

