Does your jurisdiction have an established renewable energy industry? What are the main types and sizes of current and planned renewable energy projects? What are the current production levels? What is the generation mix (conventional vs renewables) in your country?

Bermuda has an established yet small renewable energy industry comprising of a commercial 6MW capacity solar farm and five solar solutions in the private sector.

Key renewable energy projects (other than residential) that have been implemented in recent years include Bermuda's National Stadium and Sports Centre's installation of solar panels and lighting upgrades that have already resulted in a 51% saving in energy costs. The National Museum of Bermuda created a solar installation consisting of 194 high performance solar panels along the museum's ramparts in 2017 as part of Emirates GBR team's Low Carbon project and participation in the America's Cup.

The Country's current energy mix relies heavily on fossil fuels, primarily oil and diesel, for electricity generation. As Bermuda has no oil or gas production, its consumption is entirely based on imports, primarily from the United States and Canada.

In 2022, the World Bank estimated renewable energy consumption in Bermuda, as a percentage of the total energy consumption, was approximately 0.9%.

However, Bermuda has set ambitious targets for renewable energy, aiming for 85% renewable energy by 2035. This goal is being pursued through initiatives like developing offshore wind capacity as well as continued investment in large scale solar energy projects and improvements to applicable law and regulation. The Bermuda Government Bermuda has already deployed a significant number of electric buses, with 70 e-buses in service as of 2024, and is aiming to fully electrify its public bus fleet by 2030.

What are the key developments in renewable energy in your country over the last 12 months?

Earlier this year, the Regulatory Authority of Bermuda (the "RA") commenced the procurement process for the island's first offshore wind project. The proposed project is anticipated to consist of 17 turbines with an initial capacity of 60MW, with the potential to expand to 120MW.

Proposed amendments to the Electricity Act 2016 (Bermuda) (the "Electricity Act") will introduce a new licensing framework for businesses and institutions generating electricity in excess of 500 kilowatts, allowing them to apply for a Bulk Generation Sole Use Installation ("BGSUI") license. BGSUI licensees will be permitted to not only generate

electricity for their own use, but also to distribute a portion of their generated electricity, up to 30% or such other percentage as determined by the RA, to the grid. The proposed scheme is aimed at supporting and encouraging distributed solar developments like that at, among other places, Bermuda's National Stadium and Sports Centre and the Department of Public Transportation's bus depot.

What are your country's net zero/carbon reduction targets? Are they law or an aspiration?

In 2019, Bermuda released its Integrated Resource Plan ("IRP") which sets the objective of achieving an 85% reduction in fossil fuel and a corresponding contribution of 85% from renewable resources by 2035. The Government of Bermuda has also proposed the reduction of transport related carbon emissions over the next 15 years starting with the electrification of government vehicles and public transportation and the banning of 2-stroke motorcycles.

The IRP and other clean energy initiatives are aspirational. While the Electricity Act does have the stated purpose of promoting the use of cleaner energy sources and technologies, including renewable energy sources, there is currently no legislation requiring a specific reduction in fossil fuel use.

Is there a legal definition of 'renewable energy' in your jurisdiction?

The Electricity Act defines "renewable energy" as energy that comes from resources that are constantly replenished, and includes energy produced by solar, wind, biomass, landfill gas, municipal solid waste, ocean (including tidal, wave, current, and thermal), geothermal, or hydro resources.

Who are the key political and regulatory influencers for renewables industry in your jurisdiction? Is there any national regulatory authority and what is its role in the renewable energy market? Who are the key private sector players that are driving the green renewable energy transition in your jurisdiction?

The Department of Energy of the Bermuda Government, the RA as Bermuda's sole utility regulator and the Bermuda Electric Light Company ("BELCO") as the sole electricity supplier and the owner and operator of the island's only generating stations and all transmission and distribution systems, are the three key influencing organisations.

The RA regulates the electricity sector in Bermuda and is mandated by the Electricity Act to evaluate and manage future investments in the production and sale of electricity for the long-term benefit of consumers and to promote the use of cleaner energy sources and technologies. The RA's authority includes:

• licensing the generation of electricity;

- licensing the transmission, distribution, and retail sale of electricity;
- · managing and reviewing the IRP process;
- · setting electricity retail rates; and
- setting and monitoring service standards to ensure the adequacy, reliability and quality electricity services.

