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Economic Commission for Latin America and the Caribbean  
Subregional Headquarters for the Caribbean

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Sustainable energy in the Caribbean: Reducing the carbon footprint  
in the Caribbean through the promotion of energy efficiency  
and the use of renewable technologies: promoting energy efficiency  
in the transport sector  
25 July 2014  
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**REPORT OF THE MEETING ON SUSTAINABLE ENERGY IN THE  
CARIBBEAN: REDUCING THE CARBON FOOTPRINT IN THE  
CARIBBEAN THROUGH THE PROMOTION OF ENERGY  
EFFICIENCY AND THE USE OF RENEWABLE ENERGY  
TECHNOLOGIES: PROMOTING ENERGY EFFICIENCY  
IN THE TRANSPORT SECTOR**

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## **A. ATTENDANCE AND ORGANIZATION OF WORK**

### **1. Place and date**

1. The Economic Commission for Latin America and the Caribbean (ECLAC) convened a one-day meeting of energy stakeholders from Grenada, Saint Lucia, and Saint Vincent and the Grenadines in Castries on 25 July 2014.

### **2. Attendance**

2. Representatives of three Member States, namely Grenada, Saint Lucia, and Saint Vincent and the Grenadines attended the meeting.

### **3. Agenda**

3. The agenda adopted by the meeting is attached as annex II.

## **B. SUMMARY OF PROCEEDINGS**

### **1. Opening of meeting**

4. Welcome and opening remarks were delivered by the Sustainable Development Officer of the ECLAC subregional headquarters for the Caribbean, who extended a warm welcome to all participants. She underscored the importance of the energy sector to the Caribbean given the vulnerability of the subregion to the impacts of climate change and natural disasters. She focused on the support that was received by the German Agency for International Cooperation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and provided a synopsis of the achievements made in the subregion under the initiative that sought to reduce the carbon footprint of the Caribbean. The Sustainable Development Officer highlighted this final activity under the project emphasizing the importance of the transport sector to regional trade and economic growth and the demands made by this sector on the energy budget. She stated that given the high price of energy in the subregion, it was therefore critical that consumption be reduced. This in itself will also have redounding success in reducing global carbon emissions and minimizing the impacts of climate change on these small economies. She continued by explaining that the matter of financing initiatives in energy efficiency and renewable energy was increasingly important and explained that GIZ will be supporting efforts to address financing, and building capacity and awareness of energy efficiency in the Caribbean. She urged participants to fully participate, deliberate and more effectively present the case regarding the unique development challenges faced by Caribbean small island developing States, especially in the energy sector and to reinforce their commitment to reducing the carbon footprint of the subregion.

### **2. Adoption of the agenda and organization of work**

5. The agenda was adopted without change.

### **3. Presentation on promoting energy efficiency in the transport sector in Grenada**

6. The presentation, delivered by the ECLAC Consultant, gave a profile of the energy sector in Grenada highlighting the issues and challenges being faced by that country. It also provided

recommendations and main policy considerations to promote energy conservation and efficiency in the transport sector.

7. The report revealed that Grenada contains abundant sources of renewable energy such as solar, wind and geothermal, but yet the country is highly dependent on fossil fuels with 50 per cent of the total energy consumption being used for the transport sector and 40 per cent for electricity generation. The report stated that currently the country did not have a transport policy or a Ministry of Transport.

8. However, in 2011, the Government approved a National Energy Policy to initiate a transition to a low carbon economy to promote economic development and improved international competitiveness. It was reported that the Policy put forward the use of renewable energy and conservation, as well as the implementation of renewable energy technologies. It also focused on the need to promote the efficiency of the energy sector in the generation, transmission and distribution of electricity as well as in the use of energy in the transport sector. The Policy also called on the consumers to play their part in conserving energy and using it efficiently. This Policy is also part of a bigger vision, the GREENADA Vision 2030, pursued by the Government of Grenada to have the country become one of the first countries in the world to go 100 per cent green in its energy sector. In order to implement this initiative, the energy sector would require a regulatory framework to face the existing challenges.

