

This series showcases success stories of PaCT (Partnership for Cleaner Textile) partner factories in the Bangladeshi textile sector that have implemented cleaner production projects.

Hamza Textile Ltd. (HTL) worked with PaCT program experts to identify several resource efficiency measures that would make its factories more productive, saving resources and money. Applying the recommended energy efficiency measures led to one of HTL's highest savings.

Factory status

With an average production of 34 tons a day, Hamza Textile Ltd. (HTL), a sister concern of DBL group, uses one gas engine to meet its power needs. While the factory has an electrical grid connection from the Rural Electrification Board, HTL purchases less than 1 percent of power from the grid and has identified solar power as an option for renewable energy.

Curbing energy use through efficiency

HTL saved approximately \$456,186 by implementing several energy efficiency measures that were recommended by PaCT experts. Energy efficient lights saved \$2,860 (with an 18-month payback period) and installing a solar panel saved \$2,870 (with a 59-month payback period). HTL invested \$98,317 to implement the following resource efficient (electrical) measures:


- 500 pieces of 18W LED lights replacing traditional 40W lights
- 324 pieces of 20W LED lights replacing traditional T8-40W tube lights
- 248 pieces of 10W LED lights replacing traditional 20W tube lights
- A 20 kWp solar panel

High energy consumption

For HTL, one of the major sources of power consumption was lighting from traditional (40W & 20W) lights. The solution was to change the existing lighting system and install a solar power system. While HTL was keen to make these changes, they needed guidance and details on technical feasibility, material and vendor selection, actual savings, and return of investment. Moreover, they needed to make significant investments to improve electrical efficiency in the factory. This is where PaCT experts stepped in to help them select a vendor for the solar panel installation.

Environmental Benefits

Installation of LED lights

 **103,006 kWh/year Electricity Saving**

 **81.29 tCO₂e/year GHG Avoided**

 **37,741 Nm³/year Natural Gas Saving**

Installation of 20 kWp Solar panel

 **32,850 kWh/year Electricity Saving**

 **18.53 tCO₂e/year GHG Avoided**

Implementation	Investment	Annual Savings	Payback Period
Installation of LED lights	\$4,236	\$2,860	18 months
Installation of 20 kWp solar panel	\$14,238	\$2,870	59 months



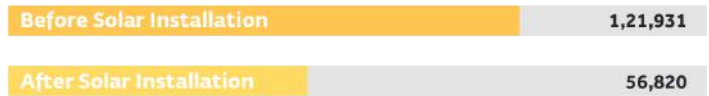
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“We have implemented several recommendations as proposed by the PaCT team, benefiting enormously from the energy saving options. We have saved about 136 MWh/year of electricity by changing our traditional lights to energy saving LED lights and installing a 20kWp solar panel. We welcome PaCT’s efforts to making the textile sector in Bangladesh more sustainable.” – *M.A. Jabbar, Managing Director, DBL Group.*

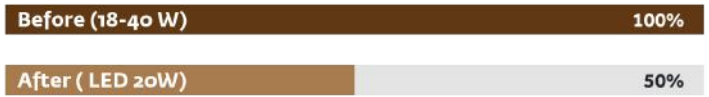
HTL's Savings

T8 tube lights use inefficient magnetic ballasts and cause uneven lighting. In comparison, LED lights are energy efficient and do not flicker. This is why factories—relying on natural gas for electricity—can save significantly by improving their electrical efficiency. Implementing energy efficiency measures has helped HTL generate high-cost savings and increase electrical efficiency.

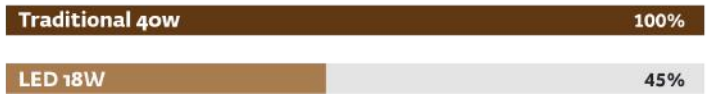
⚡ Grid Electricity Reduction (kWh/year)



💡 Energy Reduction (%)



💡 Energy Reduction (%)



IFC-led Advisory Partnership for Cleaner Textile (PaCT) is a holistic program that supports the entire textile value chain – spinning, weaving, wet processing and garment factories – in adopting cleaner production (CP) practices. PaCT engages with brands, technology suppliers, industrial associations, financial institutions, and the government to bring about systemic and positive environmental changes to the Bangladesh textile sector and contribute to its long-term competitiveness and environmental sustainability.

WHAT PaCT DOES:

- Chemical Management Assessments
- Basic Cleaner Production Assessment
- In-Depth Cleaner Production Assessment
- Water & Energy Management
- Rooftop Solar PV Pre-feasibility Study
- Rooftop Solar Calculation
- Online Resource Monitoring

DEVELOPMENT PARTNERS



IMPLEMENTING PARTNER



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BRAND PARTNERS



IMPLEMENTER



Creating Markets, Creating Opportunities