



2012 International Year of SUSTAINABLE ENERGY FOR ALL

This year 2012 has been declared by the United Nations (UN) General Assembly as the **International Year of Sustainable Energy for All (SE4ALL)**. When the UN General Assembly made this declaration in December 2010, it called on Member States, the UN system and all actors to raise awareness and promote action towards sustainable energy for all.

In parallel, and as a response to the Declaration, the UN Secretary-General formally launched the Sustainable Energy for All Initiative in September 2011, in New York. The aim of this initiative is to mobilize Governments, the private sector and civil society to make commitments and actions aimed at attaining the goal of sustainable energy for all by 2030.

The UN SG's Initiative articulates three objectives:

- Ensuring universal access to modern energy services – access to electricity and to modern fuels and technologies for cooking, heating, and productive uses.
- Doubling the rate of improvement in energy efficiency – increasing the current pace of improvement to 2.5 percent per year, achieving a 40 percent reduction by 2030, measured in terms of global energy intensity.
- Doubling the share of renewable energy in the global energy mix – increasing the current renewable energy share of global energy consumption to 30 percent.

This is against the backdrop that in 20 years, energy consumption will rise by 40 per cent -- mostly in developing countries where 1.6 billion people still lack access to electricity, and where 3 billion people rely on traditional biomass fuels for cooking,

heating, and other basic household needs.

The SG's Initiative on Sustainable Energy for All is of the highest priority not only because 2012 is the Year of Sustainable Energy for All, but also because it is being foreseen that commitments to meet the targets being considered under this initiative can be an important outcome for the United Nations Conference on Sustainable Development (Rio +20) to be held in Rio de Janeiro, Brazil from 20-22 June 2012.

The designation of 2012 as the International Year of Sustainable Energy for All will provide a vital platform within CARICOM over the course of this year for raising awareness of the challenges and for



UN Secretary- General, Ban Ki-moon and Director- General of UN Energy, Kandeh K. Yumkella

securing national commitments toward achieving the three objectives. This should also help to bolster efforts in CARICOM towards positively changing the energy poverty situation in Haiti and the establishment of a sustainable energy pathway in the Region.

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Successful Staging of the Inaugural CARICOM Energy Week in 2011

It can be reasonably concluded that the staging of the Inaugural CARICOM Energy Week (CEW) was generally successful, despite some big challenges. This is based on the level of awareness raised, participation by Member States (including Heads of Government, Ministers, other officials and citizenry), and also adjudging from the range of activities that engaged wide cross-sections of the society including youths in various CARICOM Member States. This is significant as increased energy awareness is critical for creating the market conditions necessary for sustainable energy development.

I wish to use this opportunity to thank everyone, especially the National Focal Points and personnel within the Ministries

responsible for energy in Member States for their overwhelming support, cooperation, as well as the exemplary level of professionalism demonstrated. The CARICOM Secretariat also wishes to thank the main sponsor, the European Union for the financial support provided through the Caribbean Renewable Energy Capacity Support (CRECS) Project. The strong support from the OAS' Caribbean Sustainable Energy Program (CSEP) is also acknowledged and appreciated. As we seek to complete the analysis of CEW 2011 and to commence planning for CEW 2012, it is the aim of the CARICOM Energy Unit to collaborate with Member States and our partners to make CEW 2012 much bigger and more impactful towards the achievement of Regional energy sector



*Mr. Joseph Williams,
Programme Manager, Energy,
CARICOM Secretariat*

goals. In this Issue of **E-Energy**, we will bring a few highlights of CEW 2011 which was staged under the general theme of “*A Clean, Low Carbon, Sustainable and Secure Energy Future*”.

Looking Ahead in 2012

As we enter a new year, it is projected that the CARICOM energy sector and the economies of CARICOM will continue to be impacted by developments in the global community, viz, the European debt crisis, sluggish economic performance in the USA, continued unrest in the middle east “*Arab Spring*”, diplomatic wrangling over Iran's nuclear programme, etc. The general prediction by leading energy organizations is that oil prices will generally remain high above US\$ 90 per barrel on average, despite some expected slackening in demand. Based on this forecasts, it appears that the year will be another challenging one for most CARICOM Member States.

One cannot help but note with interest some recent global developments impacting renewable energy, viz:

- The inclusion of the Aviation Sector in the European Union Emission Trading Scheme (EU ETS) that takes effect from January 2012 based on a ruling of the EU's highest court in December 2011, and which has elicited huge negative reactions globally, particularly in the USA. Under the scheme, all flights landing and taking-off from airports in the 27-nation bloc, along with those of the three neighbouring countries of Iceland, Liechtenstein, and Norway, must

submit permits to cover the emissions of these flights. This move could see an increase in airfares and also potentially negatively impact the Caribbean tourism sector which is already reeling from the UK's Air Passenger Duty (APD). It also highlights how the Climate Change challenge especially linked to energy, will change our way of life.

- It is also ironic that just when demands are being made for the airline industry to lower its carbon footprint, there is news that many leading airlines have abandoned their biofuels pilot projects due to a lack of consistent supplies.

- Further, Brazil which has been the world leader in Bio-ethanol production and export, has had to start importing ethanol from the USA owing to the fact that demand is outstripping local supply.

- Trade issues between China and US renewable energy equipment manufacturers, as well as, spats between Japan and Canada on the matter of subsidy for renewable energy have huge implications for the policy instruments used globally based on subsidies, to stimulate growth in demand for renewable energy.

- The designation of 2012 as the

International Year for Sustainable Energy for All (SE4ALL) by the UN, coupled with the Rio+20 Conference to be held in June 2012, provide opportunities for establishing key linkages and mobilizing support for sustainable and clean energy development in CARICOM. Within the context of CARICOM, two Regional level energy fora are being planned which will seek to facilitate dialogue within the context of the objectives of the Sustainable Energy for All Initiative. These are the United Nations Development Programme (UNDP) Spearheaded Conference for all Small Island Developing States (SIDS) scheduled for April 2012 in Barbados and the Third Caribbean Sustainable Energy Forum (CSEF III) organised by the CARICOM Secretariat with lead support from the Government of Finland scheduled for September 2012 in St. Kitts and Nevis.

