

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

### **Factory Status**

Columbia Washing Plant Limited (CWPL) specializes in the washing and drying of denim garments. As a forerunner in the industry, CWPL leverages modern technology to ensure superior quality products. In 2019, the company achieved an

average daily production of 13.65 tonnes per day. Despite its modern approach, a number of interventions were identified by PaCT experts to help CWPL reduce its resource consumption at little to no cost. These measures may be applied at other factories also.

### **Observation and implementation**

- **Observation**

During the PaCT assessment, it was observed that the gas engine frequency was set at 50.2Hz. It was determined that this frequency could be optimized to 50.0Hz.

- **Implementation**

The CWPL team contacted their generator supplier and checked all the parameters and reduced the frequency, which reduced energy consumption.

- **Observation**

During the PaCT assessment, it was observed that the unit practiced a system of timer-based manual blow down about six times a day for approximately one minute each, which resulted in low Total Dissolved Solids (TDS) between 1,300-1,600 ppm of the blowdown water. This causes a significant loss of heat and water. The TDS set point could be increased up to 3,000 ppm to meet the boiler's blowdown water allowable limit.

- **Implementation**

To address this issue, it was recommended that an auto-blowdown system should be installed to reduce heat and water losses.

- **Observation**

During the PaCT assessment, it was observed that the compressed air system was operating at a pressure of 8.5 bar, which is considered excessive. Higher pressure settings can result in increased leakages in the compressed air network to maintain the required pressure.

- **Implementation**

To reduce leakages and maintain optimal pressure in the compressed air network, it was recommended that the CWPL team perform regular leakage repairs and maintain detailed records in a logbook. The team implemented this recommendation by conducting frequent maintenance checks and recording all repair activities.

- **Observation**

During the PaCT assessment, it was observed that the current ceiling fans (75W) could easily be replaced with energy-efficient models.

- **Implementation**

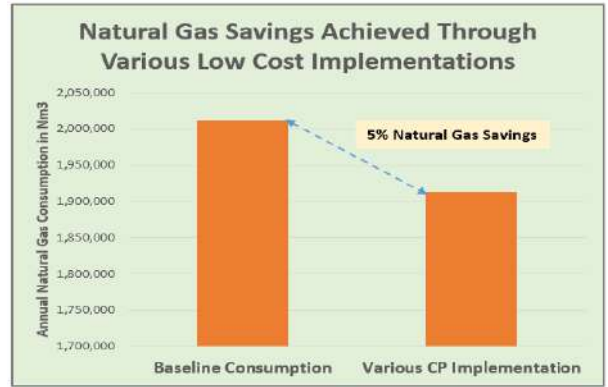
During the monitoring period, CWPL purchased 17 Brushless Direct Current (BLDC) fans (35W). The company plans to continue the implementation of this energy-saving measure in a phased manner by acquiring more fans.

### **Savings**

The implementation of various low to no cost measures resulted in significant resource savings for CWPL. The company invested \$1,047 and saved \$15,451. Additionally, it was able to

reduce natural gas consumption by 99,360 m<sup>3</sup>, electricity consumption by 229,981 kWh, and avoided 214 tons of CO<sub>2</sub>eq GHG emissions annually.

“The PaCT program helped us achieve energy savings. We hope to keep on improving our energy efficiency based on the recommendations of the experts for years to come.” – Factory Management



| Sl No        | Recommendations  | Investment required (\$) | Potential Annual Savings |                       |                   |                                     |
|--------------|--|--------------------------|--------------------------|-----------------------|-------------------|-------------------------------------|
|              |  |                          | Savings (\$)             | NG (Nm <sup>3</sup> ) | Electricity (kWh) | GHG avoided (ton CO <sub>2</sub> e) |
| 1            | Frequency reduction in gas engines                                     | Nil                      | 4,536                    | 27,513                | 90,792            | 59                                  |
| 2            | Blowdown optimization  | Nil                      | 3,961                    | 29,668                | --                | 64                                  |
| 3            | Reduce air leakage in the compressed air system and pressure reduction | 418                      | 2,166                    | 13,137                | 43,351            | 28                                  |
| 4            | Replacement of conventional fans with BLDC fans                        | 629                      | 4,788                    | 29,042                | 95,838            | 63                                  |
| <b>Total</b> |  | <b>1,047</b>             | <b>15,451</b>            | <b>99,360</b>         | <b>229,981</b>    | <b>214</b>                          |

**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 and engages with brands, technology suppliers, industrial associations, financial institutions, government to bring about systemic and positive environmental change for the Bangladesh textile sector contributing to the sector’s long-term competitiveness and environmental sustainability.

**WHAT PaCT DOES:**

- Cleaner Production Assessment
- Water & Energy Management
- Energy Efficiency & Productivity Assessment
- Rooftop Solar PV Pre-feasibility Study
- Rooftop Solar Calculation
- Online Resource Monitoring

**DEVELOPMENT PARTNERS**



**IMPLEMENTING PARTNER**



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**BRAND PARTNERS**



**IMPLEMENTER**