BELCO currently operates two generating stations, both of which are fuelled by oil and diesel, all of which is imported. However, BELCO has committed to being 'net zero' by 2050 through a combination of carbon offsetting and implementing wind and solar energy into their electricity generation infrastructure.

The key private sector players include BeSolar, AES (Alternative Energy System), BAE (Bermuda Alternative Energy), Greenlight, Sunnyside Solar, Fuze (part of the Liberty Group, owners of BELCO) who collectively cover everything from residential to commercial large scale systems. Saturn is a commercial solar farm that contributes to the Grid and has up to 6MW of capacity. Electric vehicle adoption is on the increase thanks to the established automobile and motorcycle import and sales companies.

What are the approaches businesses are taking to access renewable energy? Are some solutions easier to implement than others? If there was one emerging example of how businesses are engaging in renewable energy, what would that be? For example, purchasing green power from a supplier, direct corporate PPAs or use of assets like roofs to generate solar or wind?

BELCO holds the only transmission and distribution licences to buy and sell electricity in Bermuda and so the only access to green energy, other than the amount contributed to the Grid, is private installation of solar panels or wind turbines.

The market for solar panels for self-consumption is growing rapidly in Bermuda. Many businesses and property owners have installed solar panels on rooftops to offset Bermuda's high electricity costs and to help reduce reliance on fossil fuels. Surplus energy can be contributed to the Grid and sold to BELCO at a predetermined tariff that is fixed quarterly.

The Government of Bermuda permits smaller solar panel installations (up to 400 square feet) without the need to obtain planning permission and is actively encouraging the increased adoption of privately owned solar panels by reducing import tariffs on solar panels and related infrastructure.

Has the business approach noticeably changed in the last year in its engagement with renewable energy? If it has why is this (e.g. because of ESG, Paris Agreement, price spikes, political or regulatory change)?

There has been a notable change in the approach to renewable energy within the last year for two main reasons. International business and multinational corporations with offices in Bermuda are continuing to promote and adopt carbon reduction and renewable energy use as part of their ESG commitments whilst the general volatility in the price of energy, including the feed in tariff, is causing organisations and residents to reconsider their options.

There has also been a notable increase of interest in residential battery capacity to retain self-produced energy due to the volatility in the fee in tariff which, being calculable quarterly, does not always align with project finance and fixed interest rates.

How visible and mature are discussions in business around reducing carbon emissions; and how much support is being given from a political and regulatory perspective to this area (including energy efficiency)?

There are no formal or structured discussions around carbon emissions outside of Government, the RA and BELCO. However, there are annual conferences on climate change and digital technology that all have an environmental focus around carbon credits, renewable energy concepts and adoption. Energy efficiency is in constant development within both the public and private sectors, especially landlords and large property owners seeking to reduce cost alongside the environmental impact of their activities.

Bermuda is also home to one of the world's largest insurance and (re)insurance markets and several international financial, law and accounting firms. These institutions are increasingly embracing green initiatives globally as well as in Bermuda, demonstrating a commitment to sustainability and environmental responsibility. These efforts range from making carbon offset purchases, reducing carbon emissions, promoting renewable energy, supporting conservation efforts and addressing waste reduction.

How are rights to explore/set up or transfer renewable energy projects, such as solar or wind farms, granted? How do these differ based on the source of energy, i.e. solar, wind (on and offshore), nuclear, carbon capture, hydrogen, CHP, hydropower, geothermal; biomass; battery energy storage systems (BESS) and biomethane?

With the exception of small-scale solar panel installation on private property, the creation of renewable energy projects, no matter the energy source, will be subject to the RA's approval and oversight in consultation with the Government of Bermuda and any applicable departments or ministries thereof, including, for example the Department of Planning, the Department of the Environment and Natural Resources and the Department of Energy.

The RA will oversee and administer the procurement process for projects, which is carried out in three stages: an expression of interest, a request for qualification, and an invitation to tender. However, as Bermuda's renewable energy sector is still quite small as a percentage of overall energy production, the procurement process and the granting of development/ownership rights is likely to develop as Bermuda moves towards meeting its renewable energy goals. The latest wind farm proposals are an example of that development in action.