For the CARICOM Energy Programme, two key objectives are targeted for the first half of the year, these are the establishment of the Caribbean Sustainable Energy Road Map and Strategy (C-SERMS) and finalization of the Regional Energy Policy.

New Ministers with Responsibility for ENERGY

Arising from National Elections in Jamaica and Saint Lucia, Nov. – Dec. 2011




Sen. the Hon. Dr. James Fletcher, Minister of Public Service, Sustainable Development, Energy, Science & Technology, Saint Lucia

Sen. the Hon. Dr. James Fletcher is the Minister with responsibility for Public Service, Information, Broadcasting, Sustainable Development, Energy, Science and Technology in the Government of Saint Lucia. Dr. Fletcher has a wide range of experience in the areas that fall within his portfolio. He served as the Director of the Social and Sustainable Development in the Secretariat of the Organisation of Eastern Caribbean States (OECS) from 2008 and 2011, where he was responsible for overseeing a wide range of areas, including energy, the environment and sustainable development, including climate change.

Prior to that, Dr. Fletcher served for approximately eight years in the capacity

of Permanent Secretary in the Ministry of Agriculture and as Cabinet Secretary in the Office of the Prime Minister, Saint Lucia.

In the past, Dr. Fletcher also served as Chairman and Director of various regional and national agencies. Dr. Fletcher is a Biochemist and has a Doctor of Philosophy degree in Crop Physiology from the University of Cambridge, England.  congratulates Dr. Fletcher on his appointment.

The Hon. Phillip Paulwell is the new Minister of Science, Technology, Energy and Mining (STEM) in Jamaica. He is also the Leader of Government Business in the House of Representatives and a member of Parliament. His areas of responsibility also include Information and Communications Technology (ICT).


In the past, Minister Paulwell served as a member of the Cabinet of Jamaica between January 1998 and September 2007, his last appointment being Minister of Industry, Technology, Energy and Commerce (MITEC). His appointments to the Executive began in 1995 when he was appointed to the Upper House as a Senator where he served until 1997. His



The Hon. Phillip Paulwell, Minister of Science, Technology, Energy & Mining, Jamaica

appointment in December 2011 marks the beginning of his fourth term of political representation.


Prior to 1995, Mr. Paulwell served in very senior positions in the Government of Jamaica- Legal Officer of the Jamaica Commodity Trading Company Limited, Executive Director and Trade Administrator of the Trade Board Limited and as the first Executive Director of the Fair Trading Commission.

Mr. Paulwell is an attorney at law by profession.  congratulates the Hon. Phillip Paulwell on his appointment.

SECOND IDEAS ENERGY INNOVATION CONTEST TO BE LAUNCHED IN FEBRUARY 2012

IDEAS is an Energy Innovation Contest intended to support the development of innovative projects and ideas promoting renewable energies, improving energy efficiency and extending access to energy in the region. This Contest aims to support the development of innovative projects, enterprises and applied technology projects that are aimed at the adoption, innovation, assimilation, development and transfer of technologies in connection with renewable energy sources, energy efficiency, energy access, climate change mitigation and fossil fuel substitution, within the Caribbean.

The IDEAS Contest was first launched in February 2009 within Latin America and the Caribbean. Three (3) projects from

CARICOM countries were among the twenty-five (25) winning projects. (See feature in  Issue 2 for more information).

For the 2012 round, applicants must fill an online application form that will be available at IDEAS' webpage: <http://www.iadb.org/ideas> from February 15, 2012. **Applications are eligible from the following Caribbean countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.**

The Contest will be jointly sponsored and managed by UKAid from the Department of International Development (DFID), Global Village Energy Partnership (GVEP), the Inter-American Development Bank (IDB) and the Korean Government. A large proportion of the Contest funding comes from DFID that has a keen interest in supporting enterprise development in the Caribbean. GVEP International has been selected by DFID as the implementing partner.



Highlights from CARICOM ENERGY WEEK 2011

Staged Across Member States

ANTIGUA AND BARBUDA:

In his Message for CARICOM Energy Week (CEW), **Dr. the Hon. Baldwin Spencer** noted that, “The global economic crisis and the resultant economic



Dr. the Hon. Baldwin Spencer, Prime Minister and Minister with responsibility for energy, Antigua & Barbuda

challenges being faced by Antigua & Barbuda require us to implement extraordinary measures swiftly. As a Government, we must act with a sense of urgency. As a nation, we must act with a common purpose. There is no time for delay.” PM Spencer further warned that “The continuing rise in the price of oil coupled with the escalation of tension in the Middle East and in Libya have major economic implications for Antigua & Barbuda and the region. Without swift and decisive action, the end results could cause significant damage to our economies.”

In addition Spencer said, “We are required to devise ways and means to develop our renewable energy resources with the aim

of changing our energy matrix to ensure the production of cleaner energy and thereby reducing our carbon emissions.” Energy Week in Antigua and Barbuda was marked by road marches, an exposition, a national school's debating competition and panel discussions among experts and various stakeholder groups aired via the electronic media.



Students view solar PV panel array during CEW 2011, Antigua & Barbuda

THE BAHAMAS:



The Rt. Hon. Hubert A. Ingraham, Prime Minister, The Bahamas

CEW was formally launched with an official proclamation by the **Rt. Hon. Hubert A. Ingraham, Prime Minister of The Bahamas**, “AND WHEREAS, in

observance of this year's Energy Awareness Week, which is being held under the theme, “Public/Private Partnership in promoting Energy Efficiency”, a schedule of activities has been organized to highlight the work of the National Energy Policy Committee, as well as to promote energy efficiency awareness within the community;

NOW, THEREFORE, I Hubert A. Ingraham, Prime Minister of the Commonwealth of The Bahamas, do hereby proclaim the week, 4th-11th November, 2011 as “ E N E R G Y A W A R E N E S S WEEK”.”

