

## ABOUT BERMUDA'S FIRST **INTEGRATED RESOURCE PLAN (IRP)**

### 1. What is Bermuda's energy plan?

The RA is tasked with forecasting Bermuda's long-term electricity needs and to plan for the most effective way to meet those future needs. The result is referred to as an Integrated Resource Plan (IRP). Bermuda's first IRP will deliver a significant amount of renewable energy sources that will stabilize energy prices, provide a reliable power supply and reduce our dependence on fossil fuels. We will conduct another IRP within the next three to four years to identify new changes in technology and gauge public sentiment regarding energy.

### 2. What is renewable energy?

Typically, renewable energy use energy sources that are continually replenished by nature e.g.: the sun, wind, water, the earth's heat and plants. Renewable energy technologies turn these fuels into usable forms of energy. Bermuda's first IRP will focus on solar, wind and biomass as sources of renewable energy.

### 3. Why do we need to change?

We know that **business as usual is not sustainable**. We also know that investing in a natural gas solution would continue our dependency on fossil fuels for up to 50 years and provide fewer diverse investment opportunities and place Bermuda significantly ahead of its renewables target.

### 4. How will this benefit me as a consumer?

- **STABILIZED ENERGY PRICES:** Renewable energy sources will provide a more stable cost for energy than with the current scenario, reducing our dependence on fossil fuels.
- **JOB OPPORTUNITIES:** As more renewable energy sources are developed for the island, **job opportunities will be created for Bermudians** to support the infrastructure through the construction, operation and maintenance of renewable energy facilities. **Training** for specialized jobs will also be supported through the government and Work Force Development.

- **CLEANER ENERGY:** High renewables are more environmentally friendly, with zero emissions from wind and solar.
- **RELIABLE AND SECURE ENERGY:** The IRP will deliver clean, continual sources of diverse energy.
- **REDUCED CARBON FOOTPRINT:** Reducing Bermuda’s dependence on fossil fuels for energy production will help to protect and preserve the environment.

## 5. When will we start to see these renewable sources of energy?

The RA will move as quickly as possible to implement the IRP. Within the first six years of the plan, the island is slated to add 21 megawatts (“MW”) of utility-scale solar photovoltaic, up to 30 MW of distributed generation, 60 MWs of wind power via an offshore wind farm, while specific engines at the Belco plant that are dependent on fossil fuels will be decommissioned. Biomass generation as another source of renewable energy is scheduled for deployment by 2028.

## 6. What do these technical terms mean?

- **UTILITY-SCALE SOLAR PHOTOVOLTAIC:** large scale energy generation through the use of commercial grade solar panels
- **DISTRIBUTED GENERATION:** the use of small-scale solar panels, often used on residential homes, to generate energy close to the end user power sites; this energy can also be transmitted from private sources to BELCO’s grid, which can then be redistributed across the entire island
- **WIND POWER:** the use of air flow through wind turbines to turn generators that produce energy
- **BIOMASS GENERATION:** fuel that is developed from organic materials such as forest debris, animal manure and certain types of waste residues, and is used to produce energy

## 7. What’s next?

The next steps in the IRP implementation include conducting several pre-feasibility studies to quantify the maximum amount of solar capacity available and future requirements, an investment grade feasibility study regarding the use of wind power and a feasibility study into biomass generation to determine its role in the energy mix.