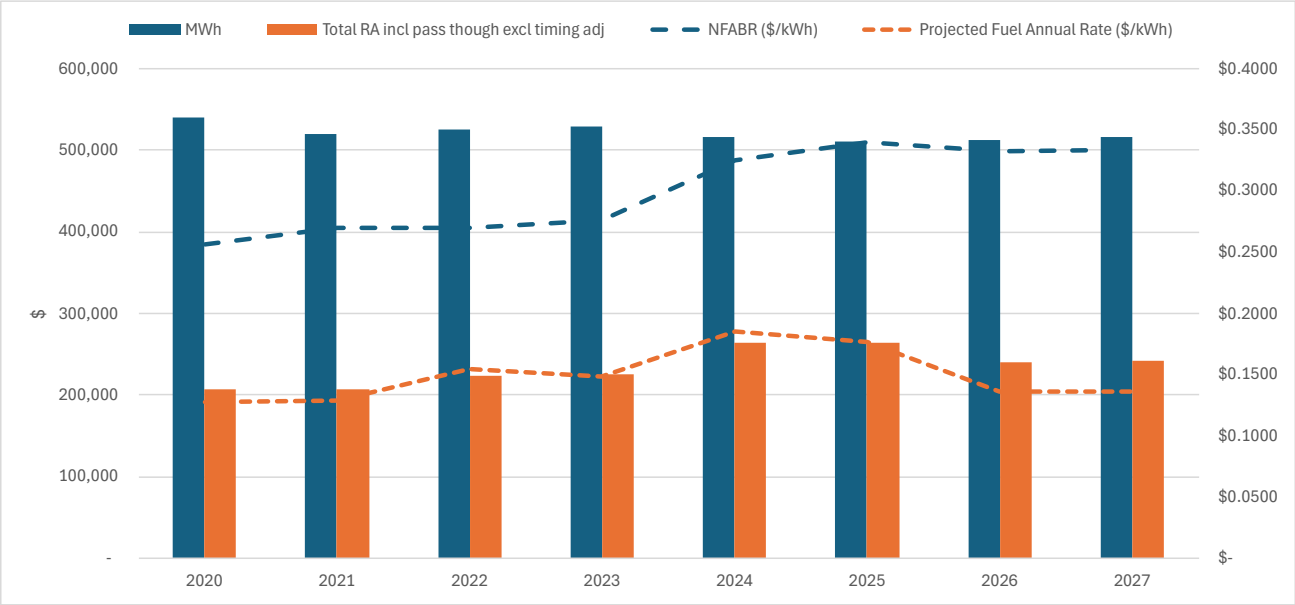


Figure 1: Historical and Projected price Increases in Rate ((RA)) (BELCO, 2021–2025)

2.3 Current Challenges: Cost, Equity, Security, and Sustainability

As outlined in Section 2.2, Bermuda's electricity sector is currently experiencing a convergence of structural and economic challenges that have intensified since the adoption of the first NESP. Rising fuel costs, the rapid expansion of DG, and the structure of the retail tariff methodology have collectively placed sustained upward pressure on electricity affordability. Continued reliance on imported fossil fuels exposes the island to volatility in global energy markets, while limited land availability and a relatively small consumer base constrain opportunities for large-scale renewable energy development.

Table 1 summarises the current generation and capacity mix in Bermuda as of 2025. Figure 2 illustrates the continued dominance of fossil fuel-based generation and comparatively low penetration of renewable energy. This outcome highlights the gap between policy ambition and system outcomes to date, notwithstanding the targets established under the NESP 2015 and the renewable energy pathway set out in the 2019 IRP.

Technology/Fuel Type	Capacity (MW)	(%)
Fossil Fuel Generators	141	84%
Waste to Energy	3	4%
Solar PV (Existing BG)	6	4%
DG Solar PV	14.3	8%
Total	**164.3**	**100%**

Table 1 Current Energy Generation and Capacity

(Regulatory Authority of Bermuda electricity-sector statistics and the BELCO 2023 Integrated Resource Plan (IRP) Proposal)

The NESP 2015 emphasised renewable energy adoption and a gradual shift away from high carbon-intensity fossil fuels, while the 2019 Integrated Resource Plan (IRP) advanced an accelerated transition towards renewable generation. However, neither framework provided sufficiently clear implementation pathways or delegated accountability for delivery. In particular, the absence of coordinated land-use planning and the lack of designated sites for renewable energy development limited the practical feasibility of many proposed projects. This gap contributed to delays and challenges in progressing the large-scale renewable initiatives envisaged under both the policy and the IRP.

The updated policy therefore provides clearer strategic guidance on emerging technologies, explicitly incorporates affordability and system reliability into investment decision making and strengthens the role of the IRP as a dynamic planning tool capable of responding to evolving market conditions and technological change. The intent is to shift from a framework dominated by aspirational targets toward one that is grounded in implementation realism. Through Ministerial and Departmental collaboration, the policy seeks to strengthen strategic direction by identifying suitable development zones and priority areas for energy infrastructure, thereby improving regulatory certainty and investment readiness.

Energy equity has also emerged as increasingly critical policy concern. Without appropriate tariff design and targeted support mechanisms, the benefits of distributed generation accrue primarily to customers with the financial capacity to invest in rooftop systems, while lower-income households, renters, and small businesses remain fully dependent on the grid. Ensuring that the energy transition does not exacerbate social or economic inequality, and that system costs are allocated fairly across all customer classes, is therefore a central pillar of the NESP 2025.

Taken together, these challenges underscore the need to move beyond aspirational policy framework toward a coordinated, system-wide strategy grounded in realistic targets, cost discipline and long-term resilience. The NESP 2025 by placing affordability and equity at the core of sector reform, while supporting renewable energy integration only where it demonstrably contributes to lowering or stabilizing costs for consumers. The overarching objective is to reduce Bermuda's dependence on high carbon intensity fossil fuel while maintaining a reliable, resilient and affordable electricity system for all customers.

2.4 Lessons from Past Policy Implementation

The implementation of the NESP 2015 and subsequent planning processes has revealed several critical lessons that inform the direction of this updated policy. While the previous policy articulated clear targets and a broad vision for renewable energy development, the institutional, regulatory and operational mechanisms required to deliver those objectives were not fully established.

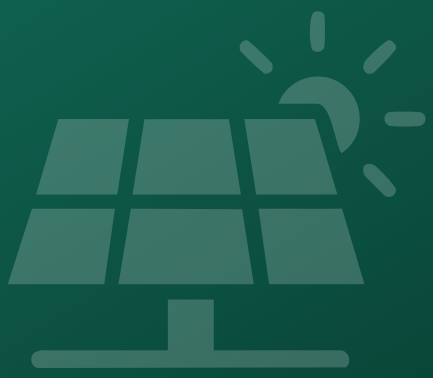
A key lesson is the importance of clearly defined institutional responsibility and accountability. The earlier policy did not assign specific mandates to designated actors or entities with the authority, resources and delivery responsibility to implement renewable energy targets. As a result, progress was fragmented and largely dependent on voluntary initiatives rather than structured, programmatic execution.

Another important lesson concerns misalignment between policy objectives and land use planning. Public lands suitable for large scale solar and other renewable developments were not formally identified, secured or reserved for energy infrastructure. This significantly constrained the availability of viable project sites and created delays in project development and investment. The absence of an interagency coordination framework linking land-use planning, environmental permitting, and grid integration further limited implementation capacity. Grid modernization shall be pursued where it demonstrably improves reliability, resilience, or integration of least-cost resources, and where the associated costs are justified within the overall affordability objectives of the electricity sector.

In addition, no central delivery vehicle or coordinating entity was established to drive project development, manage procurement, or systematically monitor progress against policy targets. This resulted in gaps in accountability, weak project pipelines and limited continuity in long-term planning.

The NESP 2025 addresses these institutional and structural gaps in Section 12 by explicitly identifying responsible institutions, strengthening coordination mechanisms between Government, the Regulatory Authority (RA), and the Electric Utility, and establishing a dedicated framework to secure public lands and mobilize resources for renewable energy projects. These measures are intended to ensure that policy objectives are not only articulated but delivered through transparent, accountable and coordinated implementation.

2045 Vision and Rate Drivers



3. 2045 Vision and Rate Drivers

3.1 2045 Vision: Reliable, Affordable, Equitable and Low Carbon Electricity

Over the next few decades, Bermuda's energy system will work towards delivering affordable, reliable, and equitable electricity service for all residents and businesses. Reliance on high carbon intensive imported fossil fuels shall be significantly reduced, thereby shielding consumers from volatility in global fuel markets and lowering the islands environmental footprint. Grid modernization shall be pursued where it demonstrably improves reliability, resilience, or integration of least-cost resources, and where the associated costs are justified within the overall affordability objectives of the electricity sector while maintaining or improving reliability standards relative to the 2025 baseline. Universal access to affordable electricity shall be safeguarded through targeted tariff support mechanisms for vulnerable customers. DG and Electric Vehicles (EV's) shall be integrated into the electricity system in a manner that enhances system efficiency without undermining affordability or reliability.

This vision is guided by the following core principles, which shall underpin all sectoral planning and regulatory decision-making through 2045:

- **Affordability:** Affordability shall remain a core policy objective, with the 2025 average retail tariff serving as a reference baseline for tracking long-term cost stability
- **Reliability:** The grid shall maintain or exceed internationally relevant reliability standards, monitored through transparent and measurable performance indicators.
- **Equity:** Grid-dependent customers shall not be disadvantaged by the growth of distributed generation. Tariff design shall ensure fair allocation of system costs, particularly fixed costs.
- **Least-Cost Planning:** All generation and grid interconnections shall be evaluated through the IRP process on a least-cost basis.
- **Transition to Renewables:** Renewable energy deployment shall proceed only where technologies are cost-competitive, reliable, and beneficial to overall system performance. Government land and seabed resources may be made available at low cost to facilitate development subject to environmental, planning, and competitive procurement processes, where doing so demonstrably supports least-cost system development.
- **Innovation and Electrification:** EV's and other electrified end uses shall be promoted as mechanisms to increase electricity sales, reduce fossil fuel imports, and spread fixed system costs across a broader customer base.
- **Accountability and Oversight:** Renewable energy installers shall be licensed and certified under nationally recognized standards to ensure quality, safety, and consumer protection.

- **Interdepartmental Cooperation**: Partnerships between Government Ministries and Departments shall support integrated energy planning and delivery, ensuring alignment between infrastructure, land use, climate and economic development objectives.

Together, these principles ensure that Bermuda's electricity transition is not only environmentally sustainable but economically prudent, socially equitable and anchored in measurable outcomes of affordability and reliability.

3.2 Benchmarks for Affordability

Affordability shall be defined as maintaining the average retail tariff at a reasonable level relative to the 2025 baseline in nominal terms , with emphasis on long term rate stability as a core policy objective through 2050.

Tariff structures shall reflect the true cost of service, while ensuring that grid-dependent customers are not disadvantaged relative to customers with distributed generation. The Government and the RA shall periodically review the affordability benchmarks to assess performance against policy objectives and adjust regulatory instruments as required. Affordability shall be assessed through long-term cost efficiency, rate stability, and fair allocation of system costs across all customers.

3.3 Main Impacts on Rate Stabilisation

This section outlines the principal factors influencing electricity tariff stabilization or reduction. The analysis is presented in real terms and does not account for inflation. These values are illustrative and included for policy modelling purposes only, not as projections of actual future rates.

3.3.1 Energy Efficiency

Energy Efficiency (EE) measures – supported through demand-side management programmes and building code enhancements - reduce overall electricity consumption, thereby lowering fuel imports and peak demand. While this contributes to system decarbonisation and reduces the need for new generation capacity, it also reduces kilowatt-hour sales for the TD&R Licensee. Under the current tariff structure, declining sales volumes exert upward pressure on average tariffs, as fixed system costs are recovered over a smaller consumption base.

3.3.2 Distributed Generation

As mentioned before, another, even greater driver of higher retail rates over recent years has been DG. Although DG enhances energy independence and reduces the island's reliance on imported fossil fuels, it ultimately reduces grid kWh sales and increases rates. This is done through shifting fixed costs to non-DG customers who rely solely on the grid for electricity, enhancing inequity. Equity safeguards, such as fair tariff structures and interconnection fees can mitigate this by ensuring DG users contribute to grid maintenance and costs. However, at this current time these safeguards have not been implemented, resulting in a large cross

subsidisation from grid reliant customers to DG owners. The proposed IRP projected DG growth to around 35MW by 2045, which requires balanced policies to prevent tariff increases exceeding the baseline.

3.3.3 Electric Vehicles

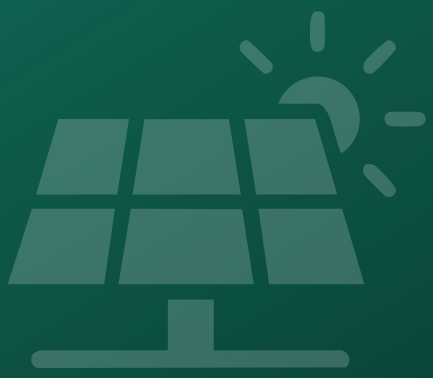
While EE and DG put upward pressure on rates, Electric vehicle (EV) adoption has the potential to mitigate this due to increased electricity sales. EV's have the potential to increase electricity demand to up to 42 to 54 GWh annually by 2045, spreading fixed costs over a larger sales base and countering EE and DG-induced TD&R sales declines. Smart charging and vehicle-to-grid integration programs can enhance grid flexibility and help stabilise tariffs and reduce fossil fuel reliance, while maintaining equity for all users.

3.3.4 Utility Costs

Utility costs, including fixed assets and operating expenditures, are recovered through tariffs and must therefore be managed through robust regulatory oversight and efficiency incentives. These costs are incurred across both the Transmission, Distribution & Retail Licensee and the Bulk Generation (BG) components of the utility, BELCO's operations. Investments in grid modernisation, such as smart metering, digital system upgrades and Battery Energy Storage Systems (BESS), have the potential to improve system efficiency, resilience and reliability. However, such investments also increase the regulated asset base and operating costs, placing upward pressure on retail tariffs.