The transfer of ownership of any future renewable energy projects may also be subject to Bermuda's exchange control regime and require prior approval from the Bermuda Monetary Authority.

Is the government directly involved with the renewables industry (auctions etc)? Are there government-owned renewables companies or are there plans for one?

The Department of Energy of the Government of Bermuda is directly involved with the renewables industry as being responsible for energy policy and consults with the Department of Planning for energy-related development applications, including the proposed offshore wind farm referenced above.

There are no government-owned renewable energy companies in Bermuda, nor are there any publicly known plans for one.

The Government is not involved in any auctions or similar style activities related to renewable energy projects.

What are the government's plans and strategies in terms of the renewables industry? Please also provide a brief overview of key legislation and regulation in the renewable energy sector, including any anticipated legislative proposals?

The IRP sets the objective of achieving an 85% reduction in fossil fuel and a corresponding contribution of 85% from

renewable resources by 2035, with a focus on offshore wind. Additionally, the Government of Bermuda is investing in solar projects on public buildings and working towards a fully electric public transportation system.

On 9 May 2023, Bermuda introduced amendments to the Electricity Act and brought into force the Electricity (Innovative Licence) Regulations 2023 (the "Innovative Regulation"). The Innovative Regulation creates what the government calls an energy regulatory "sandbox" whereby companies can apply for a licence to test new renewable energy products in Bermuda.

Further proposed amendments to the Electricity Act will introduce a new licensing framework for businesses and institutions generating electricity in excess of 500KW, allowing them to apply to the RA to distribute a portion of their generated electricity to the Grid.

The Government of Bermuda has also introduced the Fuels Act 2022, which has the stated purpose of, among other things, ensuring the safe, efficient, economic and environmentally responsible operation of the fuel sector and promoting investments in the fuel sector in a manner which promotes sustainability. However, most of this legislation is not yet in force and it remains to be seen the impact, if any, it will have on the renewable energy industry in Bermuda.

Recent discussions have also taken place regarding the creation of an Energy Policy Steering Committee ("ESPC"). The ESPC is proposed to advise the Ministry of Home Affairs on the development, implementation, and monitoring of the IRP. If created, the ESPC will issue directives to the RA to support Bermuda's energy goals. Additionally, the EPSC will propose strategies to reduce Bermuda's rising electricity costs and to decrease the island's dependence on fossil fuels by promoting sustainable and cost-effective energy solutions.

Are there any government incentive schemes promoting renewable energy (direct or indirect)? For example, are there any special tax deductions or subsidies (including Contracts for Difference) offered? Equally, are there any disincentives?

Yes, the Government of Bermuda offers incentive schemes to promote renewable energy, primarily with respect to solar power. The Solar Photovoltaic Rebate Initiative ("SPRI") provides rebates to residents installing solar panels on homes with annual rental values ("ARV") of BM\$120,000 or less. These rebates are tiered based on ARV, offering up to BM\$8,000 for homes with ARVs under BM\$30,000.

The Government of Bermuda has also reduced residential planning permit costs and duty on energy efficient equipment, as well as zero duty on solar equipment.

There are currently no incentive schemes promoting renewable energy on a large-scale. However, proposed amendments to the Electricity Act will permit certain businesses and institutions generating electricity in excess of 500KW (primarily through the use of solar panels) to sell a portion of the electricity generated back to the Grid. However, to encourage widespread participation the licensing and electricity buy-back scheme would need to be cost effective and come with a level of certainty from both a procedural and tariff perspective.

How does the structure of the natural gas industry in your country impact the price of electricity? Are there any plans to de-link the price of renewable electricity from gas prices?

Whilst the North Power Station owned and operated by Belco has turbines that are capable of running on natural gas, natural gas is not currently imported or used for electricity production.

What are the significant barriers that impede both the renewables industry and businesses' access to renewable energy? For example, permitting, grid delays, credit worthiness of counterparties, restrictions on foreign investment, regulatory constraints on acquisitions; disputes/challenges?

