



# Barbados Commits to Generating 100% of Electricity from Renewables



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In his address to the Sustainable Energy conference at the Lloyd Erskine Sandiford Centre on November 10, Prime Minister The Right Honourable Freundel Stuart announced Barbados' commitment to a strategy to produce all the country's electricity needs from the sun, wind and other renewable sources. When that strategy is complete there will be no need to import fuel to generate electricity. Barbados has joined a select few countries which have taken this bold, forward-looking step. Others include Denmark and the Seychelles. Renewables are the future of our planet, particularly those energy sources like solar and wind that do not produce pollutants, because they do not contribute to global warming. Committing to renewables marks Barbados among world leaders in environmental responsibility.

We know that this strategy is achievable, using techniques that are tried and true, affordable, and available to us. In a most enlightening paper, Professor Olaf Hohmeyer of the University of Flensburg in Germany, has calculated how much solar and wind generating capacity would be needed for the 100% solution. Storage would be needed, for times when there is not enough wind and sunshine; Professor Hohmeyer's paper suggests that it be provided by "pump" storage, an artificial hydro system with two lakes, one at a high elevation and the other at sea level. When there is excess of wind and solar, the surplus is used to pump water to the higher lake. That water is released to drive turbines to supply supplementary power when needed. All the elements of this solution are to hand: controlled hydro accounts for over 90% of renewable energy supply globally, and solar photovoltaic (PV) and wind turbines are now commonplace.

Barbados was a world leader in the use of solar water heaters (which do not produce electricity) and we have now re-established our leadership with the rapid escalation of solar photovoltaic installations. Barbados is also a global leader in the per capita use of electric cars, thanks to an innovative company called Megapower, which imports, services and supports these vehicles.

Government has put incentives in place to encourage the use of solar PV and to support energy conservation, though much remains to be done at the official level.

There is considerable international interest in the promotion of renewables, and finance is available from a number of sources. Government has obtained funding from the Interamerican Development Bank for energy conservation strategies, and funding has also been received from other foreign institutions, including through regional programmes in which Barbados participates. Banks and local financial institutions offer financing for the installation of household and business solar systems.

All the national players are on board with the 100% renewables strategy. Emera, the owners of our BL&P company, are themselves major producers of power from renewable energy in Canada, and they have actively embraced the strategy for Barbados. Their solar farm in Trents in St Lucy doubles the installed capacity of solar PV, and Emera Renewables installs household and business systems throughout the Caribbean. Private companies have embraced solar PV, both as users and suppliers of systems and service. There is also private sector interest in wind turbines, though Town and Country Planning restrictions have so far held up the installation of Barbados' first wind turbine. Biodiesel is already being produced and used commercially, and Barbados has attracted interest and research on other renewable sources.

Achieving the 100% renewables target would be a windfall for our economy with far more potential than the discovery of oil, gold or any other precious metal. The immediate windfall would be the foreign exchange which would no longer have to be set aside to buy oil. That foreign exchange could be used to import other goods and services to further improve Barbadians' standard of living. The renewables sector would expand as a source of job creation, to make a major contribution to employment, output and income. These services could be exported across

the Caribbean, making energy a source rather than a user of foreign exchange. Barbados has now become a member of a global network of experts in this field, and that opens up the possibility of contributing to the improvement of renewables technology. Barbados is too small to initiate the research, but it can participate in global networks of innovation.

Economic transformation requires visionary leadership, and our strategy has found its leadership in the Barbados Renewable Energy Association (BREA). The Association has attracted all stakeholders into an umbrella grouping that promotes renewables by going to bat for its members, and by a programme of public education.

The conference on Sustainable energy independence in the Caribbean, organised by BREA, was a path-breaking event, with contributions from around the world that opened new vistas and new possibilities, and warned of some of the pitfalls to be avoided. We were inspired by the vision, passion and achievements of the pioneers who came to the conference. We learned of local initiatives that might complement the solar-wind-storage strategy, and of new types of storage. We were told of developments elsewhere in the Caribbean and beyond, and of technologies that may soon be available to us. The conference was an inspiration to all who attended, and has renewed our determination to press ahead with the promotion and implementation of Barbados' renewable energy strategy.

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