Accordingly, while grid resilience and reliability are essential public goods, the associated costs must be carefully managed to ensure that they deliver demonstrable system benefits without unduly increasing electricity prices. This requires strong regulatory scrutiny, transparent cost reporting and performance-based incentives to ensure that capital and operational expenditures are efficiently incurred. The Regulatory Authority (RA) shall continue to oversee utility costs, tariff methodologies, and cost-of-service regulation in accordance with its statutory mandate. The NESP shall provide strategic direction, while detailed cost regulation remains the responsibility of the RA..

Structure of the Electricity Sector



4. Structure of the Electricity Sector

The NESP sets out the policy of the Government that the structure of the electricity sector be designed to best serve the public. This requires appropriate institutional arrangements, including clearly defined relationships and responsibilities for:

- the Ministry responsible for Energy (Section 4.1)
- the RA (Section 4.2)
- the Utility (Section 4.3)
- IPPs (Section 4.4)
- BG Sole Use Installation (BGSUI) (Section 4.5)
- Innovative License (IL) (Section 4.6)
- End Users (Section 4.7)
- Distributed Generators (Section 4.8).
- Community and Cooperative Energy Models (Section 4.9)

The Ministry responsible for energy is updating the NESP policy, which shall guide the RA as it regulates Bulk Generators (BELCO and IPPs), the TD&R Licensee, and transactions with end users. End users ensure a high quality of service by filing complaints with the Authority. Figure 2 summarises the updated structure of the electricity sector, followed by descriptions of the roles and responsibilities of each entity. Private businesses that compete to provide goods and services to each of these entities are an important part of the electricity sector, but for simplicity are not illustrated in the figure.

The roles and responsibilities of each entity are described in the following sections.

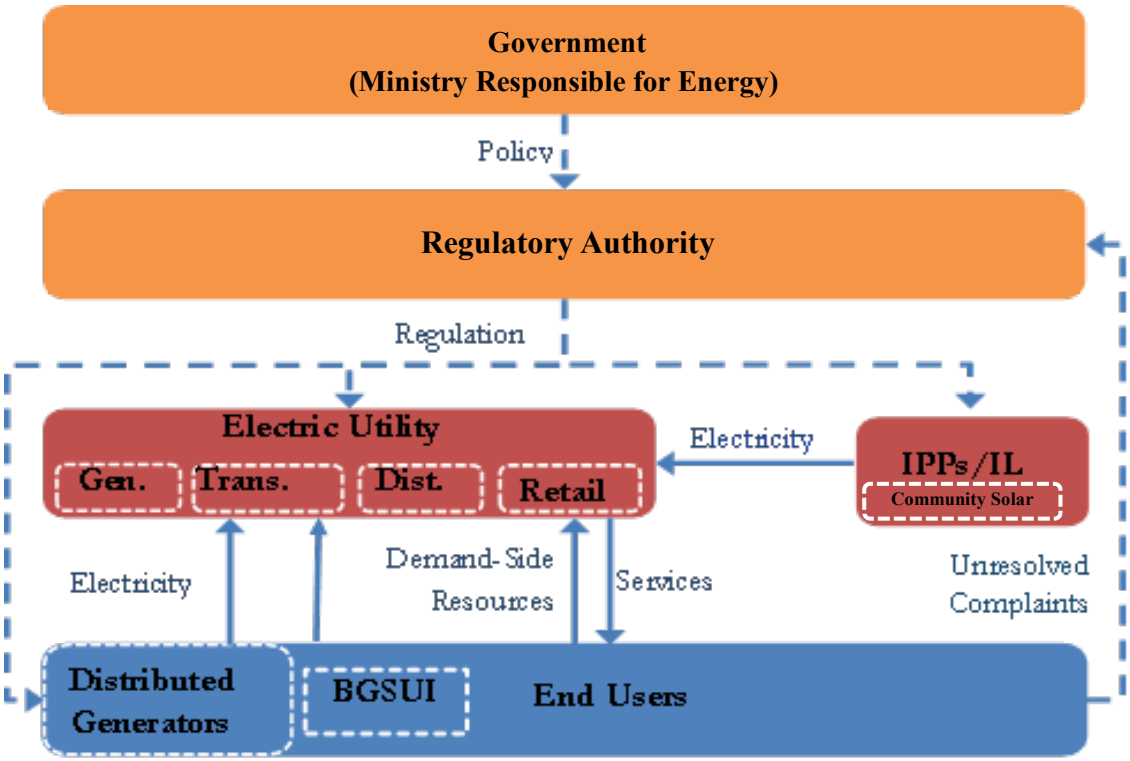


Figure 2: Desired Structure of the Electricity Sector

Notes: Dotted arrows indicate policy or regulation. Solid arrows indicate goods or services. Functions of the Utility are divided to indicate separate regulatory accounts.

4.1 The Ministry responsible for Energy

The Ministry responsible for energy provides policy to guide the electricity sector.

The Ministry leads the Government's efforts to coordinate and enable the development of large-scale electricity and infrastructure projects. The Ministry is also responsible for leading cooperation within the Government (and with other countries) on smaller-scale policy matters, such as an energy efficiency labelling initiative.

The Ministry has two main responsibilities in relation to the RA. It:

- Participates in the process to select Commissioners of the RA
- Provides general policy direction to the RA.

Looking ahead, the Government shall evaluate options to further streamline regulatory oversight by enhancing coordination between the Ministry and the RA. This includes the possibility of a

more amalgamated approach that merges or better aligns certain functions for more efficient governance of the electricity sector.

There are also several other ancillary additional roles the Ministry has:

- **Long-term energy planning:** Leading the development and periodic updating of national energy strategies, including demand forecasts, renewable energy integration pathways, and decarbonization targets.
- **Stakeholder coordination:** Facilitating structured engagement with utilities, independent power producers, consumers, and civil society to ensure policy is informed, inclusive, and responsive.
- **International representation:** Representing the Government in regional or international energy forums, securing technical assistance, and developing bilateral cooperation agreements.
- **Overseeing major public investments:** Ensuring effective governance of Government-funded electricity sector projects, including grid upgrades, storage solutions, and renewable energy procurement.

4.2 The Regulatory Authority

The RA is the sole body responsible for regulation of the electricity sector. The RA's responsibilities include:

The RA regulates tariffs and quality of service in a manner that promotes public interest (as defined in this Policy) while allowing the Electric Utility's investors an opportunity to earn a fair return on investment.

Regulating the TD&R Licensee's relationship with Bulk Generators (including IPPs) and distributed generators. The RA ensures that all generators have a fair opportunity to connect to the grid and sell power on commercially competitive terms.

Investigating and responding to complaints from end users. The RA serves as a single point of contact for end users to pursue grievances against the TD&R Licensee that have not been resolved through the TD&R Licensee's own customer service processes.

The RA conforms to general Government policy but is intended to act independently of the Government. The RA operates under the law, maintains an arm's-length relationship with private interests and the Government, and has organizational autonomy (including budgetary autonomy).

The RA is staffed with sufficient technical expertise to carry out essential functions, while outsourcing more specialized analyses and tasks to external consultants. For example, the RA engages external consultants to support rate cases and the IRP process. This approach:

- Helps control costs. (A larger, conventional regulatory body would have too high an overhead relative to the TD&R Licensee's total revenue on a small island.)
- Ensures specialized skills remain available. (Regulation is a highly specialized field; the Authority needs to ensure sufficient skills in-house to regulate the electricity sector.)
- Improves the independence of the Authority. (Ensuring an arm's-length approach to business is challenging in any sector on a small island such as Bermuda.)

Prior to issuing any determination, the RA holds consultations that provide an opportunity for analysis and comments to be submitted by all interested parties: the TD&R Licensee, Bulk Generators (including IPPs), and end users (including those who are distributed generators at a residential, commercial, or industrial scale).

The RA also serves as an independent technical advisor to the Government on energy policy matters and helps the Ministry understand trade-offs implied by policy decisions; however, the RA does not advise on which policy direction to take. At the request of the Ministry, the RA initiates a consultation process on proposed policies, in which the TD&R Licensee is required to quantify both the financial and economic costs of the proposed policy. The RA is responsible for preparing its own cost-benefit analysis, reviewing the TD&R Licensee's analysis, and holding public consultations on the proposal.

To align with international best practice, especially given Bermuda's increasing exposure to distributed generation, electrification, and climate risks, the following roles are important to incorporate explicitly:

- **Oversight of Integrated Resource Planning (IRP)**
    - Approving, monitoring, and enforcing the IRP process to ensure that all future generation and grid investments follow least-cost planning principles and align with this Policy.
    - Reviewing long-term demand forecasts, technology assessments, and resilience requirements.
- **Resilience and Climate Preparedness**
    - Integrating resilience requirements, including hurricane hardening, backup capabilities, and system restoration plans—into regulatory oversight.
    - Monitoring grid modernization efforts to ensure reliability is maintained or strengthened as intermittent renewables and EV loads increase.
- **Monitoring Competition and Market Fairness**

- Ensuring that market behaviour by dominant actors (including the TD&R Licensee) does not impede competitive procurement, fair pricing, or innovation.
- Overseeing procurement processes to ensure they remain transparent, non-discriminatory, and aligned with least-cost principles.

- **Licensing, Certification, and Compliance**

  - Licensing installers of renewable energy systems and ensuring compliance with nationally recognized technical and safety standards.
  - Enforcing penalties or corrective actions where license conditions are breached.

4.3 The Electric Utility

The Utility is responsible for:

- Supplying electricity to end users
- Planning the electric system (within the bounds set by policy, law, and regulation
- Operating its generation, transmission, and distribution assets efficiently
- Providing access to the transmission and distribution network in a non- discriminatory manner, including dispatching generation in merit order.

The Utility is the single buyer (off taker) of power from all generators, through the TD&R Licensee. The Utility meets demand by generating bulk power itself, purchasing power from third parties (BG from IPPs, and distributed generators from residential, commercial, and industrial end users) under long-term contracts, and procuring demand-side resources. Demand-side resources are conservation measures that are designed to limit or reschedule electricity use so that the size and number of generating facilities can be reduced or delayed. The Utility is responsible for forecasting demand and procuring resources to meet this demand, through the IRP process defined in this Policy.

The Utility is also the sole party responsible for providing transmission, distribution, and retail services on the Island.

The Utility is subject to regulation by the Regulatory Authority. To facilitate effective regulation, and particularly cost-reflectiveness of tariffs, the Utility will maintain separate regulatory accounts for each operating license, BG and TD&R.

4.4 Independent Power Producers

It is the Government's policy to enable an environment for IPPs to introduce competition in bulk generation, help reduce the cost of power in Bermuda, develop new energy sources, and contribute to achieving the other objectives of this Policy. For example, the Government recognizes that IPPs may bring unique expertise that can yield high-quality generation using technologies not currently in the electricity matrix, thus promoting energy security and realizing more opportunities to reduce local and global emissions.

IPPs are entities that provide energy, capacity, and ancillary services (for example storage) for commercial purposes, exclusively to the TD&R Licensee under long-term contracts that have been secured through the IRP process (see Section 6).

The PPA between the Utility and Tynes Bay shall be reviewed by the Regulatory RA every five years considering it's the IPPs contribution to firm capacity and costs of operation.

4.5 BG Sole Use Installation (BGSUI)

The Electricity Amendment Act 2024 introduced the BGSUI to enable large-scale renewable energy developments greater than 500 kilowatts (kW) to generate electricity for their own exclusive use. This licence was created to address the challenges faced by large institutions, commercial enterprises, and government facilities of national importance that sought to install renewable energy systems but were previously constrained by regulatory limits.

The new licence strikes a careful balance between empowering licence holders to achieve greater energy independence and ensuring that the stability of the grid and the interests of ratepayers are protected. Under this framework, a Bermuda-registered company, Government department, or statutory authority may install renewable generation above 500 kW for self-use at a single location. To safeguard system reliability and equity, the RA will oversee the licensing process and ensure that projects are designed and operated in a manner that does not undermine grid stability or shift costs onto other customers.

While the primary purpose of these installations is self-supply, licence holders may be permitted, with RA approval, to export up to 30 percent of their total generated output to the grid. This provision provides flexibility for system design while preventing excess generation from creating unintended impacts on the grid or ratepayers.

The BGSUI Licence represents an important tool for supporting Bermuda's clean energy transition. It enables large developments that are of national importance to benefit directly from the renewable energy they produce, strengthens energy security by reducing reliance on imported fuels, and ensures that the transition occurs in a measured and well-regulated fashion. However, similar to DG, the BGSUI feed in tariff (FIT) shall not increase rate pressure for other consumers.

4.6 Innovative Licence (IL)

The Electricity Amendment Act 2022 introduced provisions for the Innovative Licence, subsequently operationalized through the Electricity (Innovative Licence) Regulations 2023. This licence is intended to create a structured pathway for the testing, demonstration, and deployment of emerging technologies in Bermuda's electricity sector.

The Innovative Licence provides a controlled framework in which companies may introduce new or unproven technologies that support Bermuda's transition to a cleaner, more affordable, and more resilient electricity system. Unlike traditional generation or supply licences, the Innovative

Licence is explicitly designed to accommodate pilot projects, demonstration schemes, or novel business models that fall outside the scope of established regulatory categories.

The Regulations establish a transparent process for application and evaluation. Applicants are required to submit comprehensive information on the proposed technology, business model, and environmental impacts. The RA is mandated to consult with key Ministries including Environment, Planning, Parks, Public Works, and Marine and Ports before determining whether to grant a licence. To safeguard the public interest, the RA may require environmental impact assessments, risk management plans, and public consultation prior to approval.

Licences may be granted for an initial period of up to seven years, with the possibility of a single extension of up to five years.

