



CARICOM SECRETARY-GENERAL (AG) ENVISAGES MORE IMPORTANT ROLE FOR RENEWABLE ENERGY

Editor's Note: The following is an excerpt from the Remarks made by Ambassador Lolita Applewhaite, Acting Secretary-General of the Caribbean Community (CARICOM) at the Opening of the Ministerial Session of the Thirty-Fifth Special Meeting of the Council for Trade and Economic Development (COTED) (Energy) held at the CARICOM Secretariat's Headquarters, Georgetown on 24 March 2011.

It gives me much pleasure to welcome you to this Thirty-Fifth Special Meeting of the Council for Trade and Economic Development (COTED), which is devoted to Energy. This is indeed a special COTED as there has not been a meeting of Caribbean Community (CARICOM) Energy Ministers for a long time – our records show that this has not happened in more than two decades.

This meeting is particularly timely in view of the recent surge in oil prices to a peak of US\$117 per barrel (the highest since

2008), following a steady upward trend over the last year. This latest surge comes in the wake of continuing unrest in the Middle East and North African Region, especially the turmoil in Libya.

There is no doubt that the cost and supply of energy are urgent items on the global economic agenda and by extension on the agenda of CARICOM. Movements in oil prices are exacerbating the hike in food prices, through increased fertiliser, irrigation and transportation costs and even as we meet today, the impact of the earthquake-damaged nuclear power plants in Japan and the reported leaks of radioactive gases may cause a re-thinking of world energy policy.

Nuclear energy which is deemed a clean energy source, given its role in reducing carbon emission through replacing other high emission energy sources, is targeted to provide *significant contribution going forward*. If the projected contribution from nuclear energy to the global energy



Ambassador Lolita Applewhaite, Secretary-General (Ag), CARICOM

supply mix is rolled back, then the question may be raised as to what will fill this void.

Natural Gas is considered to have an important role going forward, especially in light of the abundant discoveries globally. It is also regarded as a clean energy source which can contribute to Climate Change Mitigation.

It appears that renewable energy will have to play an even more important role than originally contemplated as we go forward. In fact, all CARICOM countries have already recognized the need for developing their renewable energy resources towards diversifying their energy matrix for improved energy security, ensuring the production of cleaner energy and for improved climate compatibility.

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Global Challenges, Regional Energy Sector Impacts

by Joseph Williams - Programme Manager, Energy



Joseph Williams, Programme Manager, Energy

Turbulent First Quarter for Energy:

From all perspectives, the first quarter of 2011 can be described as a most turbulent period for the Global Community, as well as the CARICOM Energy Sector. In trying to guess the fortunes of world oil price in 2011, the ominous signs from the increasing trends were noted in the

previous issue of **E-energy**. However, it was never anticipated that we would see such steep movements in prices in the global oil market in such a short time frame. It is now well known that the surge in oil prices of more than 25% between the start of the year and the end of March is linked to the unrest and turmoil in Middle Eastern and North African countries.

Then, just as the global economy was trying to come to terms with the implications of this rapid movement in oil price, on 11 March 2011, the triple tragedy of the earthquake, tsunami and nuclear disasters struck in Japan, the world's third largest economy. This recent disaster in Japan occurred only some 14 months after the January 2010 massive earthquake in Haiti. Even as CARICOM mourns the loss of lives and property in Japan, as communicated by the acting Secretary-

General of CARICOM, it is recognized that the disasters have far reaching implications for the global economy, the Region and the CARICOM energy sector. There are signals that the impact of the radiation leaks of the crippled nuclear plants at Fukushima, Dai-ichi is causing curtailment of current and planned contributions of nuclear power to the global energy supply. Germany has moved swiftly to close seven nuclear reactors of similar design to those involved in Japan's disaster notwithstanding that the latter were considered

safe up to mid-March 2011. In the USA (which has the largest number of nuclear plants), there are also increasing calls to shut down plants of similar design to those damaged in Japan.

The likely net effect in the short to medium term is additional upward pressure on oil prices. Such a situation could in turn potentially threaten the nascent global economic recovery. A rule of thumb is that a 10% rise in the price of oil trims 0.2% from global growth (*Economist Magazine*). This threat is also heightened by the fact that Europe's sovereign-debt crisis (while less acute) still prevails. Inter alia, there is still much concern about the prospect of the long expected bailout for Portugal and possible write downs of Irish bank debt. The prospect of a return to global recession remains worrying for the fragile economies of CARICOM countries.

Damaged Nuclear Reactor and Climate Change:

Another far reaching implication of the Japan nuclear incident is the impact on Climate Change Mitigation efforts. It is fair to say that the images out of Japan now present nuclear power as being even more dangerous and risky than previously considered, consequently leading to this source of power becoming unpopular and expensive. Some analysts are even beginning to consider a world energy supply scenario with diminished contributions from nuclear power. They even argue that it can be replaced '*with no huge structural shifts in the way the world works*'. However, the contribution from nuclear power to the world's electricity generation (which now stands at 14%) was projected to save about 2 billion tonnes of carbon dioxide by 2020 (approximately the total annual emissions of electricity

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Territory	No. of Plants Operational	Under construction or planned	Percent of Electricity Generation
WORLD	443	220	14.0%
USA10	410	10	20.2%
FRANCE	58	2	74.1%
JAPAN	55	14	28.9%
RUSSIA	32	24	17.8%
S/KOREA	21	11	31.1%
INDIA	20	23	2.9%
UK	19	4	17.9%
CANADA	18	5	14.8%
GERMANY	17	0	26.1%
CHINA	13	77	1.9%
CZECH REP	6	2	33.2%
FINLAND	4	1	27.3%

Source: Nuclear Energy Institute

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The Government of Guyana as part of its Low Carbon Development Strategy is pursuing development of the 150 Megawatt Amalia Falls Hydropower plant. Barbados is well known for its solar water heating industry but its advancement towards a sustainable energy framework is also noteworthy.

Madame Chair, Honourable Ministers, Delegates, Ladies and Gentlemen, I challenge us to see how we can leverage the energy sector advantages in both fossil and renewables to advance our development, through such approaches as cross border integration of energy systems, encouraging participation in downstream energy sector industries and implementation of regional strategies to support capacity development in the sector.

