

**DRAFT LECTURE BY MS. RACHEL KYTE,  
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**The William G. Demas Memorial Lecture  
Caribbean Development Bank**

**Tuesday, May 17, 2016  
Iberostar Calypso Theatre | Jamaica**

Dr. Smith  
Governors and Directors  
Diplomatic Corps  
Distinguished Guests  
Ladies and Gentlemen

It is a great honor to speak to you this evening.

And I would like to thank the Caribbean Development Bank for the invitation – and I also want to thank the government of Jamaica, for your incredible hospitality.

I am also delighted to be here in my role as Special Representative for the UN Secretary General on Sustainable Energy for All.

It's a real honor to work for Ban Ki-moon - a man of great vision and integrity and courage – who has put energy access for all at the heart of the development agenda.

**The UN charter begins with “We the peoples of the United Nations determined...”**

“We the peoples” is not just “a few”.

It's not just the fortunate ones – the ones with the reliable and affordable access to food and shelter and clean drinking water and education and health services and energy.

“We the peoples” is *everyone*.

That's why we are called Sustainable Energy *for All*.

Because there are over 1.1 billion people today who still have little or no access to energy.

3 billion people rely on wood, coal, charcoal or animal waste for cooking and heating

Energy is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions

Energy is central to nearly every major challenge and opportunity the world faces today. Be it for jobs, security, climate change, food production or increasing incomes, access to energy for all is essential.

Sustainable Energy for All is dedicated to securing access to millions of the world's most vulnerable people.

“We the peoples” want a planet – and a future – that’s not ravaged by climate change.

“We the peoples” deserve access to affordable, clean and reliable energy.

And “we the peoples” know that the time for action is now.

The impacts of climate change are being felt all around the world – and nowhere more than here in the Caribbean.

Rainfall patterns are changing which has caused a series of islands to experience prolonged dry seasons and severely low reservoir levels.

This severely impacts the ability of island nations to grow local crops. In 2014, according to Robert Pickersgill, Jamaica's minister of water, land, environment and climate change, Jamaica lost 2,190 hectares of crops valued at US\$953.3 million because of a widespread drought.

The generation of electricity from fossil fuels is water intensive. Drought can thus impact the reliability, and cost, of electricity supply.

On the other hand, a large amount of energy is required in pumping and treating water. Without a reliable supply of water, the reliability of electricity access is put at risk and without energy, water cannot be treated and distributed.

With climate change, the water-energy nexus and the foundation that it plays in society is increasingly threatened.

Forest fires throughout the Caribbean are getting more intense, threatening homes and wildlife.

Grenada faces the strong possibility of land loss from a rising sea, while Jamaica’s coastal infrastructure, from airports to government buildings, will become increasingly threatened.

The Bahamas Islands are vulnerable to an increase in tropical storms, both in number and intensity. In October last year, on Crooked Island in the Bahamas, 85 percent of the homes were destroyed. Over 36 hours, the storm rested menacingly over the islands, closing airports as well as destroying communications and electrical infrastructure, according to the Ministry of Environment and Housing in Nassau.

### **So, what needs to happen?**

Securing affordable, clean and reliable sustainable energy is the key to combating both climate change and poverty.

In order to stay well below 2°C – and move towards 1.5°C – while meeting the 17 development goals:

- We need to double the amount of renewable energy in the mix by 2030
- We need to double the rate of efficiency by 2030
- And we need to secure affordable, clean and reliable energy for the 1.1 billion people who have little or no access to it now.

Now this will not be easy. Tough challenges lie ahead. What’s required is nothing short of a complete global energy transition.

In order to avoid the worst impacts of climate change, we need to:

- We need to peak emissions by 2020.
- We need to enact smart policies that will spur innovation and get the money moving.
- And we need to invest \$12 trillion in renewables in the next 25 years. That's \$5.2 trillion above business-as-usual projections

**Now, even with all of the momentum created in 2015, there are still many who would put barriers in front of us.**

But as the Saint Lucian poet, Derek Walcott, wrote in his retelling of The Odyssey, "The future happens. No matter how much we scream."

The future happens. There's no doubt. In fact, the future already is happening.

Last year saw a new record in investments in renewables: \$329 billion.

Coal and gas-fired generation attracted less than half as much capacity investment as renewables last year.

And 2015 was the first time that more money was invested in clean energy in developing countries [\$167 billion] than developed countries [\$162 billion].

The price of solar is plummeting. Solar and wind in Morocco now cost 3cent/kWh.

Most traditional lighting is being displaced by white LEDs - which each decade get 30x more efficient, 20x brighter, and 10x cheaper.

58 Fortune 500 companies have joined RE100 and committed to procuring 100% of electricity from renewable resources. A recent report from The Climate Group showed that those companies are already more than 50% of the way towards their renewables goals.