Speaking at the launch of Energy Awareness Week, Minister of State for the Environment, the Hon. Phenton Neymour observed that recent high electricity bills

are a sign that the Bahamas needs to adopt alternative energy solutions. Continuing, the Minister pointed out that, “The systemic nature of this problem demands



Hon. Phenton Neymour during his address at the Ceremony to launch Energy Week in The Bahamas

that a holistic approach be taken. One approach requires tracking down each unit of energy wasted, to minimise the need for future expansion of infrastructure.”

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Minister Neymour further stated, "It must be recognised, however, that while reliance on tried and proven technologies, both

renewable and non-renewable, provides a level of certainty in the short term, without focused research and development of

emerging technologies, the likelihood of establishing indigenous forms of clean technology diminish rapidly."



Dr. the Hon. Earl Deveaux, Minister of Environment addresses students of Claridgeale Primary School among his visit to several primary school during CEW 2011 in The Bahamas

BARBADOS:

Energy Week 2011 for Barbados was held in October 2011 to coincide with the staging of the 2011 Caribbean Renewable Energy Forum (CREF). The Ministry with responsibility for energy has however signaled that Barbados will stage energy week during the same period as other

CARICOM Member States in subsequent years.

The Prime Minister, the Hon. Freundel Stuart delivered the key note address during CREF 2011 as part of a range of activities to mark Energy Week. In his address, he outlined a number of sustainable energy initiatives and strategies being

pursued by the Government to significantly change the energy landscape in Barbados.

Barbados' Energy Week commenced with a church service. Other activities during the week included, inter alia, TV documentaries, newspaper supplements on interviews conducted, bus tours, RETScreen training and an energy hike which concluded the week of activities.

BELIZE:

CEW 2011 was marked by a range of activities in Belize. These included, inter alia, an official launch, Expert Panel Discussion aired nationally, Tour for school children, Poster and Theme Competition. The **Chief Executive Officer (CEO) of the Ministry of Public Utilities, Mr. John Mencias** delivered the key note address during the ceremony to launch CEW 2011. He also presented the prize to the winner of the Energy Week Theme and Poster Competition, students of Our Lady of Guadeloupe School in Belmopan. They won with a colorful poster depicting the uses of energy under the theme "Build on the Technology for a Better Tomorrow".



Poster & Theme Competition winners Our Lady of Guadeloupe RC School



Official opening of Energy Expo in Belize



Mr. John Mencias, Chief Executive Officer, Ministry of Public Utilities delivering the Keynote Address during the ceremony to launch Energy Week 2011, Belize



Some Participants at the Panel Discussion



Students toured Belcogen Plant as part of CEW 2011, Belize

DOMINICA:



The Hon. Rayburn Blackmoore, Minister of Public Works, Energy and Ports, Dominica

The Hon. Rayburn Blackmoore, Minister of Public Works, Energy and Ports in his Energy Week message stated, "It gives me great pleasure and honour, first of all, to recognise the tremendous effort of the CARICOM

Secretariat for initiating Energy Week throughout the region. Secondly, I am even more honoured that Dominica is able to partake in these activities, as we embrace the opportunity to highlight our achievements in the furtherance of the energy sector, and to present Government's plans to enhance the development of the energy sector.

I endeavour to lead an energy sector that is governed by a robustly aggressive and well-informed regulating authority that will engender the utilization of local renewable energy resources to provide clean, reliable and affordable electricity supply to all Dominicans. We have updated our electricity supply law, and have prepared draft policy and other legislative instruments to help achieve that objective."

Minister Blackmoore further stated, "My Ministry supported by Government's commitment is prepared to develop local sources of energy for the primary

purpose of reducing the cost of electricity to the consumer. The regulation of the electric sector is entrusted to the Independent Regulatory Commission (IRC), with a mandate to ensure that electricity is efficiently and effectively generated, transmitted and distributed. Our domestic market is growing and becoming more sophisticated and demanding, while the commercial segment is expanding. Nevertheless, our energy cost still remains one of the highest in the region. Renewable energy and more specifically for us, **geothermal**, is well positioned to replace our dependence on fossil fuel and significantly reduce the cost of energy, while providing the opportunity to improve our balance of trade through energy export for generating economic growth".



Section of Panel of Experts & Stakeholders – CEW Dominica

GRENADA:



The Hon. Nazim Burke, Minister of Finance, Planning, Economy, Energy & Cooperatives, Grenada

In his CARICOM Energy Week address, the Hon. Nazim Burke, Grenada's Minister of Finance, Planning, Economy, Energy and Cooperatives noted that "It is a great honor and pleasure for me to officially open

Caricom's Energy Week in Grenada, under the theme: *Creating a Sustainable Grenada Through Renewable and Efficient Energy Use*".

He pointed out that the objectives of the week were "to heighten awareness and provide information to the regional populace on sustainable energy options and the need for greater efficiency in the use of energy" and also that of "increasing the awareness about the important role for clean and renewable energy in the context of global trends and the realities in CARICOM".

The Hon. Nazim Burke further pointed out that "the Government of Grenada has taken some deliberate measures to eliminate energy wastage in the Public Sector, and to foster, or encourage energy conservation and energy efficiency. We will do all that is necessary to make the State of Grenada an energy efficient landscape".

According to Minister Burke, "For the celebration of Energy Week in Grenada, the planned activities will focus on the promotion of Energy efficient appliances and devices, renewable energy and energy conservation fundamentally."



Pre-primary & primary school children participate in Energy Awareness activities, CEW 2011, Grenada



Drivers' Seminar - CEW 2011 in Grenada

GUYANA:

Guyana is one of two CARICOM countries (the other being Saint Lucia) that has staged an annual national energy awareness week over recent years and was therefore able to share lessons and experiences with other

CARICOM Member States participating in the inaugural CEW. In his address to mark CEW 2011, **Chief Executive Officer of the Guyana Energy Agency (GEA), Dr. Mahender Sharma** pointed out that, “a key feature of a low carbon future is one where the society addresses the

developmental needs of its people while calculating habits to foster more effective and efficient use of energy”. He further stated that, “minor adjustments in daily routines and choices can conserve energy and save money.”