We no longer have the luxury of just tinkering. We must find ways as individual Member States and collectively as a Community, to develop concrete and effective strategies that will change the landscape towards a diversified energy matrix. We must significantly improve efficiency of use and increase the contribution from renewable energy.

In that regard, the establishment of a CARICOM Energy Policy will be instrumental. It is envisioned that this Policy will carefully balance the interests of all Member States to ensure the overall good of all. As you are aware, the advancing of the CARICOM Energy Policy towards finalization is a significant agenda item for this Meeting.

Finally, I wish to thank our developmental partners who are active in the energy sector of the Region, especially in the area of sustainable energy development. In this regard, we recognize the role of the Government of Germany through the German Agency for International Cooperation (GIZ), especially in support for Caribbean Renewable Energy Development Programme (CREDP) which was implemented jointly with the United Nations Development Programme's (UNDP's) support, and which has been a watershed renewable energy programme. CREDP has also stimulated many of the sustainable energy developments now taking place. We note with thanks, their part sponsorship of this Meeting. We further thank the Government of Germany for its

commitment to provide support in the amount of 4.5 Million Euros for the implementation of a sustainable energy strategy within all of our Member States through the CARICOM Energy Programme.

The Inter-American Development Bank (IDB), apart from providing some sponsorship for the hosting of this Meeting, has provided significant grant support for the Secretariat's Energy Programme, in funding important studies and supporting development of the regional strategy. Other partners, including the European Union, have been also supportive with regional projects such as the Caribbean Renewable Energy Capacity Support (CRECS) Project.



Global Challenges, Regional Energy Sector Impacts


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generation in Germany and Japan combined). According to the United Nations Environmental Programme (UNEP), even with countries taking the most ambitious actions by 2020 (as outlined to the UN) for the world to be on track for a reasonable chance of limiting increases in global temperature to less than 2°C, there is still an emission gap of 5 billion tonnes after counting the contribution from nuclear power. It appears that the world would be a lot warmer without an increased contribution from nuclear power generation. This is tragic

news for Small Island and Low-lying Coastal Developing States like those of CARICOM which are most vulnerable to the effects of Climate Change.

On the whole, based on the experience of the first quarter of 2011, it appears that the year ahead is shaping up to be another challenging one. On balance, it appears that *net oil importing countries* like most of those in CARICOM will suffer most.

Special COTED on Energy: Although the 35th Special Meeting of the Council for

Trade and Economic Development (COTED) on Energy held on March 22 and 24, 2011 was planned before the full emergence of the impact of the aforementioned recent global headline events, these developments formed a sobering backdrop for this Meeting of CARICOM Energy Ministers to advance the Regional energy agenda. Given the importance of this Special COTED on Energy to Regional energy sector developments, we are pleased to bring you some highlights of the Meeting in this issue of .

Highlights of the 35th Special Meeting of the Council for Trade and Economic Development (COTED) (ENERGY)

During the week of March 21, 2011 the Caribbean Community (CARICOM) Secretariat convened the 35th Special Meeting of the Council for Trade and Economic and Development (COTED) (Energy) at the CARICOM Secretariat in Georgetown, Guyana. The Meeting of Senior Energy Officials was held on March 22, 2011 and the Ministerial Meeting was held on March 24, 2011. Prior to this, a Meeting of CARICOM Ministers with responsibility for energy had not been held since 1983. This Meeting was therefore deemed a significant step in advancing Regional energy sector development matters. Further, this meeting was held in the context of the surge in world oil prices caused by political unrest in North African and Middle Eastern countries.

Some key items for consideration and decision at the meeting included the advancement of the CARICOM Energy Policy, discussion on the regional energy pricing study, the region's support for important energy sector developments such as geothermal in the Eastern Caribbean, the approach to the development of the Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS), and general discussions in relation to significantly advancing the deployment of renewable energy and improving energy efficiency as a key response to rising oil prices.

Opening Session

Remarks made at the Opening Session of the Meeting by the Honourable Samuel Hinds, Prime Minister of Guyana, under whose portfolio energy falls; Senator the Honourable Joanne Massiah, Minister of State within the Ministry of Legal Affairs in Antigua and Barbuda and Chairperson of the Ministerial Meeting; and Ambassador Lolita Applewhaite, Acting Secretary-General of CARICOM, set the tone for the Ministerial Session. Prime Minister Hinds commended the

programmatic approach adopted by the CARICOM Secretariat to support energy sector development in the Region. He noted some of the achievements made by Guyana towards diversification of the country's energy matrix. These achievements include development of the Amaila Falls Hydroelectric Project that will add 154 MW to the national grid, thereby significantly transforming the electricity sub-sector from 100% fossil fuel use to 100% use of renewable energy

urged that decisive action be taken on the finalization of a CARICOM Energy Policy that places importance on alternative energy options and technology.

In her remarks, Ambassador Lolita Applewhaite, Acting Secretary-General of CARICOM, warned of the negative impacts of rising world oil prices on the economies of CARICOM Member States and the consequential impact on food prices. While noting some of the progress



The Honourable Samuel Hinds, Prime Minister of Guyana (2nd from left) addressed the Opening Session of the Ministerial Meeting of the 35th Special COTED on Energy held at the CARICOM Secretariat Headquarters on March 24, 2011.

source. He also cited Government's approval of a Power Sector Policy, Agro-Energy Policy and the country's leadership in the reduced emission from deforestation and degradation through its Low Carbon Development Strategy.