The Regulations also empower the RA to impose conditions on innovative licences, including obligations for reporting, risk management, environmental protection, and decommissioning at the end of the licence period. It is important to note that if the licence is transferred to a BG licence, the decommissioning shall be done in accordance with this licence, not the now void innovation licence.

In addition, the Regulations provide for the designation of innovation zones and protection zones. These mechanisms allow specific geographic areas, including terrestrial and marine environments, to be reserved for innovative projects while restricting or prohibiting incompatible activities that might jeopardize the project's equipment or objectives.

The Government views the Innovative Licence as a critical instrument for enabling technological advancement in line with Bermuda's energy transition goals. It creates opportunities for local and international developers to pilot storage technologies, advanced renewables, smart grid solutions, and other innovations that may in the future contribute to reducing fossil fuel reliance and stabilizing electricity costs. At the same time, the framework ensures that consumer protection, environmental stewardship, and system reliability are maintained.

Through this licence, Bermuda demonstrates its commitment to balancing innovation with oversight, enabling the country to responsibly explore emerging opportunities in the electricity sector while protecting the public interest.

4.7 End Users

End users buy services from, and may sell services to, the TD&R Licensee. End users can buy energy, demand, and grid access services from the TD&R Licensee.

End-users participate in the electricity sector as consumers of electricity services. They may adopt distributed generation in accordance with RA's rules. End-users contribute to sector development through feedback, complaints, and participation in public consultations, but they do not hold statutory responsibilities within the sector's governance or regulatory framework

4.8 Distributed Generators (DG)

It is the Government's policy to continue to create a clear, equitable and fair regime for distributed generators. DG are end users (residential, commercial, or industrial) with generating units that are connected to the distribution network and used to offset some or all the end user's energy consumption.

An enabling regime for distributed generators hinges on an equitable tariff structure for the Utility that:

- Ensures cost recovery by reflecting the Electric Utility's cost of providing services to distributed generators (energy, demand, and grid access services), and
- Fairly compensates distributed generators for the value of any energy produced by their distributed generation system. This may be set to reflect financial value (according to avoided generation cost), as well as economic value (accounting for externalities and benefits not captured in avoided cost).

Matters of cost recovery and the value of distributed generation will be regulated by the RA, under the direction of this Policy.

4.9 Community and Cooperative Energy Models

The Government recognizes that greater public participation in energy generation and ownership can enhance affordability, promote social inclusion, and strengthen community engagement in the transition to renewable energy. To support this, the updated policy introduces a framework for Community and Cooperative Energy Models as a distinct category within the electricity sector structure.

Community and Cooperative Energy Models involve the collective ownership, financing, and operation of renewable energy systems by community organizations, cooperatives, or non-profit entities for the shared benefit of their members of the community. These models allow individuals, small businesses, or institutions to pool resources to develop renewable generation projects and share the resulting financial and energy benefits.

The Government proposes that this model be supported through the creation of a new Community and Cooperative Energy Licence, to be issued and regulated by the Regulatory Authority. This licence class would enable community-based renewable generation projects that sell electricity to the grid under approved feed-in arrangements for participating members, in accordance with technical and regulatory standards.

The objectives of this licence class are to:

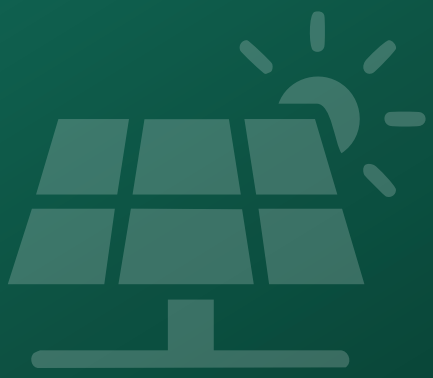
- Facilitate equitable access to renewable energy opportunities for households, small businesses, and community groups
- Encourage local investment and ownership in renewable energy generation

- Support public participation in the national energy transition while maintaining grid reliability and safety
- Enhance community resilience by reducing collective energy costs and improving local energy awareness

The Department of Energy, in collaboration with the RA, will establish eligibility criteria and technical standards for the Community and Cooperative Energy Licence. Priority will be given to projects that demonstrate broad community participation, transparent governance, and measurable social or economic benefits for ALL local residents, including, but not limited to, expats, PRC's and local Bermudians.

This model complements existing licence classes such as IPP's and BGSUI's by introducing a social and community-focused tier of renewable generation. It supports the principles of the Just Energy Transition by broadening participation in Bermuda's clean energy future, ensuring that the economic benefits of renewable energy are shared more widely across society.

Integrated Resource Planning and Policy Objectives



5. Integrated Resource Planning and Policy Objectives

The IRP is the foundation of long-term electricity sector planning in Bermuda. It provides a structured and evidence-based process for determining how best to meet future electricity demand while balancing affordability, reliability, and sustainability. Given Bermuda's small, isolated grid and high exposure to fuel price volatility, the IRP plays a critical role in managing risk and avoiding unnecessary or premature investments that could increase electricity costs.

The IRP process enables the systematic comparison of supply-side and demand-side options on a consistent basis, ensuring that decisions are informed by full system costs rather than individual project merits alone. The IRP is the primary mechanism through which policy objectives set out in the NESP and are translated into practical planning and investment decisions.

5.1 IRP as the Central Planning Tool

The IRP serves as the central planning tool for evaluating Bermuda's future electricity needs and finding the least-cost portfolio of resources capable of meeting those needs under a range of possible scenarios. The plan must assess projected electricity demand, peak load requirements, fuel price uncertainty, technology cost trajectories, emissions implications, and system operational constraints.

The EA 2016 established the IRP as the central planning tool for Bermuda's electricity sector. The IRP provides a structured, transparent framework for assessing future electricity demand and determining the least-cost mix of supply and demand-side resources to meet that demand in line with policy objectives while remaining feasibly practical.

A main function of the IRP is scenario analysis. Given the uncertainty associated with fuel markets, technology development, climate impacts, and consumer behaviour, the IRP must examine multiple future pathways rather than relying on a single forecast. This includes sensitivity testing of key assumptions such as fuel prices, renewable energy costs, uptake of electric vehicles, energy efficiency improvements, and distributed generation penetration.

The 2019 IRP, set a long-term target of 85 % renewable energy by 2035. This was ambitious and exceeded the NESP 2015 targets, using inefficient and economically unviable technologies, such as biomass. In 2023, the TD&R Licensee submitted a new IRP proposal assessing several different scenarios. This assessment was detailed, thorough and its results will ultimately be a reference for the RA and this policy to determine Bermuda's energy future. Although the IRP ended up settling on an 85% renewable generation by 2040, extending the 85% by five years, the NESP 2025 chooses to look at all the potential scenarios from a technology agnostic, economic and environmental standpoint with the main goal of stabilising electricity prices.

The extensive work done by the IRP culminated in eleven (11) separate scenarios, each with varying capacity and generation mixes and separate schedules for the decarbonisation of the island's electricity supply. Rather than attempting to recreate these scenarios, the NESP 2025

will use the energy mixes and decision pathways identified in the IRP as a reference. It will also learn from the previous IRP processes in attempt to streamline and improve upon the decision making and stakeholder engagement of the overall process.

The IRP process is heavily dependent on updated input assumptions that are subjective by nature. The overall renewable energy potential is dependent on the land and seabed available for development, environmental impact assessments, planning approvals and zoning. As a result, future IRP processes' input assumptions must be approved by a joint committee including but not limited to the Department of Energy, Department of Environment and Natural Resources (DENR), RA and the Utility.

5.2 IRP Informing Future Policy Objectives

Reducing the carbon intensity of Bermuda's electricity supply remains a central policy objective. However, the NESP 2025 recognizes that the shift must be explicit, costed, and detailed within the IRP itself, rather than left as an aspirational target set through policy. Furthermore, as mentioned above, the scenarios within the IRP and the intensive data sets used should be utilised to inform future policy.

Accordingly, the IRP remains the main driver for the scheduling of the shift towards a less carbon intensive generation mix. This policy supports this shift; however, the overarching policy goal is to ensure that only economically feasible options are considered. The focus of this policy is to ensure that while the island shifts towards lower carbon intensive energy mix the overarching goal remains the stabilisation of rates. As a result, this policy does not prescribe specific targets or technologies.

The NESP 2025 remains technologically agnostic, meaning it does not endorse or discourage any particular energy mix, may it be through LNG adoption, wind procurement, expanded solar BG or any other economically feasible technology (this can include technologies such as wave or tidal if proven economical after being tested through the Innovation Licence or certified commercially viable). Instead, the policy prioritizes the stabilization of tariffs, ensuring that any transition maintains or reduces costs relative to the baseline Business-as-Usual (BAU) scenario.

While the NESP establishes high-level objectives and guiding principles, it does not prescribe specific technologies, project sizes, or deployment schedules. Instead, it provides the policy framework within which the IRP is developed and evaluated.

The findings of each IRP will inform future policy refinement by identifying emerging risks, opportunities, and cost drivers within the electricity sector. This iterative relationship between policy and planning ensures that the NESP remains responsive to changing circumstances while preserving regulatory certainty. Policy updates will therefore be informed by empirical evidence, rather than aspirational targets alone.

Through this iterative process the data and analysis done by successive IRPs can help inform future policy. In simple terms, the Department of Energy and subsequently the Ministry

responsible for Energy can and will pull as much as possible from the work done by previous entities such as the RA and the Utility. This will assist the construction of a coherent, well informed and in-depth policy that utilises all information available to discern the right path for the island's electricity sector.

5.3 Resilience and Security Considerations

Resilience and security are critical considerations for Bermuda's electricity sector. As a small, isolated island system with limited interconnection options, Bermuda is uniquely exposed to both external and internal shocks. The IRP must explicitly assess the system's ability to withstand and recover from extreme weather events, fuel supply disruptions, equipment failures, and other credible risks. Global fuel price volatility has been a specifically defining challenge, as fluctuations in international oil markets directly affect the cost of imported fuels and, in turn, electricity tariffs. These external pressures create uncertainty and highlight the urgency of reducing reliance on fossil fuels while ensuring that any transition maintains system stability and affordability. Although it is noted that uncertainty and volatility of energy supply due to the variability of renewable sources still remain.

This includes evaluating the benefits of resource diversity, geographic dispersion of generation, redundancy in critical infrastructure, and black-start and restoration capabilities. The IRP should also consider the value of maintaining adequate reserve margins, grid resilience and firm capacity to support high penetrations of variable renewable generation.

The IRP shall

ensure adequate firm generation capacity is maintained to serve full system demand under extended adverse conditions, including multi-day weather events during which variable RE and battery storage may be unavailable.

Grid resilience also relates to the ability of the grid to withstand and recover from natural disasters, supply disruptions, and operational stresses. Hurricanes, severe storms, and the increasing impacts of climate change demand a more robust and flexible electricity system. Grid modernization is an essential part of resilience planning. Modernized systems can incorporate predictive algorithms, digital monitoring, and flexible resources to anticipate demand changes, integrate renewable energy more smoothly, and manage distributed generation. While grid modernization will be addressed in greater detail in the following section of this Policy, it is important to recognize that investment in advanced grid infrastructure, especially BESS, is fundamental to reducing vulnerability and strengthening energy security.

Resilience considerations must also be balanced against affordability. While investments in resilience are necessary, they must not place undue financial burden on grid-dependent customers. The RA is therefore required to assess resilience investments by the TD&R Licensee through the contribution to stability and impact on long-term tariffs. By evaluating resilience

alongside cost, while the RA and TD&R Licensee ensure that Bermuda builds an electricity system that is both secure and affordable for all consumers.

5.4 Incorporation of Energy Storage in Resource Planning

Energy storage technologies can play a significant role in supporting system flexibility, integrating variable renewable generation, and enhancing resilience. Storage can provide services such as peak shaving, frequency regulation, reserve capacity, and backup power during outages.

The IRP must evaluate storage options based on their full system value, including capital costs, operating characteristics, duration, degradation, and lifecycle impacts. Storage should not be assumed to be a universal solution, but rather assessed alongside alternative options such as demand response, flexible generation, or network investments. Only storage solutions that demonstrate net benefits to affordability, reliability, or resilience should be incorporated into the preferred resource portfolio. As Bermuda transitions toward a higher share of renewable energy, the integration of energy storage technologies will become a critical component of the resource planning process. Energy storage enhances system reliability, manages intermittency, and supports the stability of the grid as renewable generation increases.

The Government recognizes that future energy scenarios under the IRP will include a combination of BG Solar PV, wind generation, and a growing level of DG. These developments will require flexible and responsive energy storage solutions to maintain grid balance, improve system efficiency, and reduce curtailment of renewable energy.

The IRP process will therefore explicitly evaluate the role of energy storage under each generation expansion scenario over the duration of procurement window. This will include assessing the optimal capacity, location, and configuration of storage systems that complement planned and existing renewable generation. Storage will be considered both as grid-scale infrastructure and as distributed assets that enhance reliability at the customer and community level.

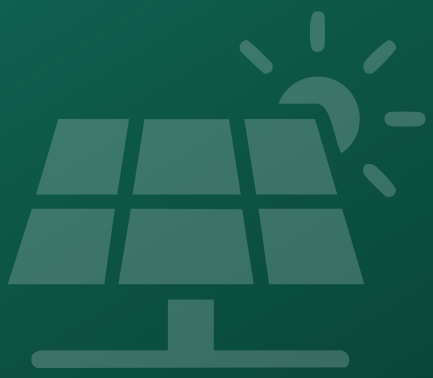
The Department of Energy, in collaboration with the RA and the TD&R Licensee, will ensure that future IRP iterations:

- Incorporate modelling of battery and other energy storage technologies as integral system components
- Evaluate storage performance in relation to renewable energy penetration, demand peaks, and backup generation requirements
- Identify cost-effective pathways for deploying storage in alignment with national renewable targets and affordability objectives

- Consider regulatory and market frameworks that allow storage to provide grid services such as frequency regulation, peak shaving, and reserve capacity

Energy storage will be treated not merely as a technical complement but as a core enabling infrastructure in Bermuda's clean energy transition. Most large-scale renewable resources applicable to Bermuda are intermittent and must be complemented by energy storage and firm generation to maintain system reliability and stability. The IRP shall determine the optimal mix. By embedding storage considerations into the IRP process, Bermuda will enhance energy security, reduce reliance on fossil fuels, and maximize the efficiency and reliability of renewable energy integration.