Dr. Mahender Sharma, CEO, Guyana Energy Agency presents Gift Certificate to a student;



Students listen to Energy Presentation during CEW 2011, Guyana



Solar cooker demonstration, CEW 2011, Guyana

HAITI:

One of the main events to mark Haiti's Energy Week 2011 celebration was held at the Historical Sugarcane Park in Tabarre and took the form of a three day conference which was well attended.

The new **Secretary of Energy, Dr. Rene Jean-Jumeau**, noted that Haiti has established its strategic plan for energy throughout the country where the larger

cities would be supplied by the national utility and the towns would utilize micro grids.



Improved Stove Display – CEW 2011, Haiti



Energy Exposition, CEW 2011, Haiti



CEW 2011 Energy Conference - Haiti Presentation on Biofuels

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Energy

JAMAICA:

Speaking at the launch of CEW 2011, **Minister of Energy and Mining, the Hon. Clive Mullings**, said he is pleased with the integral role the Ministry has played in the coordination of the first staging of CARICOM Energy Week. He noted that *“Through this initiative, the entire Region has been forced to acknowledge the challenges we face in energy and that we need a regional*

approach in meeting these challenges”. The Minister further noted that the first staging of CEW demonstrates the possibilities that arise from regional consensus and integrated partnership between government and non-governmental organisations. He informed that the gathering that the Week seeks to bring a holistic treatment to energy issues that affect not only those in Jamaica, but the entire region, particularly developing and non-oil producing countries. He

further stated that to offset the impact of high energy prices, reduce dependency on imported oil, and heighten energy security in Jamaica, the country must pursue a diversified energy strategy, *“This includes renewable energy, natural gas, and includes all the possibilities, because we cannot afford to put all our eggs in one basket, as we have done before, because current trends do not augur well for our country's energy future.”*

Meanwhile, Programme Manager, Energy, CARICOM Secretariat, Joseph Williams noted that the idea for a Week to focus on energy has been long overdue. He pointed out that, *“Despite the fact that energy can be a challenging subject matter in CARICOM, it is a critical aspect of our development. A co-operative and Regional approach is imperative, in order to be able to make the kind of steps that are necessary to take us forward. In some territories, energy needs to be transitioned from being an impediment to becoming an enabler for economic development and growth, especially as it relates to the cost factor. Identifying how best we can achieve this as a Region, must be a part of the focus of CARICOM Energy Week.”*

Editor's Note: Since the staging of Energy Week, from 6-12 November 2011, national elections have taken place in Jamaica and based on the outcome of those elections, Dr. the Hon. Phillip Paulwell has been appointed as the new Minister of Science, Technology, Energy and Mining (STEM). The Hon. Julian Robinson was also appointed Minister of State in the Ministry of Science, Technology, Energy and Mining, Jamaica (See article titled 'New Ministers with responsibility for Energy' on page 3).



Mr. Joseph Williams, Programme Manager, Energy, CARICOM Secretariat makes a point to Hon. Ministers Clive Mullings and Laurence Broderick, and Permanent Secretary, Mrs. Hillary Alexander at the launch of CEW 2011, Jamaica



Students pay keen attention during a technical session at the Energy Awareness Expo held at UWI Mona

SAINT LUCIA:

Saint Lucia is one of two CARICOM Member States which has in the past celebrated energy week prior to the launch of CEW in 2011 as an annual event. Saint Lucia's celebration of CEW 2011 was marked by the publication of newspaper supplements highlighting energy related articles, energy workshops, quizzes and promotions via the electronic media, and the production and distribution of relevant energy awareness literature.

ST. KITTS & NEVIS:

Energy Week in St. Kitts and Nevis was marked with a series of events culminating in a street fair "Energy EXPO" in the heart of Basseterre, St. Kitts, from 10:00 am to 6:00 pm.

The event brought together providers of renewable energy and energy efficient products and/or services to display their goods and to allow participants to meet all of the important players in the Energy Sector in the Federation. It also provided a golden opportunity for public education

regarding a number of issues relating to energy. Members of the public including school children, office workers and energy enthusiasts interacted with each other and exchanged views on matters relating to conservation and the future development of alternative energy in the Federation.



Students on a site visit to the Nevis Wind Park examine a lowered wind turbine, CEW 2011, St. Kitts & Nevis

Students on a site visit to a geothermal site, CEW 2011, St. Kitts & Nevis

ST. VINCENT & GRENADINES:

Energy Week 2011 in St. Vincent and the Grenadines was marked by a range of activities engaging a wide cross-section of the population. Heavy emphasis was placed on energy efficiency and conservation.

Renewable Energy and Energy Efficiency
Expo - CEW 2011, St. Vincent & Grenadines



Energy Consultant, Eaton Haughton addresses audience on energy efficiency techniques



Energy Awareness Mascot
St. Vincent & Grenadines

TRINIDAD & TOBAGO:

Energy Week activities in Trinidad and Tobago were rolled out under the general theme of “Understanding Trinidad



Sen. the Hon. Kevin Ramnarine, Minister of Energy & Energy Affairs, Trinidad & Tobago

&Tobago's Energy: Promoting Sustainability through Smarter Energy Choices”. In his message, the **Minister of Energy and Energy Affairs, Senator the Hon. Kevin Ramnarine** noted that “the Government sustainable energy agenda includes improvement in the use of energy in key consuming sectors in order to generate savings and reduce Trinidad and Tobago's carbon footprint.”

He gave examples of the Government taking the lead in energy conservation. He further noted that, “The time has come in Trinidad and Tobago for there to be legislation for energy efficiency. The Ministry of Energy will be coming up with policy paper on energy efficiency, and, in collaboration with Attorney General's Office, on a draft energy policy bill.”

Minister Ramnarine said, “In the area of solar photovoltaic, we continue to develop opportunities for solar development. We are exploring the idea of establishing a solar photovoltaic manufacturing capability. Such an industry will have linkages with the local natural gas industry through the use of gas as fuel and could be another phase in the evolution of this country's natural gas industry.”