Senator the Honourable Joanne Massiah called for the strengthening of functional cooperation and the coordination of policies in the Region, particularly in light of the unfolding events in Libya and Japan. She posited that the recent increases in food prices signified a correlation between food prices and the escalation of fuel prices resulting from conflicts in the Middle East and North Africa. These, she stated were manifesting in inflationary pressures and a rise in cost of living. In view of these challenges, she

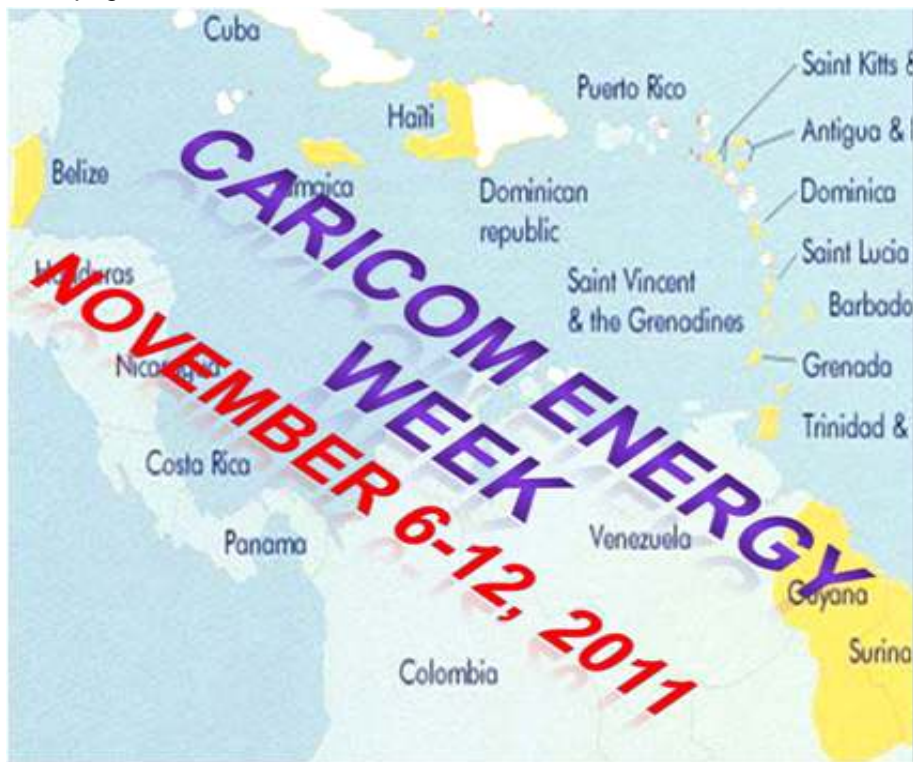
being made by Member States and the support of the international development community in their efforts to diversify energy matrices, she called for urgent actions for the further development of concrete and effective strategies that would contribute to transforming the energy landscape in being less dependent on imported petroleum and petroleum products. (See Front Cover for excerpts of the Remarks made by the Acting Secretary-General of CARICOM to the COTED Energy Meeting).

CARICOM Energy Week

The 35th Special Meeting of the COTED on Energy endorsed the recommendation made by Officials at the Launch and

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Operational Planning Meeting for Sustainable Energy Initiatives, held in January 2011 in Barbados, for the designation of an annual CARICOM Energy Week. The Special COTED (Energy) agreed that the first annual CARICOM Energy Week would be held during the week of 7 November 2011, and thereafter on an annual basis during the second week of November. The objective of the CARICOM Energy Week is to raise awareness on energy in general and the critical importance of energy to sustainable development, including Climate Change. The CARICOM Secretariat was mandated to coordinate support from existing Regional projects to assist Member States in staging the CARICOM Energy Week at national levels.

Other Key Decisions

The Meeting of the Special COTED on Energy underscored the need for Governments to take urgent actions at the national level and in addition, for a regional approach to addressing the challenges posed by the recent surge in oil prices.

The Meeting noted that since the draft CARICOM Energy Policy was presented to the Conference of Heads of Government in 2007, a number of significant

developments impacting the energy sector have taken place at the global, regional and national levels. One of the key conclusions reached at the meeting was the need for the draft CARICOM Energy Policy to be revised to reflect evolving developments since the policy was drafted in 2007, so as to incorporate the priorities of Member States. This includes increased emphasis on the exploitation of renewable energy sources available to the various Member States, particularly geothermal developments being pursued by several Eastern Caribbean countries. The Meeting established the procedure for finalization of the CARICOM Energy Policy and recommended that the policy should be revised for submission to the Thirty-Second Meeting of the Conference of Heads of Government of CARICOM scheduled for July 2011 or alternatively that an update be provided to the Heads. The revised CARICOM Energy Policy will take account of comments from Member States. The Policy will also examine the issue of energy systems integration within CARICOM.

The Meeting received and noted the findings of the regional energy pricing study which was conducted with support from the Inter-American Development Bank (IDB) and which examined the structure, formation and build up of the

price for natural gas and liquefied natural gas. The key recommendations endorsed include the need for a review of the approach currently used in many CARICOM countries for the pricing of petroleum and petroleum products and its impact on fuel prices, viz, the posted pricing system. A Working Group comprised of representatives from Antigua and Barbuda, Barbados, Grenada, Jamaica, and Trinidad and Tobago was established to conduct this review. The issues related to trade in natural gas were still not resolved even after very active discussions on the results of the energy pricing study. It was determined that further clarification of some issues was necessary.

The Meeting of the Special COTED on Energy mandated the CARICOM Secretariat to continue to mobilize support for sustainable energy developments identified by Member States. The Meeting also endorsed the approach to be taken by the CARICOM Secretariat to develop the CARICOM Sustainable Energy Roadmap and Strategy (C-SERMS) as mandated by the Twentieth Inter-Sessional Meeting of the Conference of Heads of Government. The C-SERMS will establish sustainable energy targets, strategies and actions at the Regional level and implement the sustainable energy goals of the CARICOM Energy Policy. Several tools, including a regional energy model balance framework and a broad-based Platform for multi-sector stakeholders' engagement and decision making, will be utilized during the elaboration of the roadmap and the establishment of regional targets and strategies for sustainable energy matters.

The integration of energy systems through cross-border electricity transmission based on geothermal power in the Eastern Caribbean, as well as natural gas transmission was endorsed as an important development that should be supported. Energy integration was recognized as having near-term potential for positively impacting the energy situation in CARICOM. Member States were also urged to take advantage of opportunities for the energy sector provided under various initiatives such as, the Energy and Climate Partnership of the Americas (ECPA) and the SIDS-DOCK Mechanism.