9. As part of their National Energy Policy, the Government of Grenada established a series of actions and/or measures. These aimed to provide an affordable and reliable public transport sector characterized by an increased use of more efficient public and private vehicles as well as transport alternatives to reduce energy consumption. The proposed actions included (i) the creation of a tax regime to encourage importation of fuel efficient vehicles, along with the development of the supporting infrastructure and the use of green fuels, (ii) the development of fuel efficiency standard, (iii) the promotion of alternative public modes of transport, (iv) the introduction of mandatory annual quotas for dealers regarding energy efficient vehicles, and (v) the support of pilot projects which aim to reduce fuel consumption.

10. The Consultant also presented a SWOT analysis of the transportation sector which concluded that there was room for improvement in order to achieve energy efficiency. Some key weaknesses noted were the lack of a transportation policy that focused on energy goals, an inefficient public transportation system, a lack of fiscal and tax incentives for the use of energy efficient vehicles, inadequate data on transport and energy use, and the lack of standards for emissions and fuel efficiency.

11. The presentation also indicated that the focus on energy conservation must be on both the demand and supply side and that energy efficiency was the best immediate solution to reduce the country's dependence on fossil fuels and the negative environmental impacts associated with use of this hydrocarbon. It was also stated that reduction in the use of fossil fuels could contribute to an improvement in the economic activity of the country and could also influence profitability. Investment in energy conservation measures therefore could additionally provide financial and environmental benefits.

12. Following the Consultant's presentation, the Sustainable Development Officer of ECLAC subregional headquarters for the Caribbean invited comments from the Ministry of Finance and Energy of Grenada. The Senior Energy Officer of the Ministry indicated that all the key issues were well captured in the report. He alerted the meeting that the transport sector in Grenada was the second largest consumer of energy behind the electricity sector. He then offered to provide additional information on the various initiatives undertaken by the Government to reduce the country's carbon footprint in the transport sector. These included a better transportation and traffic management system with the implementation of the "park and ride" initiative, the better management of vehicles (fleet management), the introduction of

fiscal incentives for the purchase of energy efficient vehicles, and the use of green fuels especially in the yachting industry.

13. The Senior Energy Officer agreed with the analysis of the transport sector and the recommendations. He added that the Government of Grenada was looking at improving their public transportation system, as well as providing other means of transportation to its citizens. He also mentioned that, as a means to encourage energy efficiency, energy efficient specifications should be used to label motor vehicles.

#### **4. Presentation on promoting energy efficiency in the transport sector in Saint Lucia**

14. The presentation addressed the context within which the assessment of energy efficiency was conducted and provided a profile of the energy sector in Saint Lucia focusing on challenges being faced by the country. It focused on the participatory approach to informing the report through the conduct of a stakeholder consultation in the country thereby soliciting the views and opinions of technical experts in the energy sector.

15. The issues addressed in the report focused on the demand for energy in the transport sector and the fact that the country was a net importer and relied completely on fossil-based energy which produced greenhouse gas emissions that contributed to global warming. It was noted that the transport sector was the largest consumer of energy, accounting for more than 50 per cent of total energy consumption.

16. The report highlighted preliminary studies that have been undertaken in Saint Lucia showing the island's significant potential for the developments of solar, wind, geothermal and biomass energy, as well as hydropower and waste-to-energy. While the actual renewable energy potential of Saint Lucia had not yet been fully quantified, the only renewable resources currently in use were solar energy for heating water and a small percentage of photovoltaic energy. It was reported that the government had set a target of 30 per cent of electricity generated by 2020 to be derived from renewable sources.

17. The report documented that in June 2010, the Cabinet of Saint Lucia approved the official National Energy Policy. According to the 1964 Power Supply Regulation, Saint Lucia Electricity Services Limited (LUCELEC) holds a universal licence for generating, transmitting, distributing and selling electricity until 2045. While the 1964 regulation was superseded by the 1994 Electricity Supply Act (ESA), LUCELEC's exclusive licence was preserved by this new Act. Currently the ESA is the main piece of legislation that governs the operations of the power sector on the island. The ESA is currently being updated to facilitate a more competitive environment.