He also spoke of the Government's plans to increase CNG use. Juliana Johan-Boodram, Permanent Secretary in the Minister of Energy and Energy Affairs, laid out some initiatives the Government will be using in the future to better utilise and conserve energy.

As part of CARICOM Energy Week, a number of activities were staged including a Renewable Energy (RE) Awareness Campaign. The Ministry had setup three

Visit the Caribbean Information Portal on Renewable Energy (CIPORE) at www.cipore.org For All Renewable Energy Information On The Caribbean

booths/energy islands at the Brian Lara Promenade, Harris Promenade and Tobago's Esplanade. The RE Forum was used to inform citizens of incentives made available in the Fiscal Incentives Act No. 13 of 2010 and encourage private sector energy stakeholders to participate and invest in energy efficiency and renewable energy technologies.



CARICOM Energy Programme Quarterly Newsletter

The **Energy** Newsletter is a quarterly electronic publication which aims to increase awareness about issues and developments in the energy sector of CARICOM Member States. It also seeks to provide information on activities under the CARICOM Energy Programme in support of Member States' energy sector development.

There is a heavy emphasis on sustainable energy development issues, given the importance of these for enhancing the diversification of energy supply towards increased energy security in all Member States, as well as, for increasing their Climate compatibility.



ENERGY NEWS

12 Month Extension Granted to the CRECS Project



The European Union funded Caribbean Renewable Energy Capacity Support (CRECS) Project which is being executed by the CARICOM Secretariat has been granted an extension of 12 months from 1 January to 31 December 2012.

The Project whose overall objective is to increase capacity for the deployment of renewable energy development, has been in operation since November 2010. The CRECS

Project has provided support, inter alia, in the areas of developing a MSc Programme in Renewable Energy and updating of the MSc Programme in Renewable Energy Management for the University of the West Indies, development of a Model Energy Awareness Programme and support to Member States for the staging of Energy Week 2011 activities, development of a strategy to encourage the use of Solar Water

Heaters in the public sector, capacity building activities in support of development of the energy sector in Haiti and support to the CARICOM Energy Programme.

The extension will allow for significant capacity building activities to support Member States in the areas of legislative reforms, energy awareness and strategy development (for example, in Haiti).

Research, Development and Capacity Building Workshop to Support Renewable Energy in CARICOM held October 2011 in Suriname



On 19-20 October 2011, the CARICOM Secretariat in collaboration with the Anton De Kom University of Suriname held a **Regional Workshop on Research, Development (R&D) and Capacity Building to Support Renewable Energy Development in the Caribbean**. This Workshop was held at the Torarica Hotel in Paramaribo,

Suriname. The main source of funding for this event was provided by European Union under the CRECS Project being executed by the CARICOM Secretariat. Other supporting partners included the Organisation of American States (OAS), the German Agency for International Cooperation (GIZ) and NV

Energiebedrijven Suriname (NV EBS). Universities, Colleges and other tertiary Institutions involved in capacity building and/or research and development to support Renewable Energy were also represented. The event was attended by Assistant Secretary-General of the OAS, Amb. Albert Ramdin who addressed the workshop. The Keynote address was delivered by the Hon. Jim Hok, Minister of Natural Resources, Suriname. President of the Anton De Kom University, Dr. Ryan Sidin also addressed the meeting and co-chaired sessions.



Hon. Jim Hok, Minister of Natural Resources, Suriname, delivering the keynote address; Some of persons at the headtable include OAS Assistant Secretary-General, Amb. Albert Ramdin, President of Board of Anton de KoM University, Dr. Ryan Sidin and Programme Manager, Energy, Mr. Joseph Williams

The key objectives of the workshop were to:

- identify all existing and planned renewable energy research and development efforts (scope and focus), and programmes offered in the various Universities in the Region;
- facilitate dialogue towards a rationalized, strategic and coordinated approach to advancing research, development and capacity building to support RE development;

Research, Development and Capacity Building Workshop ...

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- establish a network among universities in CARICOM, as well as the wider Caribbean and beyond involved in RE research, development and training;
- identify currently available technical and financial assistance opportunities and support at the hemispheric and global levels to support RE initiatives; and
- identify mechanisms for establishing dynamic links between research and development efforts in university and industry for mutual benefits.

In general, the objectives were met and networks established among key stakeholders. Inter alia, it was identified that while some progress is being made,

significant scope exists for addressing R&D and capacity needs to support the quantum leap needed to advance RE in the Community.



Cross-section of the Workshop participants

Vice President of Suriname, H.E. Robert Ameerali addressing the Workshop during a brief visit to the Workshop to register his support

Roundtable on Development of a Geothermal Drill Risk Fund for the Caribbean Held October 2011



Geothermal development in the Eastern Caribbean has been identified as having the potential to significantly change the energy future, as well as future economic fortunes of the OECS sub- region. This has therefore been identified as an area of priority at the Regional level by CARICOM Energy Ministers who have charged the CARICOM Secretariat to do all possible to support geothermal developments in the relevant Member States.

*It is in this context that a roundtable dialogue was facilitated on 11 October 2011 (in Barbados) to begin the process of exploring with key stakeholders the establishment of a geothermal drill risk fund in the context of the recommendations of the Geo-Caribbes Project 2005. The signaling of the Government of France, through its Agency for Environment and Energy Management (ADEME), and the Regional Councils of Guadeloupe and Martinique of their willingness to support the establishment of a financing mechanism to support geothermal drilling in the Caribbean was the primary facilitating factor for this Forum. Inter alia, the key objectives and targeted outcome of this first dialogue towards the establishment of a *Caribbean Drilling Risk Fund for Geothermal Development* were to :*

1. Establish initial dialogue among key stakeholders from Government, private sector and Regional organizations that would facilitate an exchange of views on the status and direction of geothermal development and receive a presentation on the current options for addressing geothermal drilling risks;
2. Receive a presentation on some key practical elements and requisites for the successful establishment of a Caribbean Drilling Risk Fund for Geothermal Development, and to identify all key players and their roles;
3. Receive summary conceptual proposals from ADEME on options and approaches for the establishment of the proposed Fund given current financial market dynamics.