MINISTER WITH RESPONSIBILITY FOR ENERGY – Part 5

INTERVIEW WITH THE HONOURABLE CAROLYN SEEPERSAD-BACHAN, MINISTER OF ENERGY AND ENERGY AFFAIRS, TRINIDAD AND TOBAGO



Honourable Carolyn Seepersad-Bachan, Minister of Energy and Energy Affairs, Trinidad and Tobago

Energy *What would you say is the biggest challenge facing the energy sector in Trinidad and Tobago today?*

Minister: The biggest challenge facing the Energy Sector in Trinidad and Tobago has been that of getting the upstream sector going again.

As you may be aware, Trinidad and Tobago's crude production declined from 144,000 barrels of oil per day in 2005 to 100,000 barrels of oil per day in 2010. To a large measure, this was due to a lack of exploration and the inability of my predecessor to complete bid rounds that would have seen oil and gas companies looking for more oil. It has also meant that some projects in the downstream side cannot be approved because of concerns for the availability of natural gas. It is therefore necessary to get the upstream side going.

The Government of Trinidad and Tobago has been able to do that with the successful completion of a shallow water bid round in which four blocks were awarded and in which there will be at least six wells drilled. In addition, our state owned

Petrotrin is drilling 21 wells this year alone to increase crude production, and by next year we expect to add another 8,000 barrels of oil per day to our production.

In many instances we are not looking for oil, we are merely drilling wells in areas where we have confirmed the presence of oil so as to increase our crude production. Additionally, we have gotten five bids on three blocks in our deep water from the world's major players and will very soon be awarding those blocks.

We believe that there are huge petroleum reserves in our deep water and are finally going to begin drilling there. So it's been our greatest challenge but we have made significant progress in getting there.

Energy: *It has been observed that Government of the Republic of Trinidad and Tobago through your Ministry has been pursuing the development of renewable energy and energy efficiency policies to the extent that a number of incentives have been announced in recent times. Some people may ask, why should Trinidad and Tobago go this route, given the country's vast hydrocarbon resources? What would be your response and what has been the general reaction of the public this development?*

Minister: There is no doubt that Trinidad and Tobago has been blessed with significant hydrocarbon reserves. Trinidad and Tobago is one of the oldest oil producers in the world having been in the business for over a hundred years. We are one of the leaders in the production and export of Liquefied Natural Gas, and in fact, this country is the one that really brought LNG back into the play by being able to export natural gas to the US at a

price that was competitive with gas coming out of Canada. It is our energy sector that accounts for 45 percent of our Gross Domestic Product and 63 percent of our foreign exchange reserves.

Since coming to office, the Government of the People's Partnership has spent a lot of time focusing on recovery and growth of the upstream sector in order to facilitate significant uptake in exploration activity and hopefully, the discovery of additional reserves. We recognize, however, that oil and gas are finite resources, and in that regard, as a country we have a responsibility to do two things, viz, to conserve the use of our resources and to exploit our renewable energy resources which countries in the Caribbean like us are blessed with.

We also realize that (we in) Trinidad and Tobago can use some of our revenues from the energy sector to invest in the renewable energy sector. In that respect, the Government took a decision to introduce and implement a series of measures including significant tax incentives to encourage people to take advantage of renewable energy. We have also embarked on a survey of all our Petrochemical facilities to ensure that they are operating as efficiently as possible and we have offered incentives for greater energy efficiency among households.

We are involved in projects to introduce RE technology in some of the country's public housing projects as well as our schools and community centres. We are literally at the start of the process but my Ministry has been and will continue to be aggressive in our efforts to have RE as part of our energy matrix and the message is now getting out. We believe the population will get on board because this is where the future lies.

Energy: *At the recently concluded 35th Special Meeting of the Council for Trade and Economic Development, CARICOM Energy Ministers inter alia, took steps to advance the*

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CARICOM Energy Policy as well as steps to advance the strategic approach to sustainable energy development. How important do you consider this regional approach to energy sector development?

Minister: The regional approach to energy sector development within CARICOM is extremely challenging, however it is critical to the long term sustainable development of the economies of the Member States.

This process had its genesis at the Fourteenth Inter-Sessional Meeting held in February 2003 when CARICOM Heads of Government (HOG) agreed to establish a Task Force to develop recommendations for a Regional Energy Policy. The major issues identified within the mandate of the Task Force were security of energy supplies, energy pricing policy and its impact on competitiveness in the CARICOM Single Market and Economy (CSME), and purchasing and transportation arrangements. This mandate was further expanded to incorporate issues which may be considered as being essential to the sustainable development of the region, viz, issues relating to natural gas, renewable energy, energy efficiency, environmental impact and investment requirements. The Task Force submitted its draft report in 2007.

Economic development, growth and quality of life within any country are inextricably tied to the availability and access to adequate energy resources. This relationship is a well established fact which cannot be challenged. It follows therefore that the sustainable development of the CARICOM Member States is closely linked to the successful implementation of plans, programs and policies which adequately address the major issues that impinge on the development of the energy sector in the region. Herein lies the challenge.

The Caribbean Community comprises a number of distinct islands, each with sovereign democratically elected Governments, each having developed independent energy policies to match its particular resource availability, national priorities and development growth paths. Wide variations also exist in terms of energy pricing policies, regulations and

standards, technology choices, levels of industrialization, infrastructure, national income levels, etc.

The recently held Special Meeting of the COTED on Energy represented one important step in the approach to finding common ground on energy sector issues and promotion of areas for cooperation, identification of institutional impediments, and for seeking solutions to the obstacles which could hinder

and endorse the Caribbean Sustainable Energy Road Map and Strategy (C-SERMS) which is a valuable planning mechanism and communication tool for establishing a link between individual country priorities and the renewable energy policy goals of the CARICOM region as a whole. Another regional approach, which is expected to provide avenues for regional synergies in the energy sector, is the SIDS DOCK –Opportunities for Financing Sustainable



Consultation on Energy Policy in Trinidad

sustainable development of the region as a whole. Trinidad and Tobago is unreserved in its support of these initiatives.

