

## MEDIUM ENTERPRISES



**Ahmed Hossam EIMolla**

### *Data Center DC Stations Enhancement*

Company:

**Vodafone**

Egypt

Products/Services:

**Telecommunication services**

No. of employees:

**6000**

#### ● Energy concept description ●

According to the current technology of the DC stations which as data centers power source, the criticality of load restricts some level of continuous secured power energy like dual source, which perform inefficient for the low loading (40%).

The main target of the energy concept is to replace the old technology DC power station with new and intelligent technology DC power station to optimize efficiency under low loading and keep the load dual source.

After that we can reduce DC power modules to increase loading level and decrease no load consumption in other DC modules by activate new technology called Echo Mode. Which will affect the operating costs, energy consumption, greenhouse gases in the generation sites and reduce the required storage backup time of the DC power stations.

#### ● Results ●

Form of energy	Electrical power
Energy saving potential	2 306 MWh/a
Cost saving potential	99 918 EUR/year
CO <sub>2</sub> – saving potential	1 335 t/a
Project total costs	575 354 EUR
Payback period	5.8 Years
Date of implementation	2017
Project life time	10 years

# MEDIUM ENTERPRISES



**Michael Humer**

*Energy saving due to installation of a mash preheater in ethanol distillation*

Company:  
**AGRANA Stärke GmbH**  
Austria

Products/Services:  
**Production of starch and starch products and other chemical products**

No. of employees:  
**960**

## ● Energy concept description ●

### Aim .....

Increasing of the average mash temperature by heat recovery out of the ethanol-steam mix of the mash stripper from 55 °C up to 62 °C.

### Base situation .....

Preheating of fermented mash at 55°C before distillation.

For increasing the efficiency in the ethanol distillery in plant Pischelsdorf an additional bundle-heat exchanger to preheat the mash shall be integrated. The alcoholic mash will be heated up by the condensing raw alcohol out of the mash stripper.

## ● Results ●

Form of energy	District heating
Energy saving potential	16 900 MWh/a
Cost saving potential	845 800 EUR/year
CO <sub>2</sub> – saving potential	3 230 t/a
Project total costs	508 000 EUR
Payback period	0.6 Years
Date of implementation	15.12.2017

# MEDIUM ENTERPRISES



**Georgi Koparanov**

*Year-round utilization of the waste heat generated by the air compressors*

Company:

**Magna Powertrain Plovdiv EOOD**  
Bulgaria

Products/Services:

**Manufacture of other parts and accessories for motor vehicles**

No. of employees:

**450**

● **Energy concept description** ●

**Aims** .....

Utilization of compressors’ waste heat for the whole year.

**Base situation** .....

Currently the compressors’ waste heat is being utilized for:

- about 23 MWh/year for household hot water (year-round)
- about 19 MWh/year for heating of the old office building (seasonally)

**Optimization potentials / weak points** .....

The utilization potential of waste heat regenerated yearly by the air compressors is 750 MWh/year, or monthly - 62 MWh/month

**Proposals of solution /possibilities** .....

The regenerated waste heat can be utilized additionally for:

- Heating of the old production hall – 274 MWh/year (during winter season)
- Technological needs – 178 MWh/year (year-round)

**Effects** .....

In result of the proposed energy-saving measure we could realize savings of 452 MWh/year by replacing electrical energy in the production process or gas for heating, with regenerated compressors’ waste heat.

● **Results** ●

Form of energy	Electrical power
Energy saving potential	452 MWh/a
Cost saving potential	26 230 EUR/year
CO <sub>2</sub> – saving potential	202 t/a
Project total costs	27 167 EUR
Payback period	1.0 Years
Date of implementation	30.09.2016