



SPEECH BY

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PRIME MINISTER**

**ON THE OCCASION OF THE CONFERENCE
CARIBBEAN SUSTAINABLE ENERGY INDEPENDENCE
MAKING IT HAPPEN**

**AT
LLOYD ERSKINE SANDIFORD CENTRE**

**ON
NOVEMBER 10-11, 2016**

Master of Ceremonies

Members of the Cabinet of Barbados

Energy Ministers of the Government of St. Lucia and the Seychelles Islands, The Hon. Stephenson King and The Hon. Didier Dogley

Governor of the Central Bank of Barbados

Members of the Diplomatic Corps

President and other Members of the Barbados Renewable Energy Association (BREA)

Distinguished Ladies and Gentlemen

It is an honour for me to be here this morning on the eve of Barbados' 50th anniversary of Independence to address

you at a conference appropriately titled: “Caribbean Sustainable Energy Independence – Making it Happen”.

I should like to commend the Barbados Renewable Energy Association (BREA) for collaborating with the Government in hosting this conference, at a critical juncture in the history of this island as we look forward to the next 50 years of Independence.

The occasion gives me the opportunity to share some thoughts with you, as Small Island Developing States in the Caribbean seek to transform their economies in the midst of threats to our very existence arising from the effects of climate change, but also in the midst of expanding theatres of opportunity presented by the use of clean energy.

The use of energy has had a transformative effect on the lives of human beings throughout history.

From his primitive use of the burning of wood for heat, to his use of nuclear power for power generation, and to his use of hydrogen to begin the exploration of the galactic immensities, man has been always determined to find new sources of energy to make his life more comfortable.

Within the last 400 years, there has been an exponential growth in man's material development on this planet precisely because he has been able to find or develop new forms of energy, and to better use existing sources.

So it is, therefore, that finding new forms of energy can propel a society forward as occurred with the Industrial Revolution in Europe; scarcity of energy on the other hand can retard the progress of the world economy as occurred after the 1973 oil crisis; the low price of energy - while being good for many countries - can result in societal conflict as we are now witnessing in a nearby country; and affordable access to energy can bring millions of marginalized persons out of poverty.

As net importers of oil in the Caribbean with its importation accounting for 20% of the region's Gross Domestic Product, access to clean, indigenous sources of energy lies at the heart of any effort by the Caribbean to

improve its resilience in a world that, in the words of one calypsonian, “does not need islands anymore”.

Energy affects all sectors of the economy and society, and we are forced to give it serious and indeed immediate and urgent attention when it is no longer readily available or when it is too costly to procure.

We ignore the importance of energy to our peril.

We in the Caribbean now stand at the crossroads in our development. In this 21st century we need to determine with some dispatch where we intend to be on this matter for the foreseeable future.

Whatever developmental route we intend to take and wherever our intended destination, it is evident that access to indigenous sustainable energy sources must be the basis on which we exploit opportunities and fine-tune processes of implementation. **Fortunately, this is not something that is new to us.**

We have gone full circle in our drive to take advantage of the abundant clean energy sources in the Caribbean.

You will recall that, in days of yore, the wind propelled ships; windmills were used to draw water and grind sugar canes; the sun and wind dried clothes; and biomass was used for cooking and the production of sugar.

Indeed, in the year 1846, Barbados was reported as having the second highest penetration of windmills worldwide, with 506 such systems dotting our island landscape, second only to the “windmill country” of the world, the Netherlands.

We in the Caribbean are richly endowed, not only in terms of wind, but also with an abundance of solar irradiation as well as biomass, ocean energy and hydro power, which, if properly harnessed, can provide energy to every man, woman and child in this region many times over.

In a world that is increasingly plagued by uncertainty and threatened by developments which severely limit our capacity to dream, the Caribbean can no longer afford to

expend billions of dollars every year on the importation of fossil fuels. Such importation undermines our competitiveness, and results in Governments not having the resources or policy space needed to give greater attention to such important areas as health and education.

We can no longer afford to have some of the highest electricity rates in the world, which in some cases are five times higher than what exists in industrialised countries.

We no longer have the luxury of standing by and not signaling to the developed world in very strong terms that Small Island Developing States, which contribute less than 1 per cent of global greenhouse gas emissions, intend to play a leadership role in the world's attempt to reduce the

carbon footprint. For SIDS feel most keenly the impacts generated by climate change.

So we need to achieve Caribbean Energy Independence in order to safeguard our future. The question is: How can we achieve this goal?