In fact, at the Eighteenth Meeting of the Conference Heads of Government of CARICOM in 2007 in St. Vincent and the Grenadines, it was agreed that the Draft CARICOM Energy Policy should explicitly address the fundamental issues of pricing and relative competitiveness of natural gas within the region. It is quite clear that the long term sustainable development of the region is closely linked to the ability of the region to enhance its available renewable energy resources which is key to long term energy security. In this regard, I wish to mention

Energy in CARICOM which is a Small Island Developing States (SIDS) institutional mechanism established to facilitate the development of sustainable energy programmes. It is expected that these two initiatives will provide a basis (amidst the diverse needs of the individual Member States) for ensuring regional energy integration and a sustainable approach to energy sector development in the region.

In conclusion, I wish to reiterate that Trinidad and Tobago is committed to playing a very active role in the regional energy sector development process.

Thought for the Quarter

We can't solve problems by using the same kind of thinking we used when we created them - Albert Einstein

Regional Sustainable Energy Initiatives Launched:

The Caribbean Renewable Energy Capacity Support (CRECS), Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS) and the Sustainable Energy Technical Assistance (SETA) Projects were launched on 24 - 25 January 2011 in Barbados. This launch was sponsored by the European Union and the Inter-American Development Bank

One of the key functions of the CARICOM Secretariat's Energy Programme is to facilitate energy sector coordination towards achieving maximum benefits for



Senator the Honourable Darcy Boyce, Minister with responsibility for Energy in Barbados (left), makes a point to CARICOM Secretariat's Representatives Ambassador Irwin LaRocque, Assistant Secretary General Trade and Economic Integration (right) and Mr. Joseph Williams, Programme Manager, Energy (centre) at the Launch and Operational Planning Meeting for Sustainable Energy Initiatives.

Member States. It is against this background that the CARICOM Secretariat staged the Launch and Operational Planning Meeting for three Regional sustainable energy initiatives which are being implemented for the benefit of the Community. These initiatives are: **i) the Caribbean Renewable Energy Capacity Support (CRECS) Project** funded by the European Union (EU) and being executed by the CARICOM Secretariat; **ii) the Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS)** with initial funding from the Inter-American Development Bank (IDB) and being executed by CARICOM Secretariat; and **iii) the Sustainable Energy Technical Assistance (SETA) Project** funded by the Caribbean Development Bank (CDB) and being executed by the Organisation of Eastern Caribbean States (OECS) Secretariat.

Given the operation of other Regional initiatives such as the **Caribbean Renewable Energy Development Programme (CREDP/GIZ)**, the **Caribbean Sustainable Energy**

Program (CSEP), and the **Energy and Climate Partnership (ECPA)** being facilitated by Organization of American States (OAS), it was necessary to foster information sharing among these projects, to provide a better understanding of how the activities of the projects would interrelate.

The keynote address was presented by Senator the Honourable Darcy Boyce, Minister in the Office of the Prime Minister with responsibility for Energy in Barbados. In his address, the Minister pointed to the need for increased diversification of the Region's energy supply, and noted that there must be commitment to a focused objective for the greater utilization of renewable energy. This, he noted, would necessitate

Governments' offering bold packages of fiscal incentives, promoting local and regional entrepreneurial spirit, and encouraging an investment climate where appropriate levels of resources are made available for renewable energy projects. He cautioned however, that given the fiscal difficulties that most of our Governments face, there is a need to be realistic and recognise that the approach may need to be a gradual one.

The Minister indicated that Barbados is seeking to replicate the country's success in the solar water heater industry in other areas of renewable energy (RE), energy efficiency (EE) and conservation. He noted that Barbados, with the

assistance of the IDB, had recently completed a study for the preparation of a National Sustainable Energy Framework which will unlock economically viable RE and EE investment projects that will reduce that country's dependency on fossil fuels, reduce energy costs, improve energy security and enhance environmental sustainability. He stated that Barbados is aiming to substantially improve its energy mix in the next twenty years, so that renewable energy generation could account for 29 percent of electricity consumption. While acknowledging that this would entail significant improvement in energy efficiency, the Minister stated that the Barbados Government plans to implement a number of initiatives and incentives packages to support the achievement of this goal. These range from policy and legislative reform to promote RE and EE, the establishment of Smart Energy Fund to support RE project development, the phasing out of incandescent light bulbs, the distribution of compact florescent lamps (CFLs) and energy monitors, energy efficiency and



Delegates at the Launch and Operational Planning Meeting for Sustainable Energy Initiatives

conservation in the Government sector, as well as, the introduction of RE generation in public sector buildings and schools. These efforts will require strengthening of institutional and individual capacities.

Ambassador Irwin La Rocque, Assistant Secretary General with responsibility for Trade and Economic
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Integration (including Energy) brought remarks on behalf of the CARICOM Secretariat. Inter alia, he pointed out that the CARICOM Secretariat is committed to playing its role in assisting Member States to make the transition towards greater utilization of renewable energy by providing support through policy coordination, resource mobilization and capacity building. He also emphasized the need for coordination among the various stakeholders in the area of sustainable energy development, given the capacity constraints in Member States. He thanked the many international development partners for their support and made special mention of the recent commitment received from the Government of the Federal Republic of Germany to support the development of a sustainable energy roadmap and strategy for the region.

Remarks were also received from Ms. Tessa Williams-Robertson, Director of Projects on behalf of the Caribbean Development Bank (CDB). Ms. Williams-Robertson indicated that the Bank's current Strategic Plan identifies environmental sustainability, climate change and natural disasters as development challenges that contribute to the vulnerability the CDB's Borrowing Member Countries. She highlighted investment in climate change adaptation and mitigation as a corporate priority area for the CDB. In this regard, the Bank's support will include inter alia, initiatives in renewable energy and energy efficiency. She also pointed out that collaboration on Regional cooperation and integration is also a key strategic objective for the CDB.

Remarks from the European Union Delegation in Guyana were brought by Mr. Narvan Singh, Programme Officer. He highlighted the need for support of renewable energy development and effective coordination in order to achieve targeted results. **Remarks were also received from the Organization of Eastern Caribbean States (OECS) Secretariat brought by Mr. Peter A. Murray, Programme Officer III,** Environment and Sustainable Development Unit.