18. The report highlighted the fact that Saint Lucia did not have an independent electricity regulator although there were plans to establish one. By the end of 2013 the country will participate in the Eastern Caribbean Energy Regulatory Authority (ECERA) and by so doing enable the independent regulation for the uptake of renewable energy technologies. The participation in ECERA also called for the revision of the ESA and will assist in removing the current barriers to renewable energy sources as a result of the current Act.

19. The presentation highlighted that the action plan promoted energy conservation and efficiency and that this should address both the demand and supply sides. On the supply side, it was noted that system losses were 9.6 per cent in 2012 compared to 10.1 per cent in 2006. Additionally, both residential and commercial customers have invested in energy efficient lighting, primarily in compact fluorescent light bulbs and in light emitting diodes. Also, under the European Union Special Framework Assistance-2006 Energy Programme, the Government developed an energy efficiency guide entitled "Save Energy Costs – A Guide" (GOSL 2010) that provides easy and simple tips to reduce the consumption of energy.

20. With respect to land transport, the country reported approximately 55,000 vehicles. According to the Organization of Eastern Caribbean States, about 25 per cent of imports were new or almost new and more than 50 per cent of all registered vehicles were 10 years or older.
21. The report stated that the government had recognized the key linkages between the transport and energy sectors and had implemented strategies to advance sustainability in the transport sector. Chief among these is the introduction of bioethanol in gasoline and fiscal incentives to facilitate the importation of hybrid cars. The National Energy Policy also addressed transport and energy efficiency. The Policy suggested short, medium and long-term options for improving efficiency in the transport sector.
22. The presentation gave a range of recommendations that could be adopted by the country in pursuit of more sustainable practices in the transport sector and looked towards improving and advancing energy efficiency in the transport and mobility sector. These ranged from the development of policies to encourage transport system efficiency, policies to encourage vehicle efficiency and improvements in institutional arrangements for linking transport and energy use.
23. The discussions focused on the increasing coordination between the Energy Division of the Ministry of Sustainable Development, Energy, Science and Technology, and the Ministry of Infrastructure, Port Services and Transport, as well as other relevant agencies. Representatives from both the private and public sector recognized that the situation was not yet ideal in terms of coordination. However, deficiencies have been identified and important collaboration had been accomplished between organizations of the public sector, and the inclusion of the private sector in the discussion has also been improved and increased.
24. Several representatives from the private sector acknowledged an increase in awareness and in the involvement of that sector and civil society in the discussions about transport and energy efficiency. They considered that legislation should be accompanied by education, information, capacity building and sensitization in order to modify consumption patterns and attitudes.
25. Participants from the private sector suggested that there are multiple simple and short term solutions that could be implemented by the government to improve the quality of transport. They also considered that several deficiencies have been identified throughout the years but few changes have been accomplished. In this regard, a representative from the Energy Division noted that, even though technical departments knew what needs to be done, resources tended to be scarce and priorities varied. However, she considered that the increased coordination among institutions in implementation of several projects will positively impact the sector within the next few years.
26. With respect to capacity, participants agreed that it was necessary to strengthen the technical expertise of policymakers and technocrats in transport energy efficiency in order to improve the quality and viability of regulations and their implementation. This would also allow experts in the public sector to work together with civil society and the private sector in implementation of appropriate measures.
27. According to representatives from the Energy Division, fuel efficient vehicles such as electric vehicles have been introduced in the country on a pilot basis. Even though the use of biofuels in their gasoline had not yet been implemented, they have created a low sulphur diesel fuel standard and are currently developing a petrol standard based on octane levels.
28. The representative from the Ministry of Infrastructure, Port Services and Transport suggested the importance of a vehicle registry which would analyse the consumption patterns based on the vehicle's age. This would allow the government to understand the relationship between vehicle stock and its impact on energy efficiency and consumption patterns.

29. Participants also discussed the taxation measures provided as incentive to encourage importation of diesel-powered vehicles. However it was noted that these vehicles were not meeting the required international standards. As such the introduction of appropriate legislation may well address this concern.

