

Recently the Energy Audit of the National Housing Trust Building was completed, and on the basis of the audit results activities have been scheduled to increase the energy efficiency of the building by 40%. That will save millions of dollars in energy cost.

Now, following the energy audit and cost benefit analysis done for NHT building we recommend the following retrofitting measure be taken for any existing energy inefficient building.



Energy Conservation Opportunities (ECO) recommended

ECO#1: Improve Lighting Efficiency - Fluorescent to LED type - Payback Years 1 to 2 years.

ECO#2: Insulate Concrete Roofs - Payback Years 1 to 2 years.

ECO#3: Install Occupancy Sensors - Payback Years 2 to 3 years.

ECO#4: Install Solar Window Film - Payback Years 1 to 2 years.

ECO#5: Install Energy Efficient Air Condition Systems - Payback Years 4 to 5 years

ECO#6: Design and install efficient water storage, distribution system and fixtures - Payback Years 4 to 5 years

ECO#7: Metering of Major Energy Consuming Components - Payback Years - Dependent on internal communication and operational strategies.



Recommendations for Retrofitting of Existing Buildings

to achieve significant increase in Energy Efficiency.

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Buildings, in general, consume a significant amount of energy (40 percent of the nation's total consumption) , particularly for cooling (32 percent) in a tropical country like Jamaica.



It is therefore important to initiate energy conservation retrofits to reduce energy consumption and the cost of cooling, and lighting buildings. Designing major renovations and retrofits for existing buildings will reduce operation costs and environmental impacts, and can increase building adaptability, durability, and resiliency.



Before making a commitment for a major investment to retrofit an existing building for energy and sustainability improvements, it is important to consider following questions:

- 1 Is the investment worthwhile in perspective with other building conditions?
- 2 Can the work be done in phases to minimize disruption to the occupants? Relocating occupants to other facilities can be a significant expense.
- 3 Is the roof able to support the additional weight to turn the roof to vegetative roof or erecting required number of solar panels?



Once it has been ascertained that building conditions are not impediments to upgrading for sustainability and improved energy performance, comprehensive energy audit should be carried out by a professional organization.