



**Unleashing
Sustainable Energy
Investments: Solutions
for Low to Middle
Income Communities**

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TOPICS TO BE DISCUSSED

- 1. Economic Impact of Fossil Fuel Imports**
- 2. Concentration in Ownership of Energy Sector**
- 3. Opportunities for Low & Middle Wealth Creation**
- 4. Criteria for Investment**
- 5. Potential Investment Model**
- 6. Role of Development Financing**

Economic Impact of Fuel Imports on Foreign Reserves

- Almost 10 % of GDP in 2011 was expended on imported fossil fuels for electricity generation and transportation
- Burden on foreign reserves
- Drain on disposal income of low to middle income households

BL&P's Operating Costs, Fuel Purchases & Net Income

2010	2011	2012	2013	2014
508,139	607,276	593,168	624,472	630,338
306,824	409,822	397,529	399,234	394,824
45,646	35,366	40,244	54,212	51,066

Concentration in Ownership of Energy Sector

- Limited Licenses or franchises for generation, transmission and distribution and sale of electricity.
- Limited participation in the ownership of generation infrastructure
- Limited number of players in the importation and distribution of petroleum products

Current Investment Environment

- Mechanism for securing 10 year grid interconnection licenses under the Electric Light & Power Act of 2013.
- Capacity limit of 25MW for distributed or small scale solar p.v. and wind
- Fixed Tariffs of BDS .416 cents and .315 cents for distributed solar p.v. and wind respectively which are delinked from fossil fuels up to a maximum installed capacity of 500kw

Rationale For Wealth Creation

- Availability of reliable solar resources on island
- Expanding technical competence in residential and commercial solar p.v. deployment
- Potential to displace a proportion of fossil fuel generation with solar pv
- Opportunity for transfer of funds required for fossil fuel peak generation to investors in solar pv as income

Barriers to Domestic Capital Investment in RE

- **Creating a Scheme for Local Capital Investment in RE generation and storage**
- **Educating local financial institutions on the opportunity for offering competitive financing for local investors in RE**
- **Educating locals with idle capital in the credit union and banking system that RE is the last frontier of Domestic Wealth Creation.**

Potential Investment Model

- 100% financing of low to medium income loans of between \$4,500.00 to \$2,500,000 at interest rates of 4% to be repaid over 10 years
- Security via a Bill of Sale or Charge over the system and an assignment of lien over the account receiving the monthly revenue
- Assumed installed cost of BDS \$4,500.00 per kw

Potential Investment Model

System Size	Capital Investment	Monthly Gross Income	Monthly 4% Loan Payment	Monthly Net Income
1kw	4,500.00	69.59	45.58	24.03
25kw	112,500.00	1,739.33	1,133.95	605.38
100kw	450,000.00	6,959.33	4556.03	2,403.30
150kw	675,000.00	10,349.00	6,834.05	3,514.95
250kw	1,125,000.00	17,398.33	11,390.08	6,008.22
500kw	2,500,000.00	34,796.68	25,311.28	9,485.40

Role of Development Financing

- Total of four policy based loans secured from the Inter American Development Bank for Sustainable Energy secured totaling approximately US \$142 million by the government of Barbados between 2010 and 2013.

Recommendations

- **Creation of a policy based loan specifically for the implementation of a low to medium financing mechanism**
- **Possible utilization of the model created under the Smart Energy Fund Medium established for Small to Medium Enterprises (SME's)**
- **Intervention is critical as domestic financial institutions despite the presence of excess liquidity are reluctant to offer low interest financing over long periods**



THANK YOU

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