

CHENACT Presents:



Watts New- Bright Ideas #3 **Solar Hot Water Heating Systems**

Watts New-Bright Ideas is a new series feature being sponsored by the CHTA based on the lessons learned from the CHENACT project. The Caribbean Hotel Energy Efficiency Action (CHENACT) project is designed to improve the competitiveness of small to medium sized hotels in the Caribbean through the introduction of energy efficiency and on-site renewable energy. In addition to the energy related cost savings at the property level, CHENACT will determine the potential for reducing greenhouse gas (GHG) emissions and imported oil at the national level associated with utility electricity generation.

Resulting from the detailed energy audit of a 75-room hotel in Barbados, the audit team identified seven projects which would help reduce the hotel's annual energy consumption by 29%, or 593,185 kWh annually. In addition, these measures would reduce Carbon Dioxide (CO₂) emissions by 349 tons per year. At a cost of US\$473,015, the hotel will save US\$163,276 annually, an overall payback period of 2.9 years.

Did you know ...

... that solar water heating systems are a cost effective alternative to electric resistance hot water heating system for villas, guestrooms, staff lockers, pools and laundry.

If the 75-room hotel replaces two villa electric hot water heaters with solar systems for a cost of US\$2,000. Annual savings are estimated to be US\$5,900, or a payback period of 4 months. However, without proper maintenance (e.g., cleaning heat exchange elements, insulating hot water pipes, and cleaning solar panel glazing), system performance will decline over time.



Solar hot water heating system

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