Presentations were received and discussions ensued on the various projects/initiatives that were launched. The two areas identified for special coordination were support to be provided

to Member States in the areas of: (i) energy awareness, and (ii) legislative reforms on energy related matters. The key role of the CARICOM Secretariat in coordinating the various initiatives through the Energy Programme was emphasized. One key recommendation advanced was the idea of a CARICOM Energy Week to be staged in all CARICOM Member States, thereby providing a platform for enhancing awareness on energy matters in the Community.

As part of the overarching objective of facilitating coordination among the initiatives that were being launched and the existing initiatives, presentations were received from existing regional projects such as the CREDP/GIZ and CSEP. Updates were also received on the ECPA and the Caribbean Hotel Energy Efficiency Action (CHENACT) Project.

PROJECTS SUMMARIES

CRECS:

Key Objectives: Build capacity for Renewable Energy (RE), promote RE Investment

Budget: €1,485,000

Targeted Countries: All CARICOM Member States

Executed by: CARICOM Secretariat

Funded by: European Union

C-SERMS:

Key Objectives: Establish Strategic framework and regional level action plan for sustainable energy development

Budget: US\$ 500,000

Targeted Countries: All CARICOM Member States

Executed by: CARICOM Secretariat

Funded by: Initial funding for Phase I from the Inter-American Development Bank

SETA:

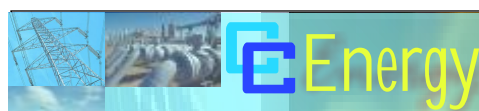
Key Objectives: Technical assistance for developing capacity and strategies in sustainable energy policy, legislation and energy awareness

Budget: US\$ 2,080,705

Targeted Countries: OECS

Executed by: OECS Secretariat

Funded by: Caribbean Development Bank



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.

Featured Personality of the Quarter - Mr. William Hinds



WILLIAM HINDS

Editor's Note: *The Caribbean Renewable Energy Development Programme (CREDP) is a landmark renewable energy initiative in the Caribbean. The project is considered to have laid an important foundation upon which many of the emerging sustainable energy developments are based and upon which future scaling-up could take place. Energy hails the pioneers of the CREDP Project who were instrumental in the design of this Project and seeks to highlight their general contribution to sustainable energy development. This Issue features Mr. William Hinds.*

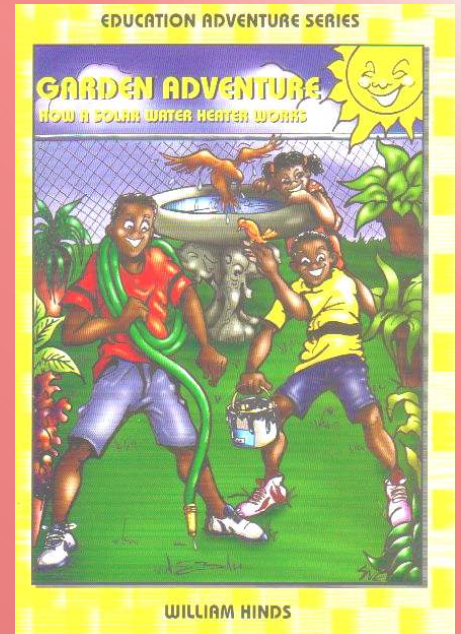
Barbadian national, Mr. William Hinds is another pioneer of the landmark Caribbean Renewable Energy Development Programme (CREDP) and a renewable energy and energy efficiency advocate in the Region. Mr. Hinds commenced his career in alternative energy in 1982 after obtaining international funding for research projects. This funding was approved in recognition of his achievement as a founder of the Barbados Association for Renewable Energy, Science and Technology (BAREST), a Non-Governmental Organization aimed at promoting renewable energy on that island. After obtaining a MSc. in alternative energy from the University of Reading in the United Kingdom in 1986, William sought to foster interest and transfer knowledge in the development of renewable energy through various initiatives, now described as the *'William Hinds Alternative Energy*

Educational Leadership Programme'

For more than 20 years, William Hinds has been a visionary and leader in promoting the increased utilization of solar energy in all its forms through several creative business ideas and innovative enterprises. One solar innovation project developed by William Hinds is the use of solar-powered, open-air, zero emission vehicles. These vehicles provide lasting sight-seeing experiences. Barbadians and visitors can enjoy the unique daytime experience of a Bridgetown Historic Tour and a glimpse into the nightlife through a tour of the St. Lawrence-Worthing area at evening using this unique mode of transportation.

In his quest to ensure that 100% of the student population in Barbados understand how the solar water heater works, in 2001, William authored the book titled, *'GARDEN ADVENTURE: How a Solar Water Heater Works'* that targets children between the ages of 5 and 12 years. His list of renewable energy literature also includes: a book published in 2006 titled *'SOLAR MOTION: SOLAR VISION FOR BRIDGETOWN'*. This book speaks of the application of solar vehicles in the capital of a small island. Other applications of solar energy are recommended in the process of making Bridgetown a SOLAR CITY. In 2008, he authored the *'HOUSEHOLDERS GUIDE TO COOL SOLAR HOUSES'*, which is set to be launched in 2011. This publication is in response to the numerous questions asked by persons visiting the Government of Barbados Solar House that was designed with assistance from William Hinds. This piece of literature is a layperson's guide on solar houses. The publication has sections on how to keep houses cool in tropical environments, as well as, energy efficiency in houses.

William Hinds has also crafted a path in the area of academia, having developed course materials and lectured at the tertiary level on renewable energy sources and alternative energy. He also developed a curriculum for a photovoltaic course for



the Caribbean Photovoltaic Training Agency, and educational materials that provide hands-on-training in the use of solar energy. His accomplishments also include presentations at over 100 lectures and seminars to national, regional and international audiences over the past 25 years on various aspects of renewable energy and energy efficiency.

William is known for his passion and tireless efforts in promoting the use of renewable energy in the Region, his contribution to the design of the CREDP, as well as, his participation as a member of the CREDP Steering Committee from its inception.

William currently serves the Government of Barbados as the Senior Technical Officer in the Ministry responsible for energy and has been integrally involved with the development of Barbados' national renewable energy and energy efficiency policies and strategies.

Energy congratulates William Hinds on his notable achievements in the field of sustainable energy!!