Distributed Generation (DG) and Energy Equity



6 Distributed Generation (DG) and Energy Equity

DG refers to electricity generating systems that, unlike bulk generation, are located on an end user's residential, commercial, or industrial premises, are interconnected to the lower-voltage distribution network, and used to offset the customer's energy consumption below the licence threshold currently set at 500kW. While DG is expected to remain an important component of Bermuda's electricity system and contributes to emissions reduction and fuel savings, its impacts on system costs, tariffs, and equity require careful management through policy and regulation. Depending on the type of end user implementing it, a distributed generation system may generally be categorized as:

- **Residential DG** – rooftop or small-scale installations serving individual households.
- **Commercial DG** – systems installed by businesses to reduce operating costs and manage long-term energy risks.
- **Industrial DG** – larger facilities integrated into industrial premises to offset high electricity usage.

While distributed generation contributes to energy independence, reduces fossil fuel imports, and encourages private investment in clean energy, it also introduces challenges. The most significant of these arise from self-consumption, which reduces the volume of electricity purchased from the grid. Because most utility costs are fixed and recovered through the mixed tariff structure (both variable and non-variable rates), widespread DG adoption without appropriate safeguards can leave grid-only customers to bear a disproportionate share of system costs.

For this reason, the Government's policy is to support an enabling environment for cost-effective distributed generation while ensuring that its growth does not adversely affect the affordability of electricity for non-DG customers. The policy therefore seeks to balance these considerations by promoting equitable access to DG while protecting grid-reliant customers from disproportionate cost burdens.

6.1 Access and Financing Mechanisms for Low Income Households

Upfront capital costs remain a significant barrier to DG adoption for low-income households and other vulnerable customers. Without targeted interventions, the benefits of DG risk accruing primarily to higher-income households, while lower-income customers bear a growing share of system costs.

To address this imbalance, the Government will explore mechanisms such as on-bill financing, third-party ownership models, targeted grants, and community-based programmes that lower barriers to participation. Any such measures must be designed to deliver net system benefits and avoid cross-subsidies that undermine overall affordability.

Community and cooperative solar programmes offer a pathway for broader participation in renewable energy by allowing customers to share in generation assets without individual ownership. These models can be particularly beneficial for renters, apartment dwellers, and small businesses.

The development of community solar must be carefully structured to ensure that projects are cost-effective, transparently governed, and aligned with system planning objectives. The Feed in Tariff (FIT), cost allocation, and crediting mechanisms should be designed to ensure fairness between participating and non-participating customers.

The Government is committed to ensuring that the benefits of distributed generation and renewable energy adoption are accessible to all segments of society, including low income and vulnerable households. The clean energy transition must be inclusive and equitable, contributing not only to sustainability but also to long term affordability and social wellbeing.

To achieve this, the Government will broaden access to DG opportunities so that participation is not limited to those with significant upfront capital or property ownership. Policy measures under consideration include:

- **Community Solar Participation**

  The establishment of community solar projects that allow households to purchase or subscribe to shares in larger solar facilities. Participants will receive credits on their electricity bills proportional to their share of the system's generation. This approach enables renters, apartment dwellers, and households without suitable roof space to benefit directly from renewable energy generation. Section 6.4 below discusses the potential for community solar projects in more detail.

- **Green Financing and Credit Support**

  The development of green financing programs that provide concessional loans, revolving funds, or credit guarantees to support residential and small business renewable energy installations. These programs have the potential to reduce financial barriers to entry and encourage adoption across diverse income groups. Partnerships with local financial institutions, the Bermuda Economic Development Corporation (BEDC), and international climate finance facilities will be explored to mobilize funding and de-risk investment.

- **Targeted Incentives for Vulnerable Households**

  The introduction of targeted incentive mechanisms to assist low-income households in adopting renewable energy and energy efficiency technologies. These may include

rebates, installation grants, or enhanced tariff support to ensure that vulnerable groups can participate in and benefit from the clean energy transition.

By expanding access to financing and shared distributed generation opportunities, the policy ensures that Bermuda's transition to clean energy is inclusive, equitable, and aligned with national affordability objectives. These measures will also contribute to energy security, economic empowerment, and reduced cost of living for households most affected by high electricity costs.

6.2 Community and Cooperative Solar

Community and cooperative solar programmes offer a pathway for broader participation in renewable energy by allowing customers to share in generation assets without individual ownership. These models can be particularly beneficial for renters, apartment dwellers, and small businesses.

The Government recognizes that not all households or small businesses have the financial capacity, property ownership, or suitable roof space to install individual distributed generation systems. To ensure that the benefits of renewable energy are shared equitably, the policy introduces a framework for Community and Cooperative Solar initiatives.

Community and Cooperative Solar projects allow multiple participants to share ownership or subscription in a shared solar installation, typically located on public land, commercial rooftops, or other centralized sites. Participants receive credits on their electricity bills in proportion to their share of the system's generation, thereby accessing the financial and environmental benefits of renewable energy without needing to install their own systems.

This approach supports Bermuda's Just Energy Transition by enabling renters, apartment dwellers, low-income households, and small enterprises to participate in and benefit from renewable energy generation. It also promotes social equity and economic inclusion while contributing to national renewable energy targets.

To facilitate this model, the Government proposes the introduction of a Community and Cooperative Energy Licence, to be issued and regulated by the RA. This licence class will enable non-profit organizations, community groups, or cooperatives to develop shared renewable generation projects, subject to clear eligibility criteria, technical standards, and consumer protection requirements.

The objectives of this licensing framework are to:

- Expand access to renewable energy participation for households unable to install individual distributed generation systems.

- Encourage collective investment and ownership models that strengthen community resilience.
- Ensure transparent governance, equitable benefit distribution, and sound financial management of community projects.
- Maintain grid stability and ensure that all costs associated with interconnection and energy balancing are fairly allocated.

The introduction of this new licence class will be designed to avoid any adverse financial impact on existing ratepayers. Cost recovery and tariff structures will be carefully developed to ensure that community and cooperative projects operate on a cost-neutral basis, with participants bearing the direct costs of development, operation, and maintenance. The RA will oversee the rate design and settlement mechanisms to prevent cross-subsidization and ensure that non-participating consumers are not financially disadvantaged.

The Department of Energy, in collaboration with the RA and the Ministry of Finance, will establish appropriate guidelines for tariff treatment, project governance, and revenue sharing to ensure fairness, transparency, and affordability. Projects located on public lands or government facilities may be prioritized where feasible, provided they meet environmental and technical requirements.

Through this framework, Bermuda will enable broader participation in the clean energy transition, empowering communities while maintaining system reliability, regulatory integrity, and financial equity for all consumers.

6.3 Micro-Grid Policy

Microgrids may enhance resilience by providing localised generation and storage for critical infrastructure or specific geographic areas. In Bermuda's context, micro-grids may be appropriate for hospitals, or other essential services. As Bermuda's grid already functions as a self-contained Micro-Grid (MG), operating as an isolated network with no interconnection to external power systems. All generation, transmission, and distribution occur within this single, integrated grid managed by the TD&R Licensee. Given this structure, the system already exhibits the defining characteristics of a MG, including localized generation, close operational control, and full grid self-sufficiency.

In this context, the introduction of additional micro grids, which are small independently operated systems designed to serve specific facilities or localized areas, requires careful consideration. While such systems can provide resilience or energy security benefits in large jurisdictions or remote regions, the potential proliferation of independent micro grids, external of the TD&R Licensee, could have unintended economic and technical consequences.

Uncoordinated expansion of independent micro grids may lead to increased costs for remaining ratepayers as grid connected customers bear a higher proportion of fixed system and maintenance costs. It may also, undermine investment in system reliability, and create technical integration challenges including frequency control, system protection, and restoration following major storms.

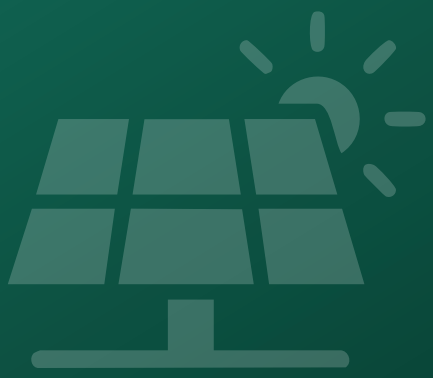
For these reasons, any move toward a broader MG Policy must be guided by a structured, evidence-based approach that maintains affordability, protects ratepayers, and preserves the operational integrity of the grid.

If future analysis supports limited application of micro grids, consideration may be given only where the project supports critical infrastructure such as hospitals, the airport, or emergency shelters, or where the system provides demonstrable resilience benefits that cannot be achieved more efficiently through grid connected solutions. These can be considered where technical standards and interconnection protocols are approved by the RA to maintain safety and system stability, and where the financial framework ensures cost neutrality with all incremental costs borne by the project participants rather than the general rate base.

The Department of Energy, in collaboration with the RA and the TD&R Licensee, will periodically review the need for a refined MG Policy. Any proposed framework would require detailed assessment of technical feasibility, regulatory oversight, and financial impacts.

The Government acknowledges the potential role of microgrids in supporting critical infrastructure and large energy users in future scenarios. Facilities such as the Bermuda Hospitals Board and Bermuda College represent strong candidates where microgrid solutions could enhance energy security, improve resilience during extreme weather events, and support continuity of essential services. As technology evolves and economic conditions become more favourable, the Government will continue to assess and enable the role of microgrids as part of Bermuda's long term energy transition. This approach ensures that the grid continues to operate as a single, reliable, and affordable entity that serves all consumers equitably while avoiding cost shifting or system fragmentation.

Bulk Generation



7. Bulk Generation

BG refers to generating systems that, unlike distributed generation, are built on dedicated sites, are developed for the commercial purpose of selling electricity into the grid and are connected to serve the entire customer base. BG may be operated either by the BG division of the Utility or by IPPs licensed under the EA 2016.

7.1 Procurement Rules

The Government affirms that all new BG capacity must be procured exclusively through the IRP process. The IRP establishes the long-term resource needs and provides the framework for competitive procurement of new generation resources. For the avoidance of doubt, the EA 2016 establishes that the Utility is responsible for conducting the procurement process, including tendering, evaluating bids, and negotiating agreements. Where public land and properties have been identified for new generation resources, the Government will select a qualified and independent third party to conduct the procurement process on its behalf to preserve transparency and fairness. The RA is responsible only for approvals, ensuring that procurement decisions align with the IRP, are transparent, and comply with the law. Business decisions regarding procurement outcomes must remain with the Utility or the appointed third party, and not with the RA. This division of roles protects the independence of commercial decision-making while ensuring regulatory oversight and alignment with national policy.

7.2 Renewable Energy Priority in Resource Mix

In accordance with this Policy, renewable energy will be given priority in the resource mix wherever it meets affordability, equity, and reliability benchmarks. Bulk renewable projects such as utility-scale solar, wind, and innovative technologies that prove commercially viable may be procured under the IRP process.

The IRP must explicitly evaluate the impact on total system cost and PPAs for all renewable bids to ensure that these projects lower or at minimum do not increase retail tariffs. The IRP shall evaluate all technologies on a technology-neutral basis, supported by investment-grade feasibility studies where required. Renewable BG projects will also be evaluated for their contribution to system resilience and their ability to displace imported fossil fuels and reduce potential environmental impact.

7.3 Green Hydrogen, Biomass, Waste to Energy Policy Direction

The Government remains committed to exploring diverse renewable energy options to enhance energy security, reduce dependence on imported carbon intensive fossil fuels, and support long term sustainability. However, in Bermuda's context, the feasibility of certain technologies must be carefully assessed considering the island's physical constraints, resource availability, and economic realities. The IRP shall evaluate all technologies on a technology-neutral basis, supported by investment-grade feasibility studies where required.

7.3.4 Policy Position

Given Bermuda's geographic and resource constraints, the near to medium term energy strategy will prioritize the expansion of solar and energy storage as the primary pathways for achieving renewable energy targets. Green hydrogen, wind and biomass technologies may be reconsidered only if future technological advancements significantly improve their cost effectiveness and resource requirements. Waste to Energy will remain part of Bermuda's essential infrastructure portfolio, guided by the principle of environmental stewardship, system reliability, and fiscal responsibility.

7.4 Local Benefit and Industrial Participation Requirements

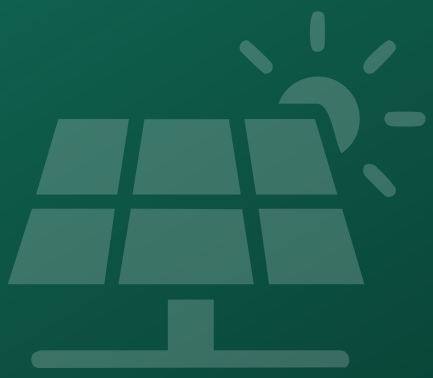
BG projects must support Bermuda's economic development as well as its energy and environmental needs. Developers of large-scale generation must show how their projects will strengthen the local workforce, engage Bermudian businesses, and build long term technical capacity on the Island.

The Ministry will require detailed plans describing how Bermudians will be involved in project development, construction, operations, and maintenance, including training, certification, and skill transfer. If specialised foreign expertise is needed, developers must explain how knowledge will be passed on to local workers to reduce long term dependence on external contractors.