30. A representative of the Taxi Drivers Association recommended the use of slip roads as a mechanism for traffic management. The meeting agreed with this recommendation.

31. Participants suggested including research and local innovation as a recommendation in the report, as well as promotion of entrepreneurship in the area of transport energy efficiency in order to support start up businesses. The encouragement in the use of e-services was also suggested by the participants.

## **5. Presentation on promoting energy efficiency in the transport sector in Saint Vincent and the Grenadines**

32. The presentation addressed the context within which the assessment of energy efficiency was conducted and provided a profile of the energy sector in Saint Vincent and the Grenadines focusing on challenges being faced by the country. It highlighted the participatory approach to informing the report through the conduct of a stakeholder consultation in the country thereby soliciting the views and opinions of technical experts in the energy sector.

33. The issues addressed in the report focused on the demand for energy in the transport sector and the fact that the country was a net importer of fossil-based energy which produces greenhouse gas emissions that contribute to global warming. It was noted that the transport sector is the largest consumer of energy, accounting for more than 66 per cent of total energy consumption with fuel prices showing an upward trend since 2005 with the remainder of energy being used for electricity generation.

34. The presentation stated that Saint Vincent and the Grenadines had substantial renewable energy sources for heating purposes (solar thermal, biomass), electricity (wind, geothermal, hydro and solar) and possibly fuel (biomass). While these resources offered the potential to supply a large share of future energy needs, only hydro and solar (hot water heating systems) energy were currently being utilised.

35. In March 2009, the nation's energy policy entitled "Sustainable Energy for SVG: The Government's National Energy Policy" was approved, and in 2010 the first edition of the Energy Action Plan for Saint Vincent and the Grenadines was developed. This action plan identified the 1973 Electricity Supply Act as the guiding regulatory instrument for energy in the country. The Act also stipulated that the Saint Vincent and the Grenadines Electricity Company could, with the Minister's approval, issue a license to any other parties that wished to generate, transmit, and distribute electricity for independent power providers and self-generation. Of the inhabited islands, only the private islands of Palm and Mustique had independent power production as part of their respective resorts.

36. The presentation further highlighted that the action plan promoted energy conservation and efficiency and that this should address both the demand and supply sides. On the supply side, it was noted that line losses and unmeasured consumption accounted for 8.7 per cent of the total consumption in 2007, showing a downward trend since 1998.

37. It was noted that there were more than 25,382 vehicles registered in the country in July 2009 and 9.7 million imperial gallons of diesel and 6.4 million imperial gallons of gasoline were consumed in 2008.

38. In this scenario the absence of land and transport policies were deterrents to improving energy efficiency in the transport sector. Road infrastructure was also of concern to the population. Also the need for public awareness of mechanisms that could be used to promote energy efficiency was emphasized.



39. The presentation introduced a range of recommendations that could be adopted by the country in pursuit of more sustainable practices in the transport sector and looked towards improving and advancing energy efficiency in the transport and mobility sector. These ranged from the development of policies to encourage transport system efficiency, policies to encourage vehicle efficiency and improvements in institutional arrangements for linking transport and energy use.

40. Discussions on the presentation focused on the SWOT analysis and it was agreed that the lack of access to data on the transport sector that would inform decision-making was a weakness. However, the linkage between the government and the private sector in examining developments in the transport sector was regarded as a strength. Development of technical expertise to make key decisions to promote energy efficiency in the transport sector was regarded as an opportunity for the island. Furthermore, the representatives agreed that the promotion of eco-driving initiatives such as “park and ride” should redound to the benefit of the country.

41. One representative mentioned that in February 2014, the Cabinet demonstrated its commitment to improving energy efficiency in the transport sector by agreeing to a comprehensive package of fiscal incentives for consumers and providers. It was stated that this should encourage more efficient use of energy.

