

## M/s Al-Badar Engineering –Improved Energy Performance



Localized air compressor helps reduce overall system pressure

*"Working with ESPIRE in energy audit is much fruitful for us. By working on their suggestions we are continuously improving which is not only helping us in decreasing our cost but also helping in purifying our environment."*

*Mr. Satwat Kaleem Qureshi*

ESPIRE is a partnership project between bfz gGmbH, Business associations, and SMEDA.

By partnering with ESPIREnergy, industries are leveraging their own efforts to save energy and thus reduce costs, by adopting the following three services:

- ▶ External Energy Audit (EA) for status quo analysis of energy consumption and recommendations for energy saving measures
- ▶ Installation of Energy Information System (EIS) for continuous measurement and monitoring of energy consumption and costs
- ▶ Implementation of Energy Management System (EnMS) in the factories for continuous control and reduction of energy consumption and costs with own staff.

▶ [www.espire.com.pk](http://www.espire.com.pk)

### Background

M/s AL Badar Engineering Company (Pvt.) Ltd. has been supplying quality products to leading multinational and national OEM'S of Automotive Sector. The company is ISO 9001 Certified and has got two plants, at Sheikhpura and Wazirabad. The area of two plants is 27000 and 2600 Sq. meters respectively. The average electricity consumption of the company is 1000 kWh per Hour.

### ESPIRE Intervention

In June 2013, Mr. Satwat Kaleem Qureshi, General Manager, contacted bfz gGmbH through Pakistan Association of Auto Parts and Accessories Manufacturers (PAAPAM) to avail services of ESPIREnergy (see description on the left).

Through Energy Audit 14 energy conservation measures were identified with an annual energy saving potential of 18.47 Million PKR with an investment of only 3.31 Million PKR at Payback of 3 Months.

For 4 months the consultant assigned by ESPIREnergy monitored and supported implementation, documented the progress and quantified the realized cost savings.

### Achievements

Al Badar Engineering implemented 5 improvement measures identified during Energy Audit within 4 months which resulted in annual energy savings of 7.38 Million PKR with an investment of only 0.84 Million PKR at a 2 months payback time.

The company has established an Energy Policy with clear goals and objectives for improving the energy efficiency. An Energy Team; led by Mr. Zamir-ul Hassan Assistant Manager Maintenance; has been formed which continuously monitors the Energy Performance Indicators.

ENERGY SAVING MEASURES [implemented within first 6 months]	ENERGY SAVING [M-PKR/year]	INVESTMENT [M-PKR]
Control Compressed Air Leakages	4.15	0.0
Reduce Compressed Air Pressure to 6 bar, Install 7kW Inline Booster	1.52	0.6
Insulation of Hot Surfaces	0.38	0.03
PFI Capacitor Health management	1.33	0.21
Set Frequency limits on Generators	Improved Safety	0.0
<b>TOTAL</b>	<b>7.38</b>	<b>0.84</b>