Key presentations were received from Mr. Mark Lambrides, Chief Energy and

Climate Change Mitigation, OAS; Mr. Chandra Shekhar Sinha, Lead Financial Specialist, World Bank; Mr. Philippe Laplaige, ADEME; and Mr. Jacques Chouraki, Teranov.

In general, the objectives were met and all agreed on the urgent need for such a Fund. The Meeting proposed that all necessary actions be taken expeditiously to move the process to the next stage in the context of the EU INTERREG Programme.

The following countries and institutions were represented: Antigua and Barbuda, Barbados, Dominica, Grenada, Montserrat, St. Kitts and Nevis, Saint Lucia, the French Agency for the Environment and Energy Management (ADEME), the Organisation of American States (OAS), the Regional Council of Guadeloupe and the World Bank (WB).

Caribbean Renewable Energy Forum - CREF 2011

Over 360 delegates from 39 countries participated in CREF 2011. It is considered that this was by far the biggest conference to date, emphasizing the growing significance of renewables to the Caribbean, and the role that CREF has come to play in facilitating vital dialogue between stakeholders. According to Conference Director, Matthew Perks, CREF is about more than just dialogue and this year's conference saw deals signed and new policy initiatives announced.

Sustainable Energy Workshop For Caribbean Educators: “Teaching Energy in the Schools” Convened under the CSEP Project



The Organization of American States (OAS) through its European Union funded Caribbean Sustainable Energy Program (CSEP) in collaboration of the Caribbean Association of Electric Utilities (CARILEC) conducted a two-day, regional sustainable energy workshop for Caribbean educators at the Coco-Palm Resort in Rodney Bay Saint Lucia on 22-23 September 2011. Among

the seventeen persons who participated in the training workshop were Government officials from the Ministries of Education, as well as teachers from primary and secondary schools from Antigua and Barbuda, the Bahamas, Barbados, Dominica, Grenada, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines.

One of the main activities of the CSEP Project is capacity building and awareness for public officials at the Ministries responsible for energy and climate change issues, as well as at the Ministries of Education.

The workshop provided educators from the seven islands with a unique opportunity to learn about the different sources of renewable energy, energy efficiency and energy conservation particularly in the context of the Caribbean. It also provided participants with an opportunity to review educational materials and participate in hands-on activities that would raise awareness and spread knowledge on the importance of renewable energies and the efficient and rational use of energy among primary and secondary school students. The workshop was lead by trainers from Egis International, Mr. Eaton Houghton, a certified energy auditor and Mrs. Alexandra Blason whose expertise is in Information and Communications.



Participants at the workshop

Solar Water Heating Workshop Held Dec. 2011



A key activity under the CRECS Project being executed by CARICOM Secretariat is a Consultancy aimed at developing a Regional Model for promotion of the Solar Water Heating (SWH) technology that is informed by the best practices of the Barbados and other Regional experiences. To this end, a Workshop was held on Thursday, 8 December 2011 at the Amaryllis Beach Resort in Barbados to garner stakeholders' input.

The Workshop was organized into three (3) sessions, and included a site visit that highlighted the SWH manufacturing operation on the island of Barbados. The site visit was preceded by a presentation on the Barbados SWH Experience and the intent was to link the details thereof with the “concept proof”. The general objectives of the workshop included, *inter alia*:

- Exploration of strategies to support an expansion of the manufacture and use of Solar

Water Heating systems in CARICOM Member States;

- Identification of effective, supportive legislative and regulatory frameworks for enhancing the expansion of Solar Water Heating systems *manufacturing and use* in CARICOM Member States;

- Analysis of the Barbados experience, thereby informing a suitable template for other CARICOM Member States; and
- Examination of the status and requirements for capacity building, product performance, and quality assurance along the value chain for Solar Water Heating systems in CARICOM Member States.



Regional Energy Awareness Workshop Held Dec. 2011

One component of the CRECS Project being executed by the CARICOM Secretariat is increasing Renewable Energy Awareness in CARICOM. To this end, a consultancy was established to develop a Model Energy Awareness Programme and train representatives from Member states in developing and implementing energy awareness strategies. As part of this process, a Workshop was held in Barbados on 12-13 December 2011 for the six countries targeted under the CRECS Project. The Sustainable Energy Technical Assistance (SETA) Project being executed by the OECS Secretariat also has as one of its objectives, to develop awareness strategies for CARICOM countries which are part of the OECS.

Study Tour to Germany, November 2011

Eight (8) delegates from Governmental agencies, utilities and sustainable energy projects within several CARICOM Member States benefitted from a Climate Change and Renewable Energy Study Tour to Germany in November 2011. The objective of the Study Tour was to provide CARICOM Member States with insights into the strategies adopted by Germany for the deployment of

renewable energy and for coping with the climate change phenomenon. Most of the participants were sponsored by the German Embassy in Trinidad and Tobago while Projekt-Consult, a German Company, coordinated all activities.

Among the places visited by the group were the *Energy and Climate Policy Unit at the Federal Foreign Office*; the

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety; *Berlin Energy Agency*; *German International Cooperation (GIZ)*; *IRENA*; *Yunicos – specializing in energy storage*; *Solarworld – manufacturer of various solar technologies*; *Ritz-Atro – manufacturer of Hydrodynamic Screws*.

CONFERENCE ON LATIN AMERICA AND THE CARIBBEAN – BERLIN, GERMANY, NOVEMBER 2011

Several key energy and climate change issues confronting the Region were discussed during a panel discussion on '*Climate and the Environment – the joint challenge*' that was held on 23 November 2011 in Berlin, Germany. This panel discussion was part of the overall Conference on Latin America and the Caribbean organized by the German Federal Foreign Office with the House of World Cultures and the Ibero American Institute as partners.