Sustainable Energy for All is supporting The Climate Group on their newly launched EP 100 – showcasing the world's most influential businesses committed to doubling their energy productivity.

And it's not just big, connected-to-grid-style renewable projects. One example: In Bangladesh, utilizing pay-as-you-go mobile phone style financing model, 3.8 million solar home systems have been installed in the past years – generating a total of 135MW of electricity with more than 15 million people benefiting.

And history was made last week in the UK.

For several hours on the morning of Tuesday, May 10<sup>th</sup> – for the first time since the era of central electricity generation began with the construction of the Britain's first coal plant in 1882 – no electricity was generated from coal in the UK.

And this weekend, with protestors invading the largest open cast coal mine in Germany, Germany too generated all its power from renewables.

So, yes, the signs are there the future will, indeed, happen.

And Sustainable Energy for All is helping bring everyone along, further and faster, towards that future.

**I want to tell you a story.**

Telling stories has a powerful history in this region of great storytellers (from Walcott, to Kinkaid, to Marley, to Linton Kwesi Johnson to Margaret Cezair Thompson, right up to Marlon James.

So, close your eyes and come with me.

We are in 2024. It's the end of the decade of Sustainable Energy for All. The decade was ushered in just before the world agreed to Sustainable Development Goals and before the historic Paris Agreement on Climate Change in Paris in 2017.

Are your eyes closed? The past years have been hard. Extreme weather events seemed to knock everyone back every time we stepped forward. Hurricane after hurricane struck with an intensity that just seemed to get angrier and angrier.

However, those with terracing – like St Lucia – were able to keep the top-soil, and get crops going again.

Tourism fluctuated. People stayed away, or the big cruise ships passing by on the horizon, not stopping this time. Jobs were hard to come by.

But tonight, you can lean back and smile. Lights are on in the houses across the crest of the hill. There are people dancing along the coastline.

The mini-grids work, and the money saved from having to buy in heavy fuel has gone to training those leaving high school in maintenance and installation.

Solar power keeps crops well irrigated with drop per crop technology and water is stored effectively, giving some respite to the harshness of the droughts that – along with the storms – have plagued this region.

Up country, the solar banks and the wind farms – and the floating wind farms off-shore, with their undersea cables, commonly known as the Necker network – bear the 'base-load' for the local industries, manufacturers, high-end food producers, schools and hospitals.

A regional utility started up four years ago, with a regional agreement to share power. The agreement took years of tough negotiations, but it happened. And coupled to commercial debt relief, it was showing a way forward.

Managed by diaspora talent attracted back by the mission, the utility was managed by female CEO and COO. This was the first time in the region that two women had taken the helm of such an important organization.

The renewable energy couldn't bring the fish back. The coral was bleached and the sea is still too warm and acidic for anything else to thrive. But the fish-ponds on shore keep the protein in the diet.

You smile, forever resilient. The islands are adapting. The people are dancing.

**So, yes, the future will happen. But what will it really look like?**

We need to be able to envision *that* future – if that's the one we want.

At Sustainable Energy for All, we see the SDG #7 targets for energy access, renewable energy and energy efficiency as integrated solutions for ensuring sustainable energy for all.

To help move forward towards a more just and equitable future, Sustainable Energy for All is empowering leaders, brokering conversations and partnerships, and unlocking finance.

## Why am I optimistic?

Last September, the world's leaders came together to agree upon 17 Sustainable Development Goals – one of which, SDG #7 is securing affordable, clean energy for all.

Last December, in Paris, 195 nations negotiated an historic Climate Agreement – one that declared that not only do we need to stay “well below 2 °C” – we need to move towards a 1.5 °C world

And a few weeks ago, on Earth Day, 175 nations came to the United Nations in New York City to sign the historic Paris climate deal. The Secretary general said, “Today, we are signing a new covenant for the future.”

And there are stories of success everywhere – especially right here in the Caribbean<sup>1</sup>.