ENERGY POLICY – Maxine Nestor

LEGAL AND REGULATORY REFORMS WITHIN CARICOM MEMBER STATES TO ENHANCE THE DEPLOYMENT OF RENEWABLE ENERGY FOR ELECTRICITY GENERATION



Maxine Nestor

Fuel Diversification for Electricity Generation

Many renewable energy technologies (such as wind, solar, biomass, and micro-hydro) lend themselves to decentralized and distributed generation, where the facilities may be integrated in the grid at the distribution end of the electricity system spreading right across the system. In this way, generation expansion targets could be significantly achieved by aggregation of the output from the large number of small generators spread across the electricity distribution system. This allows for the possibility of a paradigm shift from the traditional approach where generation expansion is met by the installation of a large central power plant near the major load centres.

The investors for the new generation capacity under this new energy generation paradigm are also different, they represent mainly a large number of small householders and small business with renewable energy generators setup on the roof or in the back of their premises. In addition to the opportunities for expanded contribution from indigenous RE resources, this approach to electricity generation at a national level is desirable because of its implication for greater participation by private citizens (small private investors) and job creation.

Barriers to Distributed Generation

The expansion of renewable energy contributions to the grid through a distributed generation approach in CARICOM has however, been largely inhibited by numerous barriers, some of which are categorized under the following three broad headings:

Legal and Regulatory	Costs and Pricing	Market Performance
Lack of legal framework that foster independent power producers.	Subsidies to conventional fuels.	Lack of access to credit.
Stringent requirements on siting and construction.	High initial capital and transaction costs.	Perceived technology performance including utilities' concerns about intermittency, reliability and stability.
Unclear utility interconnection requirements.	Unfavourable power pricing rules.	Uncertainty and risk.
Unclear definition of 'avoided cost' and pricing mechanisms.	Non-inclusion of environmental externalities in investment decisions.	Lack of technical or commercial skills and information.

Legislative and Regulatory Reform to Support Renewable Energy Development

Policy reforms are taking place in many CARICOM Member States aimed at removing barriers, thereby unlocking opportunities for maximum benefits to be derived from their indigenous renewable resources. However, unless these policies supported by the institution of the relevant legislations or legislative changes, the fundamental investors' risks will hardly be alleviated as it is considered that policies may easily change based on political preferences. Many of the existing energy related laws in CARICOM Member States do not include provisions that promote competition in generation, allow for self generation, promote renewables through incentives, foster small distribution grid

connection, encourage energy efficiency, provide for technical and safety issues, and cross border purchase and supply of electricity, among other things. Legislative reform is needed to achieve greater diversification through the increased contribution of renewable energy to electricity generation by way of a decentralized and distributed model of generation. This will also allow for the increased participation of Independent Power Producers (IPPs) through competitive processes, thus breaking the traditional stronghold monopoly that the integrated utility has over generation.

Reforms to Support Regional Cooperation in Energy Trade

There is yet another case for a new architecture of the regulatory framework in CARICOM. This is the need to facilitate inter-state interconnection of the electricity grid and cross border trade in electricity. This is considered imperative for the development of renewable energy resources in those territories with resource potential that far outstrip their domestic demand (for example hydro power in Guyana and Suriname and geothermal resources in the Eastern Caribbean). The establishment of expanded markets is necessary for viable exploitation of these renewable energy resources.

Inter-state power transmission (or
see page 12)

electricity market integration) will not work effectively in the absence of a strong and robust regional regulatory institutional framework that enables market players to operate within a predictable, transparent and non-discriminatory environment. This institutional set-up is also necessary to establish the confidence of the receiving country that the power will not be disrupted 'willy-nilly' or rules changed based on some political expediency in the supplying country. It is those rules, established within the context of this regional regulatory framework (functioning in the context of established treaties), which will ensure that the desired level of supply reliability is achieved. Without this regulatory framework being established in tandem with the development of the vast renewable energy resources, it appears unlikely that the receiving country will take the risk of not investing in excessive back-up generation or maintain unnecessarily high reserve margins.

Box 1: Proposed Barriers and Solutions to Regional Energy Integration

BARRIERS	SOLUTIONS
Non-existing inter-island/country transmission infrastructure	Need for a regional CARICOM strategy for integrating electricity markets.
Lack of financing	Requires commitment from policy and decision makers, public and private sector and multilateral organizations.
Absence of legal and regulatory framework to support energy integration	National sector laws to be revised to facilitate connection of non-domestic sources of electricity supplies to the national grid.
	National and regional institutional regulatory regime to be improved. Significant regulatory oversight will be required to set rules and operational criteria
Absence of Inter-Governmental and other inter-parties Agreements	Governments within CARICOM need to develop bilateral Agreements for cross border supply and purchase of electricity as contemplated by the Revised Treaty. Multiparty agreements required amongst IPPs, utilities and other parties.
Lack of technical and organizational capacity to develop commercial agreements	Need for pooling of resources and sharing of information on systems requirements, load profile, generation cost, avoided cost etc.
Inadequate assessment of the technical and economic feasibility of transmission facilities (submarine cables and overhead transmission lines)	Regional approach should be taken to leverage support from multilateral and other international partners and the private sector in conducting more detailed assessments and analysis.
Diluted responsibility for energy sector management at a decision and strategic making level in some Member States	Institutional reform needed particularly for the creation of dedicated Energy Ministries that could focus attention on the establishment of required infrastructure.

THE GREEN ECONOMY




RIO+20
United Nations Conference
on Sustainable Development

One of the themes of the United Nations Conference on Sustainable Development (Rio+20) scheduled for June 2012 in Brazil, is a *green economy* in the context of sustainable development and poverty eradication. The Green Economy Initiative (GEI) is one of nine UN-wide Joint Crisis Initiatives (JCI) launched by the UN System's Chief Executives Board in early 2009. The collective overall objective of the various components of the GEI is to provide the analysis and policy support for investing in green sectors and in greening environmental unfriendly sectors.

Over the last two years, the concept of a "green economy" seems to have been gaining traction in environmental economics and has found its way into the mainstream of policy discourse. Many, leading policy makers have embraced the concept as reflected in the text of the G20

communiqués. But what exactly is a Green Economy?

The United Nations Environment Programme (UNEP) defines a green economy as one that results in *'improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities'*. In its simplest expression, a green economy can be thought of as one that is low carbon, resource efficient and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.