In picture from left: Mr. Mohammed Idries Taus – Suriname; Mr. Francis Daniel – LUCELEC; Hon. Johnson Drigo – Dominica; Ms. Maxine Nestor – CREDP/ GIZ; Ms. Madhavi Soerayadebie Ramdin – Suriname; Mr. Randy Maurice – Trinidad & Tobago; Ambassador Stephen Auer - Commissioner for Globalisation, Energy and Climate Policy at the Federal Foreign Office; Ms. Johanna Carsten – Projekt-Consult; Dr. Raymond Nurse – Grenada; Mr. Leighton Waterman – Barbados; and an officer from the Federal Foreign Officer (partly hidden).

AVIATION INCLUDED IN EU EMISSIONS TRADING SCHEME

In December 2011, the European Court of Justice (ECJ) ruled that the inclusion of aviation in the European Union Emissions Trading System (EU ETS) was indeed valid. The airline industry, particularly in USA, has been pushing to reverse an earlier decision by the EU to include the aviation sector under the cap and trade scheme which has been in effect for the power sector, as a part of its Climate Change Mitigating Strategy. The matter was taken to the ECJ.

Under the EU scheme, which will take effect from 1 January 2012, all airlines - regardless of nationality are required to surrender emission permits for intra-EU flights, as well as flights to and from the EU bloc. For inter-regional flights, emissions are calculated for the entire last 'leg', which naturally results in higher

costs for transatlantic and other long-distance flights.

Despite much opposition from the airline industry worldwide and in particular, the USA, Brussels insisted that the inclusion of all airlines was key to the scheme's success, specifically for reducing possibilities of carbon leakage. Otherwise, the reduction of emissions by EU airlines could potentially be offset by an increase in emissions from non-EU airlines. Airlines that do not comply with the EU ETS could potentially be banned from EU airports. This development indicates the extent to which the fight against Climate Change will affect all aspects of our lives especially how energy is used.



OUTCOME DURBAN CLIMATE CHANGE CONFERENCE, COP-17

Notwithstanding what some would describe as a somewhat low-keyed, COP 17, when compared with Copenhagen 2 years ago, the Durban Climate Change Conference appeared to have delivered on some important aspects, which all have potential positive implications for sustainable energy development in CARICOM SIDS, viz:

- It wrapped up much of the remaining work to elaborate the Copenhagen/Cancun process, by adopting the governing instrument of the new Green Climate Fund and transparency rules for both developed and developing countries pledges.

- It agreed to extend the Kyoto Protocol by another 5–8 years. Although the emissions targets for Kyoto's second

commitment period still need to be worked out and the formal amendment will not be adopted until next year, the basic political decision to extend the Protocol was made in Durban.

- It agreed to launch a new negotiating process to develop a “*protocol, another legal instrument, or agreed outcome with legal force*” that addresses the post-2020 period and is “*applicable to all Parties*”.

This outcome was made possible by a careful compromise that gave BASIC countries (Brazil, South Africa, India and China), on one side, a 2020 start date for the new agreement and gave the EU, small island states and least-developed states, on the other side, early start and end dates for the negotiations (the negotiations will

begin next year and conclude in 2015) and language that the result of the new negotiations would be an “*outcome with legal force*”.

For the CARICOM energy sector, one issue of immediate relevance and particular importance is the extension of the Koyoto Protocol. This means that there is a new lease of life for the Clean Development Mechanism (CDM) which is still viewed as holding significant potential for encouraging the deployment of clean, low carbon and renewable energy technologies in the Region. Also, the Region hopes to benefit from resources under the Green Climate Fund for technology transfer and general transformation of energy systems.

SIDS-DOCK's Developments

JAPAN Contributes US\$15M to SIDS-DOCK

The Government of Japan has announced a \$15 million grant to support clean energy efforts by Small Island States.

The money targets the SIDS-DOCK partnership, an initiative that was launched last year at the UN Climate Conference in Cancun with a pledge of \$14.5 million from the Danish Government. Speaking at the signing, Naoko Ishii, Deputy Vice Minister of Finance for International Affairs and

Special Advisor to Japan's Minister of Finance for Global Environmental Affairs, said, “*We are very pleased to join the epoch-making SIDS-DOCK programme, which can be a game-changer for small island states that are facing the immediate threat of climate change.*” The SIDS-DOCK partnership, which was created by the Alliance of Small Island States, the World Bank and the United Nations Development Programme, provides financial and

technical support for small island countries to improve their green energy efforts. “*The Partnership generates a triple win for small islands*” said Michelle Gyles-McDonnough, UN Resident Coordinator and UNDP Resident Representative for Barbados and the OECS. She further stated that, “*The SIDS-DOCK partnership will not only help to increase energy independence and build resilience for these nations, but it will also allow them to lead — to demonstrate innovative mitigation strategies in the face of resource constraints.*”



Belize Selected As Headquarters For SIDS-DOCK

Based on their proposal, Belize was adjudged by the evaluation team as submitting the best Expression of Interest (EOI) and was awarded the Host Country for SIDS DOCK by the Steering Committee at its 8 December 2011 meeting. At the meeting, Samoa was also designated as the Pacific Regional Office of SIDS DOCK.

RE Technology Brief

Editor's Note: One of the key objectives of **E Energy** is to promote sustainable energy development in CARICOM in response to the adverse energy situation for many Member States, as well as the importance of sustainable energy to environmental sustainability. Renewable Energy (RE) is considered to hold significant potential for many Member States to improve their energy security and reduce their carbon footprint. One of the challenges with deployment of RE for power generation to the electricity grid has been the issue of intermittency in supply (sun does not shine all time nor does wind blow all the time) especially for the ubiquitous RE resources of solar and wind. In general, this issue affects grid stability as well as the reliability of supply and results in a situation where it is generally NOT feasible to have these sources (wind and solar) making up more than approximately 25% of the total energy mix. The development of energy storage systems for renewable energy sources of particular interest, especially to small isolated grids, as this is a characteristic of electricity supply in CARICOM Member States. In this issue of **E Energy**, we feature one such storage system in an advanced state of development. This technology was presented to the group of CARICOM Representatives during the Study Tour in Germany in November 2011. This feature should not be construed as an endorsement of this product by **E Energy** or the CARICOM Secretariat but considered as relevant and useful information. Readers are encouraged to carry out their own investigations.