42. However, despite these incentives, another representative of Saint Vincent and the Grenadines highlighted that maritime transport was one of the highest consumers of energy and that not enough emphasis was being placed on energy efficiency in this sector. An example of this was that the fast ferry between Saint Vincent and the Grenadine islands utilizes 500 gallons of fuel on a daily basis and this ferry travels three times per week.

43. The aviation sector was also considered important in terms of fuel consumption. The representative from Saint Vincent and the Grenadines noted that the efficiency of the air fleet could be improved if the scheduling of flights was addressed. These matters would be addressed in the national transport policy. In this regard, a working group has been established to spearhead preparation of the policy.

## **6. Conclusions and recommendations**

The meeting reached the following conclusions:

44. Grenada, Saint Lucia and Saint Vincent and the Grenadines have taken important preliminary action towards increasing energy efficiency in the transport sector by the development of national energy policies that include strategies for transportation and mobility. The goals of increasing energy efficiency and fuel diversification in the transport sector were part of overarching policies to address these issues in all sectors of the economy. Each of the three countries has already embarked on energy efficiency initiatives.

45. These current efforts will result in increased energy security due to greater energy diversity, improved balance of payments due to a lower oil bill, and reduction in fuel costs for the consumer. Furthermore, less reliance on fossil fuels will result in better protection of the environment and a reduced carbon footprint. While the contribution by these countries to global climate change is small, reducing the countries’ carbon footprints is a win-win situation since it occurs concurrently with other important economic and social benefits.

46. Notwithstanding the above, there is need for increased and improved work and studies in the transportation and mobility sectors, particularly the linkages between transportation and the economy. Whilst this paper presents a range of recommendations and strategies that countries can consider or may

already be considering, the study would have benefitted from increased data and information on the transport sector in each of the countries, especially since the transport sector accounts for the highest consumption of imported fossil fuels.

47. Countries must begin to advance gains in energy efficiency by focusing more on the transport sector. It is a good time to do so. Globally, there is a strong shift in focusing energy efficiency on transport and mobility compared to focusing primarily on the electricity sector and demand side management initiatives. Right here in the region, organizations such as ECLAC were committed to support and advise its Member States to better drive and advance initiatives in energy efficiency.

The following recommendations were made:

48. The countries needed to consider policies to encourage transport system efficiency. These included national transport policies; sustainable land transport systems for each of the countries which would require reference to a range of indicators for sustainable transport; spatial planning policies; traffic management initiatives; advancing international discussions on the green economy and green transport into local policy; enhance data collection and management in the transport sector; provide financial and fiscal incentives and disincentives to promote energy efficiency; introduce mandatory labelling for new appliances, new cars and buildings as well as devising minimum energy efficiency standards for new cars and; encourage a shift in mode of transport to more energy efficient methods.

49. It was recommended that policies to encourage vehicle efficiency be developed and implemented through action plans. These included policies to improve operational efficiency in cars and freight; implementing eco-driving programmes, and embarking on public awareness and communications campaigns.

50. Institutional arrangements that create a direct link between transport and energy needed to be established. These could be achieved through strengthening interaction with governmental institutions; addressing public procurement to advance the use of alternative and hybrid vehicles and establishment of systems of data collection for the transport sector so that trends in consumption of energy could be monitored and thereby elicit appropriate action.

## **7. Closure**

51. In closing, the Chief, Energy Science and Technology, Ministry of Sustainable Development, Energy, Science and Technology, Saint Lucia noted that the support from ECLAC was timely and propitious and acclaimed ECLAC for consulting with the Ministry prior to embarking on the study. She welcomed the opportunity to interact with the Saint Lucian transport community and noted that this meeting was the beginning of a relationship with participating stakeholders which she indicated would be cemented in the future as her Unit continued to consult with the relevant communities. She also noted that this was the first time that a meeting was convened using the WebEx modality and in itself it considerably reduced out carbon footprint. Finally, she thanked all participants and committed to supporting efforts to promote energy efficiency in the transport sector.

52. The ECLAC Sustainable Development Officer thanked the ECLAC team for its support in convening of the meeting especially the Computer Information System Assistant who made it possible for considerable cost savings in this initiative.