Let us look at the model that Barbados has chosen as we move along the road less travelled in our quest for energy security and independence.

First, the model requires that there be a commitment at the highest political level to the energy transformation that we are seeking to achieve.

In view of its importance to the sustainable development of the country, therefore, I chose to have the portfolio of energy in the Prime Minister's Office to ensure that this sector is overseen at the highest level.

The second imperative of our model is the conducting of an analysis to determine the potential in the island for access to energy sources, and to understand clearly both the challenges and opportunities for doing so.

In the case of Barbados, such an assessment was conducted in 2009, and resulted in the preparation of a report – the Sustainable Energy Framework of Barbados – which showed immense potential in the island for renewable energy and energy efficiency.

The third requirement is the crafting of a clear vision for the country in terms of energy.

In 2009 my predecessor in office clearly articulated part of the vision when he said that the Government wishes to see Barbados transformed into one of the most advanced Green Economies in Latin America and the Caribbean.

The Government's vision is now one of Barbados becoming a 100 per cent renewable energy island within the next 50 years, based on the use of indigenous local renewable energy sources.

On the way to achieving this goal, we now comfortably expect that a target of 65 percent of peak electricity capacity can be achieved by 2030, taking into account the suite of investments which have been and will be undertaken within the next few years.

We have also undertaken an Offshore Petroleum Programme which has so far resulted in the award of three blocks to the international oil companies BHP Billiton and Repsol.

Some may argue that this initiative could be at variance with the Government's clean energy programme and the Government's quest for a Green Economy.

However it is being done within the context of a strategy where we seek to capitalize on the opportunities highlighted under the Sustainable Energy Framework, while simultaneously pursuing opportunities of locating hydrocarbons in Barbados' vast offshore.

We have adopted the stance where the revenues gained from the Offshore Petroleum Programme will be used to diversify the economy, to assist in developing the Green Economy and achieving our 100% renewable energy goal, and to build up our foreign exchange reserves, since we recognize that fossil fuels are finite and, when all is said and done, not environmentally friendly.

To achieve these objectives obviously a Policy and a Road Map are indispensable.

In relation to Policy, I can inform you that a draft National Energy Policy for Barbados has been prepared which, after review by the Cabinet, should soon be presented to the public for discussion.

In addition the Cabinet has agreed to the establishment of a National Task Force on Energy consisting of stakeholders in the private and public sector, as well as the key Non-Governmental Organisation in this sector, the Barbados Renewable Energy Association (BREA).

The mandate of this body is to take a comprehensive approach to the preparation and review of the National Energy Policy, and to review the Energy Road Map which has recently been drafted by the International Renewable Energy Agency, as well as to monitor developments in the energy sector.

There are several matters that will be framed within the context of the policy.

First, the Government does not envision Barbados' grid being augmented only with numerous utility scale solar photo voltaic plants. The Government wishes to democratize the production of power by bringing it within the capacity of the householder, the small and medium

sized enterprise and the corner shop, as well as to have some room for the large Independent Power Producer and the utility.

The democratization will not be done in an ad hoc manner but in a systematic way where a proper framework and proper limits are set for all of these entities.

In this regard, I should like to commend the Barbados Light and Power Co. Ltd for its effort in undertaking a grid penetration study, which has shown that the grid can accommodate a significant amount of energy from intermittent renewable energy generation systems.

It is on this basis that the Cabinet has recently agreed to the imposition of a limit, for the time being, of 65 MW in respect of the cumulative installed capacity on the grid of intermittent renewable energy generation systems.

The Cabinet has further agreed that the 65 Megawatts should be broken down into 20 Megawatts for the Barbados Light and Power Co. Ltd for utility scale intermittent renewable energy generating systems; 20 Megawatts for utility scale intermittent renewable energy generation systems by Independent Power Producers; 15 Megawatts for distributed licensed intermittent systems under 1 Megawatt; and 10 Megawatts for grid tied intermittent systems that are not required to be licensed

under the Electric Light and Power Act. These are systems which will not exceed 5 Megawatts.

It has also been agreed that licences should not be granted for any intermittent renewable energy generation systems exceeding 10 MW, unless a very thorough, transparent and compelling case is made to show that the optimal scale of the plant should exceed this size. It is to be noted that the utility has already used 10 Megawatts in its solar farm at Trents in St. Lucy and therefore 10 Megawatts more of its allocation remains.

The Office of the Attorney General is now preparing the requisite legislation to give effect to these proposals.