MEGAWATT Range Energy Storage for Renewable Energy Systems

“Switching off the Generator – the Stable Operation of Sustainable Island Grids in the MW Range Using Renewable Energy and Energy Storage”

YOUNICOS AG (Y-AG) developed a storage-based system that for the first time ever) allows an electric grid to be based on up to 100 percent renewable generated energy from wind or solar or other intermittent RE sources. Y-AG indicates that their system will guarantee

a stable supply of electricity even at night and during periods of no wind, and already commercially viable today, beating most diesel-based systems over its 20-year life-span.

Following a successful demonstration of the technical feasibility of the system to the local power utility and the Portuguese regulator in the Younicos island test bay in Berlin-Adlershof. Y-AG will start implementing the system on the Azorean

island of Graciosa (3 MW peak load) in 2012. Using a 3 MW /18 MWh NaS (Sodium-Sulphur) battery and an intelligent control system developed by



Busso v. Bismarck
YOUNICOS, Germany

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OUR PLANET Opens in Saint Lucia

Our Planet, a new, interactive information and education centre for the Caribbean was opened in Saint Lucia in mid 2011. This is considered to be an innovative and interesting development which is useful for aiding energy and environmental awareness targeting both nationals of Saint Lucia and visitors alike.

E Energy considers Our Planet a useful visual aid in understanding the impact of energy supply options and environmental awareness.

Using cutting-edge technology, Our Planet features the largest mirror-sphere in the world displaying a kaleidoscopic view of life on Earth; an Energy Game where players decide on the power supply for a futuristic city; Science on a Sphere installed by NASA/NOAA which displays data downloaded directly from NASA satellites on which the latest weather systems can be viewed, volcanic

eruptions, earthquakes and tsunamis as they happen, as well as, a range of pre-recorded films about the planet; a hurricane game where one can programme a hurricane; a special effects theatre where visitors experience some effects of climate change including a hurricane, tsunami, heavy rainstorms and droughts.

utilizes energy efficiency technologies and renewable energy sources to power its operations.

Our Planet is the first Centre of its kind in the Caribbean. It was funded primarily by the German Government (GIZ/BMZ) with support from other sponsors. It operates exclusively with Light-emitting diode (LED) lighting to highlight energy efficiency.



Other features of the Centre include a number of large touch-screens with a range of other “learning” games focusing on biodiversity (turtles, iguanas and other endangered species), energy efficiency and renewable energies, electronic postcards and short videos made by local environmentalists. The Centre also

Our Planet which is conveniently located at La Place Carenage, one of the two cruiser terminals in Castries and occupies two floors of the building, was founded by Pablo Rosenthal and Sarah Adams who have between them 35 years of experience in the fields of sustainable development, renewable energies and support for small and medium enterprise. For more information, contact Sarah (sarah@ourplanetcentre.org) or Pablo pablo@ourplanetcentre.org, or call the ticket office on 1 (758) 453 0107.

MEGAWATT Range Energy Storage for Renewable Energy Systems

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YAG, we can smooth the fluctuating electricity generated by 9.8 MW wind turbines and a 1 MW photovoltaic unit. The 4,700 inhabitants of Graciosa will be able to cover 75 percent of their annual electricity needs from renewable energies (wind and sun).

A combination of storage management, intelligent power electronics and the development of a top-level energy management system can replace any diesel-centred system. Powerful computers in the battery inverters control the frequency and voltage with speed and accuracy. This allows the inverter to take over the function of the controlled voltage



NaS Battery

source. The battery inverters are key, since these are responsible for the instantaneous power balance and compensate for fluctuations by charging and discharging the battery. The resulting deviation from the nominal frequency, which is determined by the operating state of the battery, is visible in the entire grid and indicates the amount of available energy in the grid. Other participants in the grid can react accordingly. Moreover, an energy management takes into account other factors such as weather and load forecasts, guaranteeing long-term supply security and battery management

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UPCOMING EVENTS

Renewable Energy Financing Workshop – March 2012, Jamaica

A training workshop aimed at strengthening the capacity of existing and potential Renewable Energy Project developers and sponsors is scheduled for 14-15 March 2012 in Jamaica. Nominations are invited from interested persons in CARICOM Member States. This is being staged as one of the activities under the EU funded CRECS Project.

C-SERMS Platform Meeting – March 2012, Guyana

The First Meeting of the C-SERMS Platform is scheduled to be held during the first quarter of 2012.

Sustainable Energy For All Conference – 16-18 April 2012, Barbados

During the year, 2012, the International Year of Sustainable Energy for All, the UN General Assembly has called on its member states, the UN system and all actors to raise awareness and promote action towards sustainable energy for all.

The UNDP has indicated that given its role in addressing universal energy access and support to the SIDS DOCK initiative, it will be hosting a conference in Barbados, to bring together SIDS

Governments, UN Agencies and other development partners to elucidate the SIDS perspective on sustainable energy for all. The conference is proposed to pursue three interlinked objectives, viz: i) Establish awareness and understanding of SIDS conditions and perspectives on sustainable energy for all (SEFA); ii) Articulate SIDS commitment to support SEFA; and iii) Convey SIDS support of SEFA as a potential Sustainable Development Goal.

THIRD CARIBBEAN SUSTAINABLE ENERGY FORUM (CSEF III) - September 2012, St. Kitts & Nevis

The biennial Caribbean Sustainable Energy Forum (CSEF) which traditionally has been organized by CREDP/GIZ and the CARICOM Secretariat, is scheduled to be held in September 2012. However, the CARICOM Secretariat will take lead role in organizing this event given the scheduled conclusion of the CREDP/GIZ Project in 2012 and the platform it provides for the Secretariat to articulate the regional energy sector agenda, in particular, its development dimension.

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