Who is behind ESPIREenergy?

Training and Development Centres of the Bavarian Employers' Association (bfz) gGmbH is one of the largest providers of vocational training in Germany.

The International Division of bfz conducts development cooperation projects on behalf of World Bank, European Union, and the German Government in all parts of the world.

In Pakistan bfz's objective is to support the industry to work economically more efficient and ecologically sustainable.

Business associations are partners of bfz and guarantee outreach and sustainability of the activities.

These associations include Pakistan Hosiery Manufacturers and Exporters Associations, Pakistan Readymade Garments and Exporters Associations, Towel Manufacturers Association, and Pakistan Association of Automotive Parts and Accessories Manufacturers. These associations are the link to the individual industries, helping with need assessment and promoting project activities. Furthermore the associations plan, organize and conduct events and trainings with network partners to guarantee sustainability of ESPIRE project activities.

The project is supported by the German Ministry for Economic Cooperation and Development (BMZ) and Sequa gGmbH.

Small & Medium Enterprises Development Authority (SMEDA) is an important Network Partner of bfz. As an autonomous body, it closely interacts with SMEs and provides technical services in the areas of energy management, productivity enhancement and quality improvement.

Contact us

info@espire.com.pk

Phone Sindh: +92 (0) 302 82 70 224

Phone Punjab: +92 (0) 305 55 52 343

More information: www.espire.com.pk
www.smeda.org.pk

"As a responsible Pakistani industrialist we have to take systematic measures to conserve power in all our business and production processes, making our products competitive and contribute in saving the precious national resource of energy for use of our other country fellows and maintaining a cleaner environment."

Mr. Abdur Razzaq Gohar
CEO, Infinity Engineering Pvt. Ltd

ESPIRE energy

Energy Efficiency Tools

Self-Assessment Tools
for Economic Efficiency &
Ecological Sustainability

Self-Assessment Tools for Energy Efficiency

ESPIRE has designed a set of tools to help industry measure and improve their energy performance.

The tools calculate the energy efficiency of a company and estimate potential energy and cost savings. The results generated by these tools are estimated based on models and help to determine which equipment or practices are worth pursuing to reduce energy consumption.

The companies can contact ESPIRE team or the experts involved in developing these tools using the contact information provided within the tools.

An on-site energy audit may be beneficial to uncover other energy conservation measures not addressed by these tools.

TOOL FOR PUMPING SYSTEMS

Conduct a Self Assessment of your Pumping System to calculate both Energy Performance of Pumps and Energy Saving Potentials, using this tool consisting of:

- Checklist for Pump And Pumping System
- Pump Efficiency Calculator
- Pump Energy Performance Calculator

TOOL FOR BOILERS AND STEAM SYSTEMS

Conduct a Self Assessment of your Boilers and Steam System, and calculate both Energy Performance of your Boilers and Energy Saving Potentials in your System, using this tool consisting of:

- Checklist for Hot Water & Boiler System
- Boiler Cost and Efficiency Calculator
- Calculator for Combustion Efficiency of Boiler
- Steam Leakage Cost Calculator by using size of Orifice
- Energy Saving calculation by Insulating hot surfaces
- Energy Saving calculation by Condensate recovery
- Energy Saving Calculation by installing Economizer

TOOL FOR MOTORS

Conduct a Self Assessment of your Motors and calculate Saving Potentials through Replacement of Motors and/or installing Variable Speed Drives, using this tool consisting of:

- Checklist for Energy Saving Options in the Motors
- Energy Saving Calculator (Installing High Efficiency Motor)
- Energy Saving Calculator (Installing Variable Speed Drive)

TOOL FOR COMPRESSED AIR SYSTEMS

Conduct a Self Assessment of your Compressed Air System to calculate both Energy Performance of Compressors and Energy Saving Potentials, using this tool consisting of:

- Checklist for Energy Saving Options in the Compressed Air System
- Compressor Energy Cost Calculator
- Energy Saving through Pressure Reduction
- Leakage Cost Calculator - Offline Method
- Leakage Cost Calculator through Orifice Size
- Energy Saving by Installing High Efficiency Motor
- Energy Saving by Installing Multiple-stage Compressor
- Energy Saving by Installing Variable Speed Drive
- Waste Heat Recovery from Compressor

TOOL FOR CALCULATING COST OF ELECTRICAL ENERGY MIX

Calculate the total costs of your individual electrical energy mix, based on the different energy sources that your company uses: grid power, diesel generator and gas generator.

ENERGY MANAGEMENT MATURITY MATRIX

The Energy Management Maturity Matrix is based on Performance Levels defined in accordance with the Energy Management System ISO 50001. The Matrix helps you to assess the level of implementation of the energy management system in the company and identify areas where further development and consideration is required.

CHECKLISTS FOR SELF ASSESSMENT

This tool unites several Checklists that help you to conduct a Self-Assessment of your existing systems and performances in the following fields:

- ✓ Checklist Hot Water & Boiler System
- ✓ Checklist Power generation and distribution
- ✓ Checklist Motors
- ✓ Checklist Pump & Pumping System
- ✓ Checklist Compressors
- ✓ Checklist Lighting System

MAXIMUM DEMAND INDICATOR (MDI) MANAGEMENT TOOL

Investigate opportunity of reducing the MDI of your company by improving Load Management of utilities and processes at shift start-ups and/or while connecting to grid power supply.