Developers must also demonstrate how they will include Bermudian companies in procurement by using local suppliers, trades, consultants, and service providers where practical and commercially reasonable. These requirements are not meant to burden projects but to ensure fair opportunities for Bermudian participation.

Where appropriate, the Government may consider opportunities for Bermudian entities to participate financially or industrially, including co investment or partnerships, subject to public interest, affordability, and competitive fairness.

Transmission, Distribution, and Retail



8. Transmission, Distribution, and Retail

It is the Government's policy that Bermuda shall continue to have a single provider of TD&R services. The Utility, licensed under the EA 2016, is responsible for ensuring safe, reliable, and equitable access to electricity for all customers. The RA oversees the Utility's performance to ensure that the TD&R operations remain consistent with this Policy and that consumers are protected.

8.1 Tariff Structures and Cost Reflectivity

A separated or segmented tariff structure allows costs to be allocated transparently and equitably, ensuring that the Utility is made whole for its costs of operation while consumers pay only for the services they use.

For DG customers, tariffs must be structured to ensure that they contribute fairly to fixed system costs, even as they offset part of their consumption with self-generation. Buyback rates, grid access fees, and other DG-related charges must be designed so that the growth of DG does not result in cost-shifting to grid-dependent customers. At the same time, DG customers should receive fair economic compensation for exports to the grid, load reductions during peak periods, or other demand-side services they provide. The policy provides the principles (fair allocation, cost reflectivity, equity protection). Tariff methodology design and implementation timelines are the RA's responsibility under its statutory mandate.

The RA shall continue to review and approve tariff structures to ensure cost reflectivity, transparency, and alignment with the principles of affordability and equity. Benchmarking against international peers and continued discussions with Government will be carried out, by consultants, government workers and other entities not mentioned herewith regularly to ensure that Bermuda's tariff design evolves in line with global standards.

8.2 Grid Modernization, Strategy and Smart Metering

The modernization of Bermuda's grid is an essential enabler of resilience, efficiency, and the integration of renewable resources. Grid modernization refers to the deployment of advanced technologies including digital monitoring, predictive algorithms, automated control systems, and distributed energy resource management systems that improve the Utility's ability to anticipate demand, manage variable generation, and respond quickly to intermittency.

The principal component of modernization is the requirement for battery storage capacity. As penetration of solar PV DG continues to expand, the system faces increased intermittency and variability in supply. Grid scale storage together with distributed storage solutions will be essential to absorb excess solar output during the day and dispatch it in the evening peak. The IRP will therefore be required to include a battery storage roadmap to ensure that modernization efforts are aligned with Bermuda's transition to higher levels of distributed renewable energy.

The Utility TD&R Licensee has successfully completed the rollout of its advanced metering program across the island. This achievement provides a strong platform for automated meter readings. Modernization by equipping all customers with smart meters capable of supporting time of use pricing, demand response programs, and improved data analytics requires further improvement in the communication so that the TD&R Licensee may build on this foundation. The RA and TD&R Licensee will be able to introduce innovative tariff structures that reflect the real cost of electricity at various times of day, provide consumers with greater visibility into their usage, and enhance system efficiency.

Resilience planning must also recognize Bermuda's unique infrastructure. The Transmission segment of the grid is underground and therefore less vulnerable to hurricanes. However, the Distribution network remains predominantly overhead and highly exposed to storm damage and climate related risks. Grid modernization must therefore prioritize investments in hardening and upgrading the distribution network to improve recovery times, minimize outages, and protect vulnerable customers from prolonged service disruptions.

All modernization investments must be explicitly assessed under the IRP and subject to RA approval to ensure they are economically justified, technically sound, and consistent with this Policy's objectives of affordability, equity, and long-term resilience.

8.3 Consumer Protection Framework

Consumer protection is a core component of Bermuda's electricity policy. As electricity is an essential service, consumers must be assured that their rights are safeguarded through both sector-specific regulation and broader consumer affairs laws.

The RA is responsible for ensuring that the TD&R Licensee operates efficiently, provides reliable service, and takes actions consistent with this, and all past, present and future Policy objectives! This includes regulating tariff design, service quality, outage management, and fair treatment of both grid-dependent and DG customers. The RA's oversight is complemented by the broader mandate of Bermuda Consumer Affairs, which enforces national consumer protection legislation such as the Consumer Protection Act 1999 and the Standards of Trade Act 1970. These statutes ensure that all commercial transactions, including those in the electricity sector, are governed by fair trading practices, transparency, and accountability.

The Consumer Protection Framework for the electricity sector will therefore operate on two levels:

1. **Sector-Specific Protections through the RA**
    - Oversight of tariff structures to ensure affordability and fairness.
    - Regulation of service quality standards including outage frequency, restoration times, and customer service performance.
    - Transparent and non-discriminatory access to TD&R services.

- Monitoring of unregulated service markets (for example energy efficiency, MG solutions, and sustainable installation services) to prevent anti-competitive behaviour.
- Use of performance incentives and penalties to hold the Utility accountable.

2. **National Consumer Protections through Consumer Affairs**

    - Enforcement of fair-trading practices, prohibiting misleading representation or unfair contract terms in electricity service offerings.
    - Assurance that customers have access to clear and accurate billing, supported by the completed rollout of advanced metering infrastructure.
    - Investigation of consumer complaints that fall outside the RA's regulatory remit but that touch on broader issues of consumer fairness and protection.
    - Application of general consumer rights protections to energy-related products and services, including renewable energy installations sold or financed through third parties.

The Consumer Protection Framework will be further strengthened through coordination between the RA and Bermuda Consumer Affairs. This cooperation ensures that electricity consumers are not only protected from unfair practices by the Utility but also have recourse to national consumer protection law where relevant.

In addition, vulnerable customers will be afforded targeted safeguards, including protection from disconnection under hardship conditions and eligibility for assistance programs that mitigate the impact of high energy costs. These protections ensure that the transition to a modernized and renewable electricity system does not leave any group of customers behind.

8.4 Industrial Auditing Program

The Industrial Auditing Program will establish a formal framework for the RA to conduct, commission, or oversee periodic audits of the Utility and other IPP's. These audits will assess energy performance, system losses, and efficiency improvement opportunities within generation, transmission and distribution.

The objectives of the program are to:

- Ensure that the utility maintains high operational efficiency in power generation and grid management.
- Identify opportunities for technical and operational improvements that can reduce system losses and lower overall costs to consumers.
- Promote accountability, transparency, and continuous improvement within the utility's operations.

The RA will be empowered, under an amended legislative framework, to:

- Require the utility to provide data and access necessary to conduct independent efficiency audits.
- Review and verify energy consumption, generation, and loss data against international benchmarks.
- Publish summary findings and recommendations to promote public accountability while safeguarding confidential information.
- Monitor the implementation of corrective measures where inefficiencies or unjustified costs are identified.

The audits may include examination of generation efficiency, network losses, system balancing practices, and maintenance programs, as well as the performance of demand side management initiatives. For large industrial facilities, audits will identify opportunities for heat recovery, load management, and renewable energy integration. The policy also recognizes that renewable energy deployment and demand-side efficiency measures create local employment and economic opportunities that support Bermuda's broader development goals.

8.5 Performance Based Regulation (PBR)

The Government supports the continued use and expansion of Performance Based Regulation (PBR) within Bermuda's electricity sector to enhance accountability, transparency, and efficiency in utility operations. PBR provides an objective and measurable framework through which the performance of the Utility is assessed against defined service quality, reliability, and operational standards.

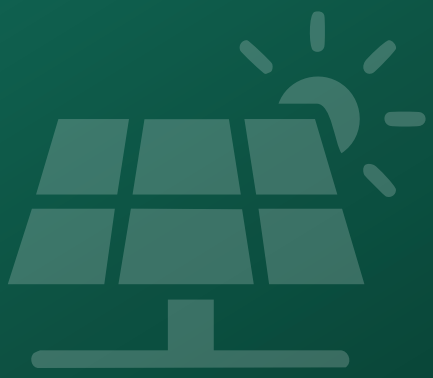
The Regulatory Authority already employs PBR mechanisms for monitoring reliability through established performance indicators such as the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI). These indicators measure the average duration and frequency of service interruptions experienced by customers and serve as key benchmarks for evaluating the reliability of the island's electricity supply. This will ensure a consistent and comprehensive approach to performance evaluation across all segments of the electricity value chain.

Under this framework, the RA will continue to define specific performance metrics and associated financial incentives or penalties tied to the utility's achievement of established targets. These may include reliability performance, voltage stability, customer service response times, and efficiency in the restoration of service following outages.

The RA will continue to ensure that PBR mechanisms are evaluated both within generation and TD&R regulatory frameworks, thereby aligning utility incentives with national policy objectives.

Over time, PBR may also be extended to address metrics related to renewable energy integration, grid modernization, and customer engagement.

Electric Vehicles and Transport Electrification



9. Electric Vehicles and Transport Electrification

The transition to electric vehicles represents both a transportation, environmental and energy policy priority. The Ministry of Transport has established phase out timelines for internal combustion engine vehicles and is advancing a national roadmap to support the adoption of zero emission vehicles across Bermuda's transport fleet. In parallel, work is underway to define the infrastructure requirements, building standards and regulatory framework necessary to support widespread electric vehicle deployment, including the expansion of charging networks across the island.

The Ministry of Home Affairs recognizes that EV adoption is central to Bermuda's energy transition. EVs increase electricity sales reduce dependence on imported fossil fuels, and, when combined with smart charging and renewable energy, can enhance overall grid flexibility and resilience. This Policy therefore aligns fully with the Ministry of Transport's initiatives, ensuring coherence between the transport and energy sector planning.

9.1 Alignment with Government's Electric Vehicle Transition Strategy

The Government is advancing a phased transition toward electric vehicles, with indicative timelines and interim targets to support a gradual and orderly shift away from internal combustion engine vehicles. This transition is intended to provide certainty to the market while allowing sufficient time for infrastructure development, consumer adoption, and industry adjustment.

The Ministry of Home Affairs fully supports this direction. From an energy sector perspective, the electrification of transport is expected to increase electricity demand in a predictable and manageable manner. This growth in demand will enable fixed system costs to be spread across a larger sales base, helping to alleviate structural upward pressure on electricity tariffs. The Ministry will continue to coordinate closely with the Ministry responsible for transport to ensure that future electricity planning appropriately reflects anticipated electric vehicle adoption trends.

9.2 National Electric Vehicle Charging Infrastructure Framework

The Government is advancing the development of a comprehensive electric vehicle charging network through the establishment of standards, regulatory principles, and infrastructure objectives. Key priorities include ensuring that the electricity grid can support increased EV demand, updating building requirements to incorporate EV charging provisions, enabling appropriate regulatory mechanisms for the resale of electricity for charging, and encouraging private sector investment in both public and private charging infrastructure.

The Ministry of Home Affairs supports this direction by ensuring that electricity sector planning fully integrates these infrastructure requirements. The Integrated Resource Plan will assess the cost, location, and timing of EV charging infrastructure deployment, including the system impacts of high capacity and fast charging technologies. Where necessary, amendments to

the Electricity Act will be advanced to enable the regulated resale of electricity for EV charging and to support the continued expansion of a reliable and accessible charging network.

9.3 Role of EVs in Increasing kWh Sales and Tariff Stability

EV adoption directly addresses one of the key structural challenges facing Bermuda's electricity system: the long-term decline in kWh sales associated with increased rooftop distributed generation. By introducing a new and growing source of electricity demand, transport electrification expands the system sales base, enabling fixed network and generation costs to be recovered more efficiently and equitably.

- To illustrate the potential impact of EV adoption, the Ministry has developed conservative projections of incremental electricity demand based on anticipated electric vehicle uptake over time. These projections assume a gradual adoption trajectory consistent with international experience, with slower uptake in the early years followed by accelerated growth as vehicle costs decline and charging infrastructure becomes more widely available. By 2050, EVs could contribute 42-54 GWh annually, equivalent to approximately 10percent of current electricity consumption.

, EV adoption represents one of the most significant opportunities to reverse declining electricity sales, stabilize tariffs and improve the long-term financial sustainability of the electricity system. By broadening the demand base, EVs will help distribute fixed system costs more equitably across consumers, while simultaneously reducing reliance on imported fossil fuels and supporting national decarbonisation objectives.. The Government will promote managed charging strategies including standardised residential charging limits and off-peak incentives.

To ensure that the growth of electric vehicles (EVs) supports and strengthens the electricity sector, the Government will establish a dedicated EV tariff. This tariff will promote charging during off-peak periods through time of use pricing, ensure that EV charging contributes equitably to system costs, and provide predictable and transparent pricing that builds consumer confidence in EV adoption. The tariff framework will also support private sector investment in charging infrastructure by enabling clear and appropriate cost recovery mechanisms.

Legislative amendments will also be required to facilitate the resale of electricity for EV charging purposes. Under the current Electricity Act 2016, the resale of electricity is prohibited, limiting the ability of private entities to develop and operate EV charging, subject to oversight by the RA, will create an enabling environment for businesses, hotels, and other organizations to invest in charging infrastructure.

Together, the introduction of a dedicated EV tariff and targeted legislative reform to enable electricity resale are essential to the development of a competitive, sustainable EV charging market in Bermuda. These measures will support increased EV adoption, expand electricity

sales, help stabilize tariffs, and stimulate growth in the EV charging sector, while advancing the Government's broader transport electrification and energy transition objectives. 9.4 Smart Charging, Vehicle to Grid (V2G) Grid Integration, and Resilience

Unmanaged EV charging could add stress to Bermuda's grid, particularly during evening peak periods. Therefore, Bermuda's EV transition must be paired with smart charging policies. The NEVCI Policy already envisions the development of smart charging guidelines and charging behaviour protocols, and the Ministry of Home Affairs will ensure that the TD&R licensee incorporates these into its demand management and Integrated Resource Plan (IRP) planning.