- The Clinton Climate Initiative and Rocky Mountain Institute-Carbon War Room (CCI and RMI-CWR) Islands Energy Program works with island governments across the Caribbean. They facilitate pathways towards achieving each island's renewable energy and energy efficiency goals as set out in their respective National Energy Policies.
- Most islands are largely dependent on imported fossil fuels for electricity generation and transport. Some Caribbean islanders have experienced more than 40c/kWh (USD) for electricity. There is not only the driving force of impending climate change, but there is an economic driver as well.
- CCI and RMI-CWR are working with governments on long term planning as well as immediate investments.
  - For example, In St. Lucia (an island of 180,000 people in the Eastern Caribbean), CCI and RMI-CWR are collaborating with the Government and St. Lucia Electricity Services Limited (LUCELEC) to develop an Integrated Resource Plan (IRP). An IRP assesses the range of electricity generation options (renewable and thermal) over a 10+year timeframe, to determine the timing, capacity and technology type of the optimal investments. This IRP spans the investment timeframe of the next 20 years and assesses the techno-economic feasibility of solar, wind, geothermal, energy efficiency and storage on the island. The objectives of this IRP are to ensure a reliable electricity supply, to contain electricity costs and to accelerate St. Lucia's trajectory towards a clean energy future. This is the first of its kind in the region, which will shape the future energy landscape of the entire country. The results of this study would be available in August 2016.
- The CCI and RMI-CWR Islands Team is also assisting St. Lucia Electricity Services Limited (LUCELEC) in the procurement of a 3 MW solar PV plant, the first utility-scale renewable energy project on the island. Thus far, the solar project has attracted the interest of over 35 engineering, procurement, and construction firms from North America, Europe, Latin America and the Caribbean. LUCELEC aims to have 1 MW installed by the end of 2016 and the additional 2 MW constructed in 2017. Once complete, the project has the potential to bring clean energy to over 2,100 households in St. Lucia.

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<sup>1</sup> Caribbean success stories compiled by the Rocky Mountain Institute

- CCI and RMI-CWR is working with the Government of St. Vincent and the Grenadines to enable a 12 MW geothermal project on the main island of St. Vincent. The project is the first of its kind for the island. This Geothermal Plant aims to provide 67 percent of the island's baseload electricity needs. The government aims to begin exploration drilling of the geothermal wells at the end of 2016.
- CCI and RMI-CWR assist with converting the INDC's of each island into an actionable plan and renewable energy installations. The due diligence process towards defining bankable projects becomes increasingly more streamlined, hence bringing down the costs even further while attracting bidders of higher quality.
- Aruba has made strides in offsetting fossil fuel based generation. There is a 30MW wind farm operating at an average annual capacity factor of 54% and plant availability of 98%. This island of 69 square miles also hosts a 3.6MW solar car port at the international airport. Aruba just released a Request for Information for a 2.5 MW total for school & building rooftops and up to 5 MW for a utility-scale PV park.
- Jamaica is about to commission a 20MW solar array in Clarendon. There is also 62.7MW of installed wind turbines in Manchester, owned and operated by Wigton Windfarm Ltd. Jamaica just announced the winning bidder, Eight Rivers Energy Company Ltd, for a 33.1 MW solar facility with a PPA price of US 8.54c/kWh.
- On the French island of Guadeloupe, the Bouillante Geothermal plant has a capacity of 15.5MW.
- In February of this year, Antigua commissioned 3MW of solar near VC Bird International Airport. This is projected to save 3000 tonnes of CO2 per year.
- Expansion of the Wigton Wind Farm is under way in Jamaica as it plans to increase renewable energy use further, with a goal to reach 20% by 2030. There are plans for 20 MW of PV solar to be installed to compliment the wind farm. In addition, Jamaica is offering benefits for any company or individual selling electricity to the grid from a renewable source.
- There are several solar water heater companies in Barbados and more than half of households have heaters installed, which can be written off against income tax. This policy has been in place since 1974. The story goes that the then prime minister installed a solar water heater on his house and was so impressed with the results that he put the economic incentives in place.
- Barbados expanded the success of solar water heaters to solar photovoltaic with the introduction of the "renewable energy rider". This allows people installing solar photovoltaics to sell their power back to the grid at 1.6 times the usual charge. As a result of this incentive, there are now more than 300 house-top PV systems in the island, and that is expanding. Barbados has set itself an ambitious goal of 29% of energy to be produced from renewable sources by 2029.
- A few other Caribbean countries have seen success with renewable energy. The Dutch Caribbean has led the way in terms of wind energy, with Curacao, Bonaire and Aruba all having significant generation capacity. The political connection to the Netherlands has helped with technical expertise and there has been economic support from the Dutch government. Jamaica has been able to build on the know-how of Dutch Caribbean countries in their own wind development.

- o Nevis, St Lucia and Dominica have all sought to develop geothermal energy projects, which is another source of renewable energy that has potential in the Caribbean. The Organization of American States and the World Bank have provided capacity and financing support.

### **What needs to happen now?**

Again, let's be clear. If we are to tackle climate change and poverty, we have no time to lose.

And right now, the policy environment is not right, so things are moving too slowly.

And if institutions are not transparent and not well-managed, things will slow down more.

And if capital costs are too high, things will slow down more.

And if policy signals are incoherent, things will slow down more.

There is tremendous responsibility on the shoulders of government leaders to ensure that the public policy in place creates a level playing field for new technologies and business models that can serve the people of these islands and region well.

This means not just the basic enabling environment that will attract investors, but the specific management and governance of utilities and other entities in the energy system.

While many believe they benefit from energy systems, today – those systems struggle to be reliable, affordable and sustainable.

