Saint lucia battery performance

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The current price of fossil fuel generated electrical energy in Saint Lucia is among the highest in the world, though not the highest in the OECS, as all the islands have a strong dependence on diesel derived electricity. These high prices have put a great deal of pressure on the government to develop and implement strategies that will result in a decrease in energy prices. Contrary to popular belief, the responsibility for reducing the high energy prices does not lie solely with the power company, LUCELEC.

2. Renewable Energy and Energy Efficiency Action Plan - The process of implementing elements of the National Energy Policy is usually embedded in an action plan that details activities, responsible agencies and a means of measuring success. Though specific actions are being pursued by the government in both RE and EE, no concrete action plan has been agreed to.

3. High cost of capital - A significant deterrent to investment in renewable energy technologies is the significant capital cost of such projects. Most energy suppliers for large grid connected projects source and provide their own capital, so that this barrier is removed through the use of private investment.

The current cost of generation of electricity from diesel fuel is in the range of US$0.18 to US$0.22 per kWh. The table below contains a summary of the levelised cost of energy (LCOE) from various renewable energy sources applicable to Saint Lucia (Latin America and the Caribbean region) according to the International Renewable Energy Association (IRENA):

Note: PV system sizes are given in kWp, i.e. kilowatt peak. This rating is generated under internationally agreed standard test conditions that differ from typical operating conditions. Output from PV systems varies depending on environmental conditions.

3. Stand Alone Solar, Micro Hydro and Wind Systems - Currently, any private property owner is permitted to install a renewable energy generation system to meet his own needs. These systems will require battery storage to ensure a continuous energy supply. Support for correct sizing and design of these systems can be sourced through the EST section of the Ministry.

Funding for all renewable energy systems based on proven technologies iscurrently available throughthe Saint Lucia Development Bank and some commercial banks at reasonableinterest rates. A well developed proposal will be required in order to access the available funding.

All renewable energy systems are import duty free. Systems are still subject to the Value Added Tax (15%) and to a service charge (5%). There is a suite of incentives currently being implemented for renewable energy systems, however, information is not yet available for release to the general public. Saint Lucia"s current building code was not formulated with energy efficiency as a requirement.

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Thus, the island currently has no Minimum Energy Performance Standards for buildings. Adoption of such a standard would require that buildings meet a certain maximum energy consumption per square meter of floor space. This would encourage use of energy efficient building practices, such as use of cross ventilation, shading of windows exposed to direct sunlight, insulation of building walls, use of high efficiency air conditioning systems and high efficiency lighting, such as LED lighting.

There are pilot projects in the city of Castries demonstrating the use of efficient LED street lighting and LED office lighting as on the first floor of the Ministry of Infrastructure building located in Union. There currently exist duty free concessions for some energy efficient devices, including LED lights. The Customs and Excise department can be consulted for a complete list of items.

Experience has shown that investments in energy efficiency projects result in a payback period which can be in excess of twice as fast as for renewable energy investments. For instance, investments in LED lighting to replace incandescent bulbs can generally be shown to have a payback period of less than 2 years, whereas, residential scale solar PV systems have a payback period

Our experience found that this is an emerging area, where standards etc. are still catching up and it"s difficult to get clear guidance on regulatory requirements in a commercial setting.