Smart charging and vehicle to grid (V2G) technologies will allow EVs to function as distributed energy resources, providing flexibility and storage benefits. EV batteries can act as balancing assets that mitigate intermittency from solar PV, contribute to system flexibility, and support faster recovery from outages, thereby strengthening overall grid resilience.

To achieve this, Bermuda must invest in grid modernization as outlined in Section 9.2.A modernized grid, equipped with advanced monitoring, predictive algorithms, and digital control systems, is essential not only to manage the variability of renewable energy but also to meet the growing charging requirements of EVs. Modernization will also enable the technical integration of V2G systems, where EVs supply stored energy back to the grid during peak demand or emergency conditions.

As part of this effort, the Regulatory Authority and the Utility will be required to assess the need for advanced metering systems that can measure both consumption and export at the household level. Such metering is a prerequisite for designing new residential retail tariffs that recognize the dual role of EVs as both consumers and suppliers of electricity.

These new tariffs may differ from standard household rates. For example, households that agree to allow their EV battery to provide grid support during peak periods could benefit from a lower retail tariff for their overall consumption or receive credits for exported energy. Conversely, households that use EV charging only for self-consumption would remain on a standard tariff. This approach ensures that the economic value of storage is recognized, encourages households to participate in demand management, and helps to stabilize system costs for all consumers.

Resilience, however, is not only about meeting charging requirements but also about managing the entire lifecycle of EV batteries. Planning for grid integration must therefore be accompanied by forward-looking strategies for the reuse, recycling, and disposal of batteries once they reach the end of their useful life. Linking EV adoption to long-term battery management will ensure that resilience is achieved in both the short term, through smart charging and V2G, and in the long term, through sustainable handling of storage assets.

This comprehensive approach will allow Bermuda to evolve its electricity grid into a more resilient, flexible, and sustainable system that supports both renewable energy integration and widespread EV adoption.

9.5 Battery Lifecycle Management and Sustainability

While electric vehicles bring clear benefits in reducing fossil fuel dependence, increasing kWh sales, and supporting tariff stability, the Ministry also recognizes the challenges associated with end-of-life (EoL) management of EV batteries. Lithium-ion batteries contain valuable but hazardous materials, including cobalt, nickel, and lithium. Without appropriate handling, disposal can create environmental risks and add to Bermuda's waste management burdens.

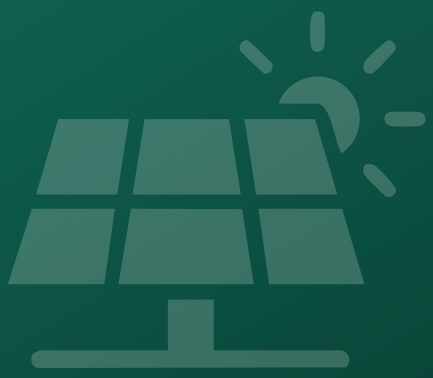
The Ministry of Home Affairs, in coordination with the Ministry of Transport and the Ministry of Public Works, is monitoring global developments in EV battery recycling, repurposing, and safe disposal practices. Current priorities include:

- Establishing an EoL Strategy: Developing a long-term framework for the collection, transport, and safe disposal or recycling of EV batteries. This strategy will ensure alignment with Bermuda's broader waste management and environmental protection policies.
- Second-Life Applications: Exploring opportunities to repurpose EV batteries as stationary storage systems. Second-life batteries can provide backup power, support renewable integration, and add resilience to Bermuda's grid at a lower cost than new storage systems.
- Producer and Importer Responsibility: Reviewing the potential for extended producer responsibility requirements, whereby vehicle importers or battery suppliers are responsible for managing batteries at the end of their useful life.
- Monitoring Global Best Practice: Tracking international standards for EV battery recycling, including approaches used in the European Union and North America, to ensure Bermuda remains aligned with sustainable global practices.

This forward-looking approach ensures that Bermuda's EV transition does not merely shift the environmental burden from fossil fuels to batteries but instead manages the full lifecycle of EV technologies in a sustainable manner, especially considering the storage and disposal of batteries.

The Ministry's policy position is therefore that EV adoption must proceed together with clear pathways for responsible battery management. This approach supports sustainability, protects the environment, and ensures that Bermuda's energy transition delivers benefits across its full lifecycle.

Renewable Energy Market Oversight



10.Renewable Energy Market Oversight

The rapid expansion of renewable energy technologies in Bermuda requires a structured and transparent framework to ensure safety, quality, and consumer confidence. While renewable energy presents an opportunity to reduce reliance on imported fossil fuels and lower costs over the long term, these benefits can only be realized if installations are carried out to the highest professional standards, supported by robust oversight and regulation.

To date, the renewable energy market in Bermuda has largely developed under the general requirements of the Development and Planning Act and applicable Bermuda Building Code 2014, Electrical Code, and permitting processes of the Department of Planning, with technical oversight provided by the Electrical Inspectors. However, as the market has grown in both scale and complexity, there is a need to strengthen and formalize oversight arrangements. This will ensure that consumers are protected, installations are safe and durable, and the sector develops in line with Bermuda's energy transition objectives.

The Government's policy is therefore to establish a comprehensive framework for renewable energy market oversight, anchored in collaboration between the Ministry of Home Affairs, the Ministry of Economy and Labour (through the Department of Workforce Development and the National Certification and Apprenticeship Board), and the Ministry responsible for Cabinet (through the Department of Planning and the Electrical Inspectorate). This coordination will guarantee that Bermuda's renewable energy sector is regulated effectively across three critical dimensions:

- Certification of Installers: Ensuring that only nationally certified electricians, supported by internationally recognized solar installer credentials such as NABCEP or ETA International, are authorized to carry out installations.
- Standards and Compliance: Aligning renewable energy systems with Bermuda's building and electrical codes while incorporating international best practices for installation quality and grid integration.
- Training and Workforce Development: Establishing pathways for Bermudians to gain national and international certifications, supported by structured apprenticeships and training partnerships.
- Transparency and Accountability: Creating a public registry of certified installers to build consumer trust and ensure that customers can identify qualified providers.

By strengthening renewable energy market oversight in this way, the Government will protect consumers, support the development of a skilled local workforce, and provide confidence that renewable energy is being deployed in a safe, equitable, and sustainable manner. This framework will also help attract investment by ensuring that Bermuda's renewable energy sector is regulated with clarity, predictability, and accountability.

10.1 Installer Licensing and National CertificationThe deployment of renewable energy systems must be carried out by qualified professionals who meet both national and international certification standards. In Bermuda, all electrical work, including grid interconnections, must be completed by nationally certified electricians. This requirement ensures compliance with the Electrical Code, planning approvals, and safety regulations enforced by the Department of Planning and the Electrical Inspectorate.

Electricians who perform renewable energy installations must hold national certification through the National Certification and Apprenticeship Board (NCAB), administered by the Department of Workforce Development. This certification confirms occupational competence within Bermuda's statutory framework.

International renewable energy certifications, such as NABCEP or equivalent, may be recognised as supplementary professional credentials where appropriate; however, they shall not replace national certification requirements unless incorporated into Bermuda's legislative or regulatory framework.

Responsibility for installation approval, electrical inspection, and grid interconnection remains with the Department of Planning, the Electrical Inspectorate, and the Regulatory Authority, in accordance with the Electricity Act 2016 and applicable codes.

Non-electrician professionals with recognized solar installation qualifications may play an important role in system design, mounting, and non-electrical installation tasks. However, to ensure safety and consumer protection, all electrical connections and approvals must be carried out by a nationally certified electrician who assumes responsibility for the final installation.

The Ministry of Home Affairs, through the Department of Energy, will work closely with the Ministry of Economy and Labour (Department of Workforce Development and NCAB) and the Ministry responsible for Cabinet (Department of Planning) to ensure that this licensing and certification regime is incorporated into Bermuda's legal and regulatory framework. This coordinated approach will guarantee that Bermuda's renewable energy workforce is properly trained, nationally certified, and internationally accredited, while also providing a pathway for specialized solar professionals to contribute under the oversight of licensed electricians.

10.2 Installation Standards and Compliance

The safe and sustainable growth of Bermuda's renewable energy market depends on clear and enforceable installation standards. These standards must protect consumers, ensure system reliability, and safeguard the island's environment from poor quality materials and practices.

The Department of Planning has primary responsibility for enforcing the Building Code and associated regulations, while the Electrical Inspectorate ensures compliance with the National Electrical Code (NEC) as adopted for Bermuda. Together, these codes establish the minimum safety, performance, and inspection requirements for renewable energy systems.

Currently, these are governed by the Development and Planning Act, the Development plan 2018 and acting Bermuda Building Code 2014. As a result, all developments remain subject to planning and building permit approvals under the Development and Planning Act and applicable Bermuda Building Code.

However, as the renewable energy sector expands, there is a need to strengthen these frameworks with explicit requirements for renewable energy technologies. Solar PV modules, inverters, and balance of system components must meet recognized international certification standards such as IEC (International Electrotechnical Commission) standards, UL (Underwriters Laboratories) certification, or equivalent as determined by the Grid Code.

In addition, all grid connected inverters must comply with IEEE 1547 standards for interconnection and interoperability of distributed energy resources with electric power systems, including any jurisdiction specific adaptations adopted by the utility. Approved inverter models shall be based on this standard and aligned with the utility's approved equipment list, as informed by established best practice frameworks. This is essential because substandard or uncertified products can pose risks to consumers and the grid. Reports from international markets indicate that some low-cost solar panels, including certain unregulated imports, have failed quality and environmental safety tests, with issues such as leakage of hazardous metals and premature failure. Bermuda cannot afford the risks associated with poor quality products given its isolated grid and fragile environment.

All renewable energy installations in Bermuda will therefore be required to demonstrate compliance with:

- Planning approvals under the Department of Planning and Building Code
- EU Grid Code and Interconnection Agreement
- NEC standards enforced by the Electrical Inspectorate
- International product certifications (IEC, UL, or equivalent) for all PV modules, inverters, and equipment

Installers will be required to submit evidence of compliance as part of the permitting and inspection process. This layered approach will ensure that Bermuda's renewable energy installations are safe, reliable, and environmentally responsible, while also aligning the island's practices with global best standards.

Installation Step	Responsible Authority	Required Standards / Certifications
Feasibility Study and Hosting Capacity Study	Electric Utility	Grid Code, Intermediate Contract and Standard Contract
Planning application and zoning approval	Department of Planning – Planning Division	Bermuda Building Code; zoning and planning regulations

Electrical design and interconnection plan review	Department of Planning – Electrical Inspectorate	National Electrical Code (NEC) as adopted in Bermuda
Equipment selection (PV modules, inverters, balance of system)	Electric Utility	Grid Code, Intermediate Contract and Standard Contract
Structural and safety compliance (mounting, roof integrity, wind loading)	Department of Planning – Planning Division	Bermuda Building Code; international engineering standards
Installation work (wiring, interconnections, system assembly)	Nationally certified electrician (licensed through NCAB / Department of Workforce Development)	NEC standards; Building Code compliance
Final inspection and approval	Department of Planning – Electrical Inspectorate	Full compliance with NEC, Building Code, and international product standards

Table 10.2.1: Compliance Checklist for Renewable Energy Installations

10.3 Just Energy Transition Framework: Workforce Reskilling

Bermuda's transition to a low carbon energy future requires a skilled and adaptable workforce capable of supporting new and emerging energy technologies. A central pillar of the Just Energy Transition Framework is the reskilling and upskilling of Bermudians to ensure that the local workforce is prepared to participate fully in the opportunities created by the clean energy economy.

The Government recognizes that the shift from fossil fuel dependence toward renewable energy and energy efficiency will change the composition of employment within the sector. Individuals currently engaged in traditional generation, fuel supply, and related services must have access to structured training and transition pathways that prepare them for employment in renewable energy and other industries that will see growth such as energy efficiency and electric vehicles.

The Department of Workforce Development, in collaboration with the Department of Energy and the Department of Planning, will lead the development of programmes focused on technical certification, renewable energy system design, installation and maintenance, battery storage management and energy auditing.

The Department of Planning is advancing the establishment of a Competent Persons Scheme, which will allow approved installers who meet the required competency standards to self-inspect and certify their own installations. This initiative, although not complete at the time of this policy, will enhance the professionalism and accountability of the sector while streamlining regulatory processes and ensuring that renewable energy systems meet safety and performance standards. However, it is important to note that this scheme does not remove or diminish the Department's statutory inspection and enforcement authority.

Partnerships with private sector companies will be encouraged to expand apprenticeships, internships, and mentorship opportunities for young professionals entering the energy sector.

Special focus will be placed on inclusivity to ensure that women, youth, and underrepresented groups have equitable access to training, certification, and employment opportunities.

The Government will also explore mechanisms to support small and medium sized enterprises engaged in renewable energy, electric vehicle services, and energy efficiency solutions, recognizing their role in local job creation and innovation.

Through coordinated efforts across departments, educational institutions, and industry partners, the Just Energy Transition Framework will establish a skilled, certified, and future ready workforce that supports Bermuda's vision of a sustainable, affordable, and equitable energy system.

10.3.1 Photovoltaic Workforce Development Pathway

The Government recognises the need to establish a structured workforce development pathway to support the growth of Bermuda's solar photovoltaic sector.

The Department of Workforce Development, in collaboration with the Department of Energy, industry stakeholders, and training institutions, will evaluate the development of a formal photovoltaic training and apprenticeship pathway. This may include:

- Integration of renewable energy competencies into existing electrical apprenticeship programmes
- Development of specialised training modules for solar PV installation, maintenance, and system design
- Creation of structured career pathways for solar technicians working under the supervision of certified electricians
- Alignment of training programmes with evolving industry standards and safety requirements

This framework will ensure that Bermudians are equipped with the skills required to participate in the renewable energy sector, while maintaining high standards of safety, quality, and system reliability.