Annex I**LIST OF PARTICIPANTS**

Ken Aldonza, Energy Officer, Ministry of Sustainable Development, Energy, Science and Technology.  
E-mail: ken.aldonza@govt.lc

John Auguste, Senior Energy Officer, Energy Division, Ministry of Finance, Grenada.  
E-mail: john\_auguste@yahoo.com

Nicholas Barnard, Managing Director, Saint Lucia Linen Services Ltd. E-mail: barnard@stlucialinen.com

Charlin Bodley, Energy Science and Technical Assistant, Ministry of Sustainable Development, Energy, Science and Technology. E-mail: charlinbodley@hotmail.com

Jason Clairmonte, President, New Car Dealers' Association, Saint Lucia.  
E-mail: jclairmonte@jqmotors.com

Jillian Joy Davis, Registrar of Ships and Seafarers, Maritime Division, Saint Vincent and the Grenadines.  
E-mail: registrar@gmail.com

Kevin Elcok, President, Saint Lucia Moto X Club. E-mail: stluciamotox@gmail.com

Judith Ephraim, Chief, Energy Science and Technology, Ministry of Sustainable Development, Energy, Science and. Technology, Saint Lucia. E-mail: ephraimja@yahoo.co.uk

Godfrey Ferdinand, Manager, National Council on Public Transportation, Saint Lucia.  
E-mail: godfreyferdinand@hotmail.com

Juliana Francis, Senior Engineering Assistant, Ministry of Transport and Works, Saint Vincent and the Grenadines. E-mail: julianafrancis@hotmail.com

Roger Goring, Public Relations Officer, Saint Lucia Car Rental Association.  
E-mail: drivevacations@gmail.com

Kirmani Isaac, Warehouse Custodian, RUBIS St Lucia Ltd. E-mail: k.isaac@rubis-caribbean.com

Benise Joseph, Energy Officer, Ministry of Sustainable Development, Energy Science and Technology, Saint Lucia. E-mail: benise.joseph@govt.lc

Lenita Joseph, Chief Transport Officer, Ministry of Infrastructure, Port Services and Transport, Saint Lucia. E-mail: ljoseph@gosl.gov.lc

Lucien Joseph, President, National Taxi Union – Holiday Taxi Ltd, Saint Lucia.  
E-mail: holidaytaxi@candw.lc

Terral Mapp, Economist, Central Planning Division, Saint Vincent and the Grenadines.  
E-mail: tmapp-2@hotmail.com

Angus Martin, President, Cruise Ship Berth, Saint Vincent and the Grenadines.  
E-mail: angusmartin@hotmail.com

Bernard Scott, Chief Air Traffic Controller, Airports Division, Saint Vincent and the Grenadines.  
E-mail: catcsvg@gmail.com

Ellsworth St Clair Dacon, Director of Energy, Energy Unit, Ministry of National Security, Air and Sea Port Development, Saint Vincent and the Grenadines. E-mail: edacon@gov.vc

Oswald Simon, Vice-President, Saint Lucia Moto X Club. E-mail: official122@hotmail.com

**Economic Commission for Latin America and the Caribbean (ECLAC)  
Subregional headquarters for the Caribbean**

Charmaine Gomes, Sustainable Development Officer, Sustainable Development Unit.  
E-mail: charmaine.gomes@eclac.org

Leda Peralta, Associate Environmental Affairs Officer, Sustainable Development Unit.  
E-mail: leda.perlta@eclac.org

Aurélie Quiatol, Meeting Services Assistant, Programme Support Unit. E-mail: aurelie.quiatol@eclac.org

Rossano Thompson, Computer Information System Assistant, Caribbean Knowledge Management Centre. E-mail: rossano.thompson@eclac.org

Annex II

**AGENDA**

1. Opening of meeting.
2. Presentation on promoting energy efficiency in the transport sector in Grenada.
3. Presentation on promoting energy efficiency in the transport sector in Saint Lucia.
4. Presentation on promoting energy efficiency in the transport sector in Saint Vincent and the Grenadines.
5. Conclusions and recommendations.
6. Closure.