A notable feature of the policy is that natural gas will be used as a bridge, as renewable energy and energy efficiency penetrate further into the energy mix. With over 20,000 residential, commercial and industrial customers, and an extensive pipeline infrastructure, it is evident that there would be significant stranded assets if this course of action is not taken.

The Government will therefore continue to import natural gas in the form of Liquefied Natural Gas to augment declining indigenous gas production, in the near and medium term, on the way to realizing Barbados' goal of becoming a 100% renewable energy island.

The other key step in the process of achieving energy independence is to have a Road Map. In this regard, the Division of Energy and Telecommunications engaged the International Renewable Energy Agency to prepare this “Map”.

The report has been prepared and has confirmed our local analysis that there can be an exponential increase in the renewable energy penetration level in the electricity supply.

It indicates that the island can increase the renewable energy penetration level in the electricity supply to a target of 76% of peak generation. The Cabinet will therefore, in 2017, review and increase the allocation of

licenses for intermittent renewable energy generation connected to the national electricity grid.

The contents of the report are now receiving the attention of the Energy Task Force.

To achieve energy independence it is essential that a transparent regulatory regime be put in place. In this regard, the Electric Light and Power Act has been operationalized and sets out clearly the processes to be employed in the issue of licences to generate electricity from renewable energy sources.

In order to facilitate this process, we are seeking to complete the administrative requirements for the licensing

regime to enable the issue of licences to the utility and utility scale Independent Power Producers. This process is expected to be completed within the next 6 months.

One other imperative of achieving energy independence is to have an appropriate fiscal regime in place. **This is not something new.** Barbados has had over forty years of providing fiscal incentives for solar water heating, and this has in part led to the island having the fifth highest penetration rate in the world.

Since 2010 the Government has continued this process of providing generous concessions for this sector by the inclusion of the generation of electricity from renewable energy sources as well as energy efficiency.

We intend to provide further concessions to the sector by significantly lowering the annual licence fees for those entities which wish to sell electricity to the grid. The Cabinet has already agreed to this proposal and the requisite Regulations will shortly come into effect.

I should like to caution, however, that, while we aspire to be a 100% per cent renewable energy island, the Government will **not** be doing so with the use of technologies that require more subsidies than currently exist through the existing fiscal concessions. The technologies must be economically viable and not a burden to the state - especially at this time of fiscal restraint.

We will pursue measures that require additional subsidy only when it has been proven that the energy security or environmental sustainability of the country justifies that pursuit.

Allow me in this context to make specific mention of the solar water heating sector. The success of this sector has shown what local entrepreneurial spirit, generous fiscal concessions and the support of the community can achieve to make the island a model in the world.

We need, however, to increase the penetration rate of these systems in the island especially in the lower income sector.

A study will be shortly commissioned to analyse the state of the sector and to determine what further assistance the Government can provide to increase the penetration rate.

In view of the significant capital investment needed to build out the renewable energy sector, strategic partnerships with our international partners need to be vigorously pursued.

I have repeatedly urged the international community to assist in this process by the provision of funding that ideally should be predictable and easily accessible.

It is in this regard that I should like to thank the Inter-American Development Bank, the European Union and the Global Environmental Facility for the generous financial support that they have provided over the last 6 years, in helping us to expand the renewable energy and energy efficiency sector.

Thanks also are due to the Governments of China, Japan and the Republic of Korea, which have provided tangible assistance.

The Government of the United States of America is to be applauded and thanked for its effort in facilitating the establishment of the Caribbean Energy Security Initiative, and the United States-Caribbean Energy Task Force both

of which seek to support the Caribbean in developing resilient and sustainable energy sectors through enhanced governance, increased access to energy finance and the creation of strategic partnerships.

We must extend appreciation also to the United Nations Development Programme, the International Renewable Energy Agency, the United Nations Industrial Development Organisation, the University of the West Indies, the CARICOM Secretariat and the Barbados Renewable Energy Association (BREA) which have all assisted the Government in various ways in developing this sector.

I should like also to thank the Barbados Light and Power Co. Ltd for working with the Government in this effort. The collaboration with the Barbados Light and Power Co. Ltd over the last few years has shown that the relationship between a foreign owned utility company and a Government that is in essence seeking to liberalise the generation of electricity, does not necessarily have to be adversarial, as has happened in other countries.

It can be a harmonious relationship although there will be times when differences of approach and emphasis will manifest.

This company introduced the Renewable Energy Rider in 2010 when the Government was embarking on its

accelerated Renewable Energy Programme. The Rider was established by the company to allow eligible customers with renewable energy generation systems to provide power to the grid.