10.4 Climate Resilience and Adaptation Targets

Bermuda's small island geography and exposure to increasingly severe climate events make energy resilience a national priority. Rising sea levels, stronger hurricanes, and more frequent extreme weather events present direct risks to the reliability and affordability of electricity. The Government is therefore committed to strengthening the resilience of the energy sector as an essential element of Bermuda's climate adaptation strategy. The following objectives will guide the approach to resilience and adaptation within the electricity sector:

10.4.1. Strengthen Energy Infrastructure Resilience

Critical energy assets, including generation plants, substations, and transmission and distribution infrastructure, must be resilient against climate related vulnerabilities and reinforced where necessary. This includes measures to elevate or protect facilities located in coastal or flood prone areas, strengthen utility poles and overhead lines, and ensure continued operation of essential services during and after severe weather events.

10.4.2. Promote Distributed Renewable Generation for Energy Security

Encouraging DG through community solar, combined with battery storage, will enhance system resilience by reducing dependence on centralized generation and greater energy security by diversifying generation sources across the grid.

10.4.3. Integrate Climate Adaptation into Planning and Regulation

The Department of Energy, in coordination with the RA, the Department of Planning, and the Ministry of Public Works, has drafted the 2025 Building Code, with the assistance of the European Union Green Overseas Program to ensure climate resiliency standards were incorporated. Project approvals, licensing, and infrastructure investments as a result, will consider long term climate impacts and the capacity of systems to operate under extreme conditions.

10.4.4. Support Research, Data, and Forecasting

The Government will support the Department of Environment and Natural Resources, the Bermuda Weather Service, and international partners to enhance early warning capabilities and support proactive adaptation planning. This could potentially be done through improved data collection and climate impact analysis to strengthen the evidence base for resilience planning.

10.4.5. Establish Resilience and Adaptation Targets

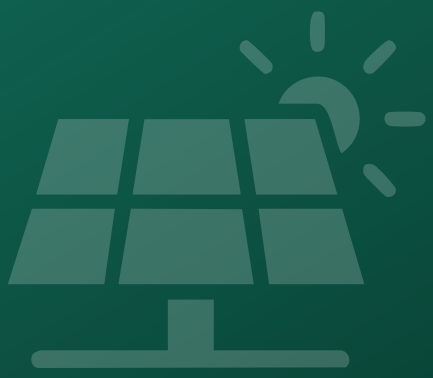
The Department of Energy, in coordination with the RA, the Department of Planning, and the Ministry of Public Works, has drafted the 2025 Building Code to ensure new electricity infrastructure will be required to meet enhanced climate resilience design standards. This will ensure that new critical generation and transmission infrastructure's resilience will be assessed against sea level rise and storm surge impacts. These efforts will help to ensure that by 2045, Bermuda's electricity system will be substantially resilient against climate events.

10.4.5 Policy Alignment

These resilience and adaptation targets are consistent with the objectives of Bermuda's National Climate Change Policy 2018, which calls for sector specific adaptation strategies and

stronger integration of climate considerations into national planning. They also align with the National Disaster Risk Reduction and Resilience Strategy, ensuring that the energy sector supports Bermuda's broader commitment to safeguarding infrastructure, protecting public welfare, and promoting sustainable economic growth in the face of a changing climate.

End-Use Efficiency and Demand-Side Resources



11. End-Use Efficiency and Demand-Side Resources

11.1 Planning for Demand-Side Resources

It is the Government's policy that the Utility's system planning must treat energy efficiency and demand-side management as critical resources in balancing supply and demand. Just as a new generating unit can help meet demand, so too can targeted reductions of consumption decrease the need for additional generation.

Demand-side resources include technologies and systems that allow businesses and households to optimize and control their electricity usage, particularly during peak periods. These measures can reduce the size and number of new generation facilities required, lower long-term system costs, and contribute directly to tariff stability. Consumers who actively reduce or reschedule their usage may also be compensated for the value these actions provide to the overall system.

Recent commercial case studies in Bermuda have demonstrated that the deployment of advanced demand-side management systems such as modern HVAC systems paired with smart controls and efficient lighting can deliver significant savings. In some cases, these investments have resulted in reductions in energy costs of 30 to 40 percent while also improving tenant comfort, providing more accurate billing, and extending the life of equipment. These results show that demand-side management not only reduces consumption but also strengthens reliability and environmental performance.

The Government will continue to support the wider adoption of demand-side management systems through the continued duty exemption under CPC 4209, which provides customs relief for equipment and materials required to install these systems. This measure lowers upfront costs and creates a favourable environment for businesses and households to invest in technologies that reduce demand, improve efficiency, and enhance the overall sustainability of Bermuda's electricity sector.

The Government recommends that the Integrated Resource Plan explicitly incorporate demand-side management as a resource category equal to bulk generation, ensuring that efficiency measures are considered on the same basis as new generation when evaluating Bermuda's future electricity needs.

11.2 Supporting End-User Conservation

The Government will help end users to overcome barriers that prevent adoption of energy efficiency technologies. Barriers include lack of awareness, mistrust of new technologies, financing limitations, and misaligned incentives.

Key measures include:

- Public education and outreach, including school curricula.
- Energy labelling requirements for equipment.
- Regulatory Authority consideration of time-of-use pricing supported by smart meters.
- Subsidized energy audits for residential customers.
- Fiscal and customs incentives for efficient equipment.

For vulnerable households already receiving Government assistance with electricity bills, specialized programs will be considered to ensure they can also benefit from efficiency measures.

11.3 Appliances Standards, Labelling and Building Codes

End use efficiency is a critical component of Bermuda's energy transition strategy. Reducing electricity consumption through efficient appliances, equipment, and building design lowers household and business energy costs, reduces overall system demand, and supports the island's transition to a low carbon and climate resilient future.

11.3.1. Appliance Standards and Energy Efficiency Labelling

Most appliances imported into Bermuda already carry ENERGY STAR ratings or equivalent international energy efficiency certifications. These standards ensure that appliances meet internationally recognized benchmarks for energy performance and reliability. The Government will continue to align with these international standards rather than creating separate local certification processes, while focusing on consumer awareness and market transformation initiatives.

The Department of Energy, in collaboration with the RA, will promote the use of energy efficient appliances through public awareness campaigns and labelling initiatives that help consumers easily identify and select high performing products. These efforts will complement existing appliance standards and contribute to long term reductions in electricity consumption and household energy costs.

Labelling will also extend to building energy performance, enabling homeowners, developers, and property managers to assess and compare the energy efficiency of new and existing buildings. This approach will strengthen public awareness and encourage continued improvements in the design, construction, and operation of Bermuda's building stock.

11.3.2. Building Energy Efficiency Codes

Bermuda's Residential and Commercial Building Codes have are being updated to incorporate enhanced provisions for energy efficiency, renewable energy readiness, and climate resilience.

These updates are being made possible through a grant provided by the European Union Green Overseas Programme, which supported the Government of Bermuda in completing the modernization of both Building Code documents.

The revised Building Codes will sa introduce measures such as improved thermal insulation, efficient ventilation and lighting systems, and requirements for renewable energy integration. They ensure that new construction and major renovations are designed to minimize electricity consumption, enhance occupant comfort, and reduce vulnerability to climate related impacts. These enhancements represent a major step forward in aligning Bermuda's building practices with international best standards.

11.3.3 Institutional Responsibilities

The Department of Planning will continue to enforce Building Codes through its planning approval and inspection processes. The Department of Energy will lead appliance efficiency and labelling programs, while the RA will support these initiatives through public education, data collection, and ongoing monitoring of end use efficiency performance.

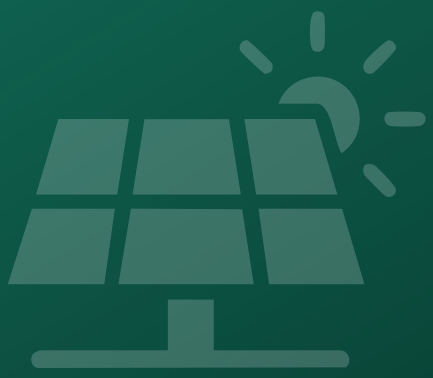
11.3.4 Policy Objectives

The key objectives of the Appliance Standards, Labelling, and Building Code initiatives are to:

- Maintain alignment with recognized international appliance efficiency standards such as ENERGY STAR.
- Strengthen consumer awareness of energy efficient products and buildings.
- Ensure that all new construction meets updated energy efficiency, renewable readiness, and climate resilience standards.
- Support long term reductions in national electricity demand and household energy costs.

Through these coordinated measures, Bermuda will achieve greater end use efficiency, ensuring that progress in appliance and building performance directly supports the national objectives of affordability, sustainability, and energy security.

Legal and Regulatory Framework



12. Legal and Regulatory Framework

It is the Government's policy to maintain a clear and effective legal framework to achieve the objectives of affordability, reliability, sustainability, and equity in the electricity sector. This framework is primarily established under the Electricity Act 2016, which sets out the roles of the Minister, the Regulatory Authority, the Electric Utility, and Independent Power Producers. The Act provides the licensing regime for generation, transmission, distribution, and retail, and ensures the sector operates in the public interest.

12.1 EA 2016 and Related Laws

The EA 2016 is the cornerstone of the legal framework for the sector. Its purpose is to facilitate the achievement of least-cost, high-quality, environmentally sustainable, secure, and affordable electricity services. The Act achieves this through:

- Establishing the Regulatory Authority as the independent regulator of the electricity sector.
- Requiring that electricity policy be set and implemented in a participative and transparent manner that balances competing objectives.
- Promoting diversity in primary energy sources for generation and demand-side strategies.
- Establishing a licensing regime that enables competition in generation while maintaining a single provider for transmission, distribution, and retail.

Under the Act, the Minister of Home Affairs sets general policy directions and may issue guidance on matters such as renewable energy targets or IRP policy directions. The Regulatory Authority regulates the TD&R Licensee and Independent Power Producers, oversees procurement of new generation, approves tariffs and retail rates, and benchmarks utility performance against international peers.

The Act also sets the framework for power purchase agreements, distributed generation contracts, and ensures that the Utility operates as the single buyer of power, while being subject to obligations to maintain reliability, efficiency, and universal service. The electricity sector operates within existing legislation and RA processes. This policy provides strategic direction to guide future legislative and regulatory development. Implementation and monitoring will occur through RA regulatory processes and the IRP

12.2 Amendments Needed for Installer Certification

The Electricity Act will be amended, where necessary, to clarify the roles and responsibilities associated with renewable energy workforce certification, installation, and regulatory approval. The Department of Workforce Development and the National Certification and Apprenticeship Board shall retain responsibility for:

- Certification of occupational competence

- Administration of apprenticeship programmes
- Maintenance of certified trades registers

Installation approval, inspection, and grid interconnection shall remain the responsibility of the Department of Planning, the Electrical Inspectorate, and the Regulatory Authority under the Electricity Act 2016 and applicable codes.

International certifications may be recognised as supplementary qualifications where appropriate but shall not constitute a substitute for national certification unless formally adopted within Bermuda's regulatory framework.

This ensures that Bermuda's renewable energy workforce is nationally grounded, internationally competent, and legally recognized.

12.3 Enforcement Powers

The EA 2016 already provides strong enforcement tools to ensure compliance with the law and licensing conditions. Offences include:

- Operating without a licence or changing control of a license without approval.
- Operating a transmission or distribution system without a licence.
- Receiving electricity from unlicensed providers or transmitting without authorization.
- Failing to pay fees lawfully imposed.
- Importing or selling non-compliant equipment.
- Damaging electricity infrastructure or abstracting electricity without authorization.

Penalties range from imprisonment to fines of up to $150,000 for corporate offenders, with higher penalties for ongoing offences. The Government will continue to review the adequacy of these powers to ensure that they provide effective deterrence, particularly in relation to non-certified renewable energy installations and the sale of non-compliant solar PV equipment.

12.3 Cross-Ministerial Linkages

The successful implementation of Bermuda's energy transition requires a coordinated, holistic approach that includes multiple government Ministries and Departments. The electricity sector intersects with a wide range of national priorities, including transportation, workforce development, fiscal management, land use planning, and infrastructure investment. Cross-ministerial and departmental coordination is therefore essential to ensure policy coherence, efficient resource use, and the alignment of national objectives with Bermuda's energy targets.

12.3.1. Ministry of Transport

The Ministry of Transport plays a key role in advancing the electrification of the transport sector. Coordination between the Ministry of Transport and the Department of Energy will ensure that the increased demand for electricity from vehicle charging is incorporated into the IRP. This

collaboration will also promote the use of renewable energy to power electric vehicles, reducing Bermuda's overall reliance on high carbon intensive fuel import.

12.3.2. Ministry Responsible for Cabinet (Planning and Standards)

The Department of Planning, under the Ministry responsible for Cabinet, maintains a vital role in establishing planning and installation standards for renewable energy systems. Coordination between the Department of Planning and the Department of Energy will ensure that renewable energy installations adhere to safety, technical, and building code requirements. The ongoing development of the Competent Persons Scheme will further streamline the approval process by allowing certified installers to self-inspect and certify compliant installations.

12.3.3. Ministry of Economy and Labour

The Ministry of Economy and Labour, through the Department of Workforce Development, is responsible for workforce certification, apprenticeship programmes, and occupational training under the National Certification and Apprenticeship Board Act 1997 and the National Occupational Certification framework.

The Department will collaborate with the Department of Energy and industry stakeholders to support workforce readiness for the energy transition, including the development of training programmes, certification pathways, and apprenticeship opportunities.

The Department does not have responsibility for installation approval, electrical inspection, or grid interconnection, which remain governed under the Electricity Act 2016 and associated regulatory authorities.

12.3.4. Ministry of Finance

The Ministry of Finance plays a pivotal role in ensuring the financial sustainability of Bermuda's energy sector and in creating a fiscal environment that encourages clean energy investment. The Ministry is responsible for reviewing and approving the RA's Annual Work Plan and Budget, which governs sectoral regulation, fee structures, and oversight activities.