There are several unsurprising barriers that impede both the renewables industry and businesses' access to renewable energy in Bermuda, including Exchange Control and restrictions on foreign investment and ownership in Bermuda's critical infrastructure. Whilst the Bermuda Government has taken proactive steps to change historical and outdated laws to promote foreign investment there remain administrative, legal, regulatory, permitting and environmental hurdles, including the island's location and relatively small consumer base. This means that any successful large-scale project would require significant government support to offset the high initial cost of the project and the complexity of Grid integration.

Conversely, Bermuda's location, natural environment, innovative culture and regulatory sandbox is attractive to those seeking to research, test, develop and implement renewable energy technologies and systems prior to wider production and distribution at a global scale.

What are the key contracts you typically expect to see in a new-build renewable energy project?

Currently, residents participating in the SPRI are required to enter into an interconnection agreement with BELCO, which agreement governs the transfer of electricity generated by the residents' solar panels to the Grid and the quantum of the rebate given by BELCO in consideration for the electricity. We would anticipate a similar agreement would be required for any large-scale renewable energy project.

We would also expect to see the following agreements for any new-build renewable energy project:

- project agreements (i.e. shareholders agreement or joint venture agreements between the parties sponsoring the projects);
- · financing agreements;
- engineering, procurement, and construction agreements;
- lease or license agreement and easements for cables and access routes; and
- operation and maintenance agreements.

Are there any restrictions on the export of renewable energy, local content obligations or domestic supply obligations? What are the impacts (either actual or expected) of the implementation of the Net Zero Industry Act (EU) Regulation 2024/1735?

There are no such restrictions in place. Due to several factors, including Bermuda's isolated location in the Atlantic Ocean and Bermuda's domestic energy production being designed to meet the domestic demand of consumption, energy exportation does not occur and will unlikely be feasible in the near term.

Bermuda does not have local content or domestic supply obligations.

Has deployment of renewables been impacted in the last year by any non-country specific factors: For example, financing costs, supply chain or taxes or subsidies (e.g. the US's Inflation Reduction Act)?

As Bermuda's electricity is currently generated almost entirely from imported oil and diesel, the increase in shipping costs and fluctuating cost of fossil fuels has led to an increase in electricity costs island-wide and an increased call for local renewable energy production.

Could you provide a brief overview of the major projects that are currently happening in your jurisdiction?

Bermuda is actively pursuing several major renewable energy projects, with a focus on solar energy and offshore wind and wave power generation. The island is also exploring the use of battery storage and electric buses. These initiatives are part of Bermuda's broader commitment to transitioning to a more sustainable energy system.

Bermuda is actively seeking developers for its first offshore wind farm, aiming for a capacity of 60-120 MW. The project is expected to be operational by 2030 and could meet around 15%-30% of Bermuda's energy needs.

Bermuda is also implementing rooftop solar projects on government buildings and exploring the development of larger-scale solar farms.

In November of 2021, the Government of Bermuda announced an agreement with Swedish wave energy company, Seabased, for the development of a wave energy park pilot project. The project is still undergoing regulatory approval but is expected to have a 40MW capacity if and when completed.

How confident are you that your jurisdiction can become a leader in newer areas like offshore wind or hydrogen?

Due to the island's location, Bermuda has potential to become a leader in offshore wind and wave power generation. Further, Bermuda experiences plenty of sunshine, making solar power a viable and economically attractive option. However, land scarcity will prevent Bermuda from being a leader in large scale solar power generation.

Bermuda does not currently have the infrastructure or network for implementation of hydrogen as a power source and any project seeking to develop the concept would face the same fiscal, legal and environmental barriers as exist in other countries around the world.

How are renewables projects commonly financed in your jurisdiction?

Renewable energy projects are financed through a combination of traditional project financing from commercial and development banks, equity investment and potential government loans or grants.

Small-scale solar panel purchases and installations are financed through traditional loans, with some local banks offering lower interest rates through green loan initiatives.

What is your forecast for the coming year(s) for renewable energy in your jurisdiction?

Based upon the content of the IRP, Bermuda's renewable energy landscape should see significant growth in the coming years, driven by ambitious targets and a focus on offshore wind, wave and solar power.

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