I say to the leaders: Many, many more people could benefit from the new energy future you need and your people want.

Of course the dynamics of credit worthiness in the region are complex.

Vulnerability should be counted as a factor in access to concessional funds to support clean and affordable energy among other things.

Parties should come together to agree how borrowing can occur to spur the investment in the infrastructure this region needs

Regional agreements and approaches will have to take place alongside the innovation we see in many island nations including Grenada and Aruba.

I am here to tell you that there is real alignment between investors and public funds, with a plunging price of clean technology that must be seized by this region.

Policy – the domain of the leaders of the region – has to embrace what is now possible. The technology and business plans we need are already here. With the right policies, finance will follow.

Public funds will remain scarce given the enormity of the challenge. Accessing the concessional finance that is available poses perennial challenges and this continues with the new sources of funding such as the Green Climate Fund.

But there are new sources of impact investing eager to take little return for helping secure energy for all. Understanding the new contours of the supply side of finance is important. Sustainable Energy for All can help.

Haiti will remain a special case. The lack of access to such a high proportion of the population will remain an immense challenge for the regional and global partners.

We will have to work hard to ensure that Haiti isn't the last remaining outpost of lack of access at the end of the decade. Remember: it is "We the peoples". No-one gets left behind.

### **How can the Caribbean Development Bank help?**

Like others in the multilateral development finance community the CDB has an essential role to play. Its priorities should be oriented to the priorities of its members as expressed through the Sustainability Development Goals in the context of Paris. The region cannot wait for others to lead the way - it has to lead its own way - and that includes CDB.

Pooling capital with among others, the IADB and the WBG will help. The priority should be on the large projects needed to put in place the infrastructure that centralized and decentralized energy systems will need. Together with Caricom, the regional bodies must focus on underpinning the regional pieces of the puzzle and convening others, from bilateral and philanthropic to private investment in the pieces of the puzzle, which are national and local.

What does a plan to have clean affordable access to energy by all by mid 2020s look like? What policies to members need in place - how much institutional reform is needed? This is work the CDB should commission if not lead. It can speak truth to its members.

Where will find the management capacity needed for such a vision? The CDB could help attract that capacity. And go get it. Maybe even house it?

Success breeds success. There is a role for the CDB to ensure that what works in one place is understood by the decision makers and takers in another - we in Sustainable Energy for All are curating and sharing stories of what works precisely because we see that this remains a barrier to boldness on Monday morning - not being aware that the future is already here. We would be happy to work with the CDB on this.

In Paris it was the High Ambition Coalition, led by some Small Island developing nations that provided the impetus for the boldest parts of the agreement. The Small Islands helped the mighty powers to find their true north. AOSIS - the Alliance of Small Island States has since the late 1980s - spoken truth to power in the context of climate change.

With the ravages of climate change upon us, this region will need to demand in very precise terms what it needs from the world, as parts of its regional drive to free itself from expensive, unreliable dirty power - managed not for "we the peoples", but for just a few.

You set a bold goal in your INDCs. 100% renewables was included in all SIDS submissions. We need to make that happen.

Many partners are already here. They are working to support you to achieve that vision. Every nation in the region is different, but there are commonalities and while tailored approaches can take place at the national level, the core components of what the region needs are known. We need to move. Time is off the essence.

Work with us and the International Development Bank in our Sustainable Energy for All regional hub.



Let's leave here clear about what it will take to realize SD7 in the context of Paris.

We need to adopt an 'energy efficiency *first*' approach. While we work on the centralized and decentralized energy generation you need – ensuring efficiency in buildings, appliances and transport will cut fuel costs now and in the future, improve quality of air in the towns, bring out the best of the tourism industry, create jobs and save funds to the treasury. This means setting standards and enforcing them.

Must the political will to repair the institutions and utilities you have today.

Be informed. Look at what is already going on in the region and what investors are already prepared to do.

Put energy at the top of the agenda. As leaders, you face an array of challenges. But without a solid approach to energy, food and water security, functioning health services, tourism and other revenue generating sectors of the economy will all suffer. If you tackle energy and those other challenges will get significantly easier to overcome.

I want to end by saying that I have absolute faith in the ability of the Caribbean leadership to tackle the risks – and seize the opportunities – that meeting the climate change challenge brings.

Sustainable Energy for All is ready to partner with the Caribbean governments, the Caribbean Development Bank and other institutions in the region.

Keep that vision of how this region could be in 2024 firmly alive in your imaginations.

Remember the responsibility to act – for this and current generations. Remember that your kids will ask you where you were and what you were doing when you knew and what did you do.

And let's not forget the wise words Derek Walcott taught us.

"The future happens".

Together, we can move – further and faster – towards that future.

A better future.

And safer future.

And more prosperous future.

A just future.

Not for some.

But for all.

Thank you.