In addition, the Ministry of Finance is leading the implementation of Bermuda's Corporate Income Tax (CIT) Policy and Legislation, which will introduce a corporate income tax framework applicable to corporate businesses operating in Bermuda. Within this evolving fiscal structure, the Government is exploring the potential to incorporate targeted tax credits or deductions to incentivize investment in renewable energy infrastructure, energy efficiency, and other sustainability-related initiatives.

Such credits would be carefully designed to ensure compliance with international tax standards while supporting Bermuda's economic diversification and environmental objectives. Any consideration of renewable energy tax incentives under the Corporate Income Tax regime will involve a detailed analysis of their potential impact on government revenues, and long-term fiscal stability.

The Ministry of Finance, in consultation with the Department of Energy and the RA, will therefore play a central role in developing the financial instruments, fiscal frameworks, and approval mechanisms required to attract private capital into utility-scale renewable energy and related infrastructure projects. This collaboration will help ensure that fiscal policy and energy policy operate in alignment to achieve sustainable growth and affordability for Bermuda.

12.3.5. Ministry of Public Works

The Ministry of Public Works plays a central role in the implementation of Bermuda's renewable energy and infrastructure development agenda. The Ministry is responsible for the identification and allocation of suitable public lands, government buildings, and coastal areas that can support renewable energy projects under the IRP. This includes the use of government rooftops, under-utilized parcels of land, and seabed sites for the installation of renewable energy systems such as floating solar photovoltaic generation, offshore wind and other bulk renewable energy developments.

Within the Ministry of Public Works, DENR is responsible for environmental oversight and regulation of activities that may affect Bermuda's natural resources. DENR establishes and enforces emissions standards, monitors environmental compliance by utilities and large energy consumers, and ensures that renewable energy projects are implemented in a manner consistent with environmental protection and sustainability objectives.

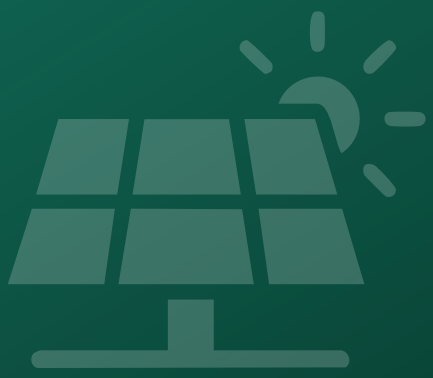
The Ministry of Public Works, through DENR, will work closely with the Department of Energy and the RA to integrate environmental standards, emissions data, and climate resilience considerations into energy planning, licensing, and monitoring processes. This collaboration ensures that all renewable energy and utility-scale projects meet Bermuda's environmental standards while supporting the broader goals of energy diversification, affordability, and sustainability.

12.3.6. Institutional Coordination and Governance

The Department of Energy will continue to serve as the central coordinating agency for the electricity sector, working closely with the ministries to harmonize planning, regulation, and implementation. A structured inter-ministerial coordination mechanism will be established to review progress, align cross-sectoral initiatives, and ensure consistency with national policy objectives.

Through these partnerships, the Government will promote an integrated and coordinated approach to energy planning and delivery, ensuring that Bermuda's transition to a sustainable and affordable energy future is supported by all relevant ministries and agencies.

Appendices



13 Appendices

13.1 References

Category	Reference (APA)	Link (if available)
Legislation and Regulations	Government of Bermuda. (2016). *EA 2016*.	gov.bm
	Government of Bermuda. (2011). *Regulatory Authority Act 2011*.	ra.bm
	Government of Bermuda. (2023). *Electricity (Innovative Licence) Regulations 2023*.	—
	Government of Bermuda. (2023). *National Training Board Amendment Act 2023*.	Royal Gazette
Policy and Regulatory Frameworks	Government of Bermuda. (2015). *NESP 2015*.	—
	Regulatory Authority of Bermuda. (2019). *Integrated Resource Plan 2019*.	—
	Regulatory Authority of Bermuda. (2018). *Retail Tariff Methodology General Determination*.	—
	Regulatory Authority of Bermuda. (2024). *Retail Tariff Review 2024–2025*.	—
	Department of Statistics, Bermuda. (2024). *Digest of Statistics 2024*.	—
International Standards and Certifications	ASHRAE. (n.d.). *ASHRAE Standards*.	ashrae.org
	U.S. Green Building Council. (n.d.). *Leadership in Energy and Environmental Design (LEED).*	usgbc.org/leed
	North American Board of Certified Energy Practitioners. (n.d.). *NABCEP Certification Standards.*	nabcep.org
	ETA International. (n.d.). *Renewable Energy Certifications.*	etai.org
	International Electrotechnical Commission. (n.d.). *IEC Standards for Photovoltaic Modules.*	iec.ch
	Underwriters Laboratories. (n.d.). *UL Standards for Renewable Energy Equipment.*	ul.com
Media and Data Sources	Bernews. (2022). *Bermuda has 49,201 registered vehicles in 2020.*	bernews.com
	Bernews. (2024). *Number of registered road vehicles increased by 1%.*	bernews.com
	Royal Gazette. (2023, September 23). *Training board to be renamed and given enhanced role.*	royalgazette.com
	Greenlight Energy. (2023). *Bermuda's renewable energy and vehicle statistics.*	greenlightenergy.bm

Category	Reference (APA)	Link (if available)
Supporting Documents (User-Provided)	*2025 06 19 NESP_SXC Draft v2 Review Final Document.*	—
	NESP (Proposed Structure).	—
	Electricity (Innovative Licence) Regulations 2023 (1).pdf.	—
	BELCO July 2025 Electricity Bill.	—

13.3 Abbreviations, Acronyms and Definitions

ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BAU	Business as usual
BELCO	Bermuda Electric Light Company
bEQ	Building Energy Quotient
BG	Bulk Generation
BMD	Bermuda dollar
CIT	Corporate Income Tax
CO_2	Carbon dioxide
DG	Distributed generation
DENR	Department of Environment and Natural Resources
DoE	Department of Energy
EE	Energy efficiency
EoL	End of Life
ETA	Electronics Technicians Association
EU	European Union
EV	Electric Vehicle
ESCO	Energy services company
FIT	Feed-in tariff
GHG	Greenhouse gases
GWh	Gigawatt-hour
HFO	Heavy fuel oil
HVAC	Heating Ventilation and Cooling
ICE	Internal Combustion Engine
IEC	International Electrotechnical Commission
IPP	Independent power producer
IRP	Integrated Resource Plan

kW	Kilowatt
kWh	Kilowatt-hour
LCOE	Levelized Cost of Electricity
LED	Light-emitting diode
LEED	Leadership in Energy and Environmental Design
LNG	Liquefied natural gas
MG	Micro Grid
MMBtu	Million British thermal units
MW	Megawatt
MWh	Megawatt-hour
NABCEP	Board of Certified Energy Practitioners
NCAB	National Certification and Apprenticeship Board
NEC	National Electrical Code is the regulations for wiring and electrical systems in Bermuda.
NESP	National Electricity Sector Policy
O&M	Operation and maintenance
PBR	Performance Based Regulation
PPA	Power purchase agreement
PV	Photovoltaic
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
V2G	Vehicle to Grid
UK	United Kingdom
UK	Underwriters Laboratories
US	United States
ZEV	zero-emission vehicles

Definitions

Bulk Generation (BG)	Generating system that (unlike distributed generation) is built on a dedicated site, is developed for commercial purposes of selling all energy produced and is connected to higher voltage lines for being distributed to the entire customer base. Importantly, BG may be operated by the Utility or by IPPs
Carbon dioxide equivalent (CO_2e)	A compound of carbon and oxygen which is formed during respiration or combustion of carbon-containing fuels. It is the main greenhouse gas that contributes to global warming. In 'equivalent' terms, all other greenhouse gases can be added up and expressed as CO_2 based on their global warming potential, which is their ability to trap radiation (greater for some GHGs than for others)
Capacity factor	The percentage of a power plant's maximum continuous power production capability that is achieved over a given time, usually a year
Community and Cooperative Energy Licence	Licence that empowers local groups to own, manage, and benefit from renewable energy projects (solar, wind, hydro), using structures like co-ops and social enterprises for democratic control, fair returns, reduced bills/emissions, and community wealth-building, moving beyond large corporations to a net-zero future.
Community and Cooperative Energy Models	Models that empower local groups to own, manage, and benefit from renewable energy projects (solar, wind, hydro), using structures like co-ops and social enterprises for democratic control, fair returns, reduced bills/emissions, and community wealth-building, moving beyond large corporations to a net-zero future.
Competent Persons Scheme	Scheme to determine if workers are competent in installation of solar systems.
Consumer Protection Act 1999	Act to protect consumers from fraudulent and other issues resulting from their consumption of goods and services.
Demand-side resources (DS)	Conservation measures to limit or reschedule electricity use so that the size and number of generating facilities can be reduced or delayed. Demand-side resources are held by end users, and can include reducing overall energy consumption (energy efficiency), shifting consumption to off-peak times (peak load shifting), and reducing consumption during peak times (interruptible load)
Distributed generation (DG)	Generating system on the premises of an end user (residential, commercial, or industrial) that is connected to the distribution network and used to offset some or all the customer's energy consumption; this could also include an energy storage system. Depending on the type of end user implementing it, a distributed generation system may be at a residential, commercial, or industrial scale

Distribution	The act or process of delivering electric energy from convenient points on the transmission system (usually a substation) to residential and commercial end users
Electric grid ('grid')	The infrastructure necessary to deliver electricity between electricity generators and end users
Electrical energy (or electricity)	The ability of an electrical current to produce work such as heat, light, or other forms of energy. The standard unit of measurement for electrical energy is the kilowatt-hour (kWh)
Electric Utility	A company that engages in the generation, transmission, distribution, and sale (retailing) of electricity. It may perform any combination of these functions; in Bermuda's case this would be the Bermuda Electric Light Company or BELCO.
End Users	The customers of BELCO that utilise or use the electricity they purchase from the utility.
Energy efficiency	A ratio of the energy input required to operate an energy-consuming product, relative to the useful services received
ENERGY STAR	Appliance rating level dependent upon its efficiency in using electricity.
European Union Green Overseas Program	An NGO that supported the Government of Bermuda in completing the modernization of both Building Code documents
Externality	A hidden or indirect cost associated with a product or service. Greenhouse gases produced by the combustion of fossil fuels are a common example
Feed-in-tariff (FIT)	A predetermined rate that is paid for electricity supplied to the electric grid by a third party
Fossil fuel	Any finite hydrocarbon-based fuel that is formed by the decay of organic material such as plants, trees, animals, and bacteria over millions of years. Examples of fossil fuels include coal, oil, and natural gas
Electricity generation ('generation')	The process of producing electric energy, or the amount of electric energy produced by transforming other forms of energy into electrical energy
Greenhouse gases (GHG)	Gases that contribute to global warming as they are transparent to solar radiation, but opaque to long-wave radiation. Examples include carbon dioxide, methane, water vapour, tropospheric ozone, and low-level ozone
Grid Reliance Customers	Customers that cannot, for whatever reason, install solar on their property and thus rely solely on the utility for their electricity. Essentially all non-DG customers.

Grid resilience	The ability of the grid to manage changes in demand and maintain voltage, current and frequency of the electricity system
Independent power producer (IPP)	Entity that provides energy, capacity, and ancillary services for commercial purposes at a bulk scale to the utility under long- term contracts that have been secured through the IRP process
Installed capacity	The maximum continuous power output available from an electrical generator, sometimes referred to as the nameplate rating
Interconnection	The physical interconnection of two or more electric systems to permit a flow of electricity between them. This permits the sale and exchange of electricity between a utility and an independent power producer, for instance
Integrated resource plan (IRP)	A public planning process to evaluate the optimal mix of utility resources and options. IRPs are comprehensive and seek to accomplish specified social and environmental goals by considering both demand- side resources (to reduce electricity demand) and supply-side resources (to redistribute types of generation among fuel types, locations, etc.)
Just Energy Transition	The reskilling and upskilling of Bermudians to ensure that the local workforce is prepared to participate fully in the opportunities created by the clean energy economy.
Micro/Mini Girds	An electrical system that operates as an isolated network with no interconnection to external power systems.
Kilowatt (kW)	A standard unit of electrical power equal to 1,000 watts
Kilowatt-hour (kWh)	A unit of electrical energy equal to one kilowatt of power expended for one hour; the standard unit of measure used for electrical billing
Low Carbon Intensive Fuels	Fuels that have smaller carbon chains and thus release fewer volatile organics, particulates and ultimately GHG into the environment
Megawatt (MW)	One million watts, or one thousand kilowatts of electrical power
Megawatt-hour (MWh)	A unit of electrical energy equal to one megawatt of power expended for one hour
Off-peak	A time period when the electric system experiences relatively low demand. These periods often occur in daily, weekly, and seasonal patterns
Oil	A liquid fossil fuel composed of a mixture of hydrocarbons that usually exist in natural underground pools or reservoirs
Peak	A time period when the electric system experiences relatively high demand. These periods often occur in daily, weekly, and seasonal patterns

Regulatory Authority (RA)	The Quango responsible for overseeing and regulating the electricity sector
Renewable energy	Energy that is obtained from naturally occurring sources that are replenished within our lifetimes. This term commonly includes, but is not limited to, solar, wind, ocean wave, ocean thermal, geothermal, hydropower, and tidal energy
Smart meter	An electric meter that is capable of two-way communication between the electric utility, the end user, and compatible appliances
Solar water heater	A renewable energy technology that uses solar radiation to heat water
Solar photovoltaic (PV) technology	A renewable energy technology that converts solar radiation into direct current electrical energy
Standards of Trade Act 1970.	Act that set the standards for trading of goods and services in Bermuda.
Transmission	The transportation of electric energy in bulk from a source or sources of supply to other systems or parts of a single system (such as large (industrial) end user, and to the distribution network)