In the next Issue of  we will look at the push towards the green economy and the implications for the Regional energy sector.

INVITATION TO READERS



wishes to extend an invitation to readers to submit news or relevant articles of interest in relation energy sector developments and in particular, sustainable energy development in their territories.

PETROLEUM BRIEF


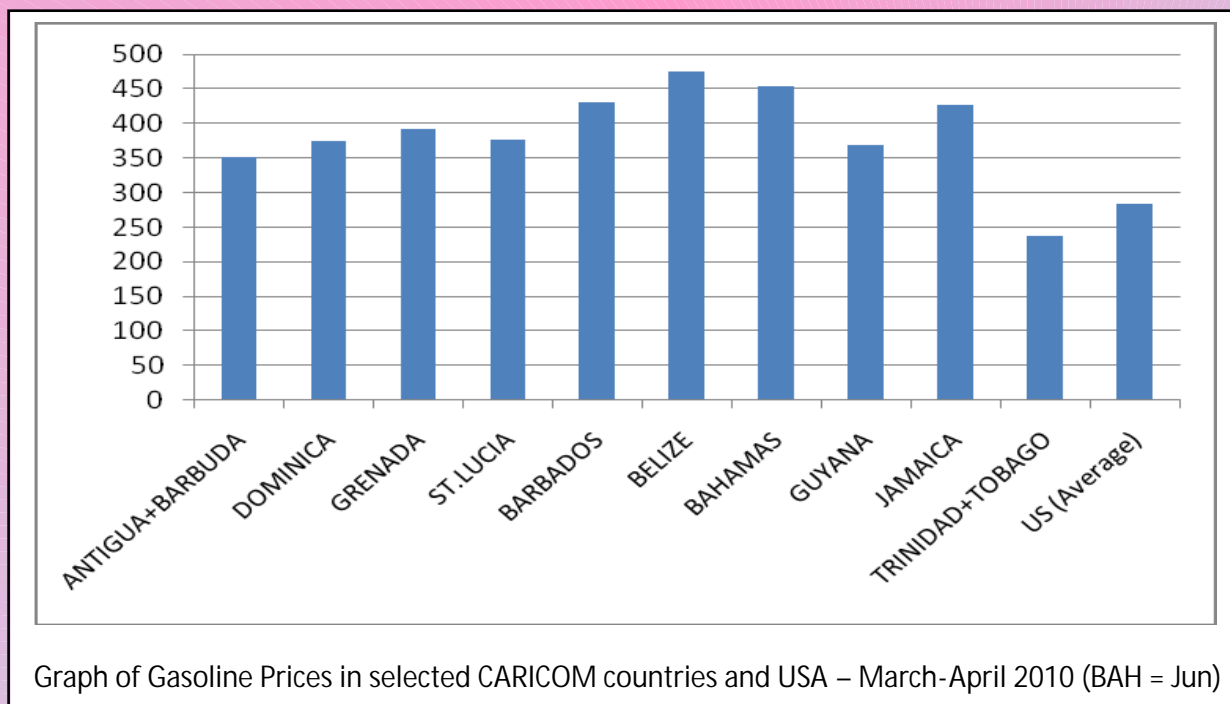
Results of the Energy Pricing Study: As part of the background work in finalizing the CARICOM Energy Policy, the CARICOM Secretariat commissioned the Regional Energy Pricing Study in 2010, with funding from the Inter-American Development Bank. The main aim of the Study was to clarify issues in relation to the pricing of natural gas, petroleum and electricity in CARICOM. Some findings considered relevant to readers will be presented here and in subsequent  publications:

Table Showing Motor Gasoline Prices during March – April 2010 for Selected CARICOM Countries and USA (N.B. Data for Bahamas is June 2010)

Country	Date	MCP Crude & Refining (US Cents)	Distribution & Marketing Margin + Taxes		Subsidy	Retail Price (US Cents)
			(US Cents)	(%)		
ANTIGUA+BARBUDA	Mar-10	211	140.6	66.6%	NIL	351.60
DOMINICA	Apr-10	250.4	123.4	49.3%	NIL	373.80
GRENADA	Mar-10	240.33	152.5	63.5%	NIL	392.83
ST.LUCIA	Mar-10	230.16	146.68	63.7%	NIL	376.84
BARBADOS	Mar-10	265.05	166.31	62.7%	NIL	431.31
BELIZE	Mar-10	252.4	222.5	88.2%	NIL	474.90
BAHAMAS	Jun-10	238	215	90.3%	NIL	453.00
GUYANA	Mar-10	231.32	136.79	59.1%	NIL	368.11
JAMAICA	Mar-10	245.6	182.1	74.1%	NIL	427.70
TRINIDAD+TOBAGO	Apr-10	244.18	55.62	22.8%	-25.50%	237.61
US (Average)	Apr-10	224.4	59.9	26.7%	NIL	284.30



UPCOMING EVENTS

1. Caribbean Renewable Energy Finance Conference, Half Moon Resort, Montego Bay, Jamaica, 2-3 May 2011
2. Sustainable Energy in the Caribbean Conference, Jamaica Pegasus Hotel, Kingston, Jamaica, 3-4 May 2011
3. IV CIEMADeS International Conference: Electrical Interconnection of the Caribbean – Technical, Environmental and Economic Aspects, Universidad del Turabo-Gurabo, Puerto Rico, 5-7 May 2011
4. San City Green Expo 2011, Skinner Park, San Fernando, Trinidad and Tobago, 12 -15 May 2011.
5. VII International Conference for Renewable Energy, Energy Saving and Energy Education (CIER2011), Havana International Convention Center, Havana, Cuba, 1- 3 June 2011
6. Jamaica's Green Expo 2011, Jamaica Pegasus Hotel, Kingston, Jamaica, 10-12 June 2011
7. Responding to Climate Change in the Caribbean Conference, University of London, London, United Kingdom, 13-14 June 2011
8. 2011 CARILEC Engineering Conference, Curacao, 25-27 July 2011

VISIT cipore.org for Information on Renewable Energy Developments and Happenings in the Caribbean including a listing of upcoming Sustainable Energy Events

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