This arrangement was superseded by the Electric Light and Power Act which established the new regulatory regime for the generation of electricity.

The relationship with the utility has shown that, once the Government's objectives are clear and there is a transparent regulatory regime in place, cooperation can accelerate the national sustainable energy programme.

Two other vitally important imperatives for energy independence are public awareness and education and capacity building.

It is a well known fact that interest in clean energy tends to wax and wane with the price of oil. It is evident, therefore, that for the successful development of this initiative, the entire island must be made a part of the exercise.

The oil crisis of 1973 stimulated further the development of the solar water heating sector in Barbados. However, if this programme is to be successful then we must keep energy awareness at the forefront of the consciousness of the nation at all times.

The message must be taken into the schools, into the communities and wherever else it is necessary to get the message across to the nation.

For this reason the Government cannot pursue this effort alone. The private sector and the NGO community must be integrally involved.

I therefore take this opportunity to congratulate the Barbados Renewable Energy Association (BREA) and its many members for their work in this regard so far, and to urge them to continue to partner with the Government in this undertaking, in order to give further life and vigour to

the Memorandum of Understanding between the two sides.

We have already started this cooperation through the national energy efficiency programme that the Government plans to roll out early in the new year.

We must continue to build on these efforts.

The Government sees itself as creating the requisite enabling environment and working with its partners such as BREX, the two being implementation hubs in this exercise.

Capacity and institutional building must be part of this effort of building out a new sector. We must take a collaborative approach since it is recognized that there is vast potential for the creation of green energy jobs.

I must, therefore, congratulate those educational institutions and other bodies which have sought to integrate sustainable energy into their curricula.

I have described the model that Barbados has chosen to use and to apply in this matter. The question you might legitimately ask is: What has this model produced to date in this country?

These are some of the tangible results:

- i) A new regulatory regime has been established in the form of the Electric Light and Power Act for the generation of electricity from renewable energy sources.
- ii) To date 69 applications for licences ranging from 6 KW to 149KW have been approved.
- iii) A 10 MW solar farm has been established by the Barbados Light and Power Co. Ltd which will shortly be commissioned.
- iv) Over 14 Megawatts of renewable energy generation systems have been installed on the grid. In excess of 1300 homes and businesses and over 20 public buildings are now veritable power producers.

- v) Over the last year, approximately 45,000 free LED lights have been distributed to householders with another 12,000 to be issued within the next two months.
- vi) Public buildings including the Queen Elizabeth Hospital, schools, polyclinics and fire stations have been retrofitted with 25,000 LED lights.
- vii) Rebates have been provided for over 3000 residences for energy efficient appliances under the Energy Smart Fund
- viii) The Government has provided in excess of \$12 million in low interest loans to businesses for the erection of solar photovoltaic systems also under the Energy Smart Fund

Then, you may go on to ask: What are the expected outputs by the end of next year?

Let me share with you some of the outputs expected by the end of 2017:

- i) The Government would have started to retrofit the 25,000 streetlights in the island with LED lights;
- ii) An additional 50 public buildings will be outfitted with solar photovoltaic systems;
- iii) An additional 65 MW of renewable energy generation systems are expected to be approved;
- iv) Thousands of energy inefficient lights in the public and private sector and in households will

be changed out as part of the Government's Phase Out Plan for energy inefficient lighting.

- v) The Government would have procured a fleet of electric vehicles as part of the Government's plan for clean energy efficient transportation;
- vi) A study would have been completed on the potential of the island for ocean energy particularly ocean thermal energy conversion (OTEC).
- vii) Work would have started on the first wind energy utility scale plants in Barbados.

And you may cast your mind to the future to the year 2030? What do you see in terms of energy in this island?

From my vantage point, what I see are thousands of the roofs of public buildings, houses and businesses covered with solar thermal and solar photovoltaic systems, along with the erection of solar and wind energy utility plants, a biomass and waste to energy facility, as well as a small OTEC (Ocean Thermal Energy Conversion) plant powering 75% of the peak capacity of the grid.

Hopefully, you will also see an efficient public transportation system powered by electric batteries and thousands of fossil fuel vehicles having been replaced by electric vehicles.

Now if I may be bold to ask you to allow your imagination to drift 50 years from now to the year 2066 – not a single

drop of fossil fuel is being imported into Barbados. The result – an energy independent Barbados.

Beyond your imagination you say?

Together we not only can, but we will, make it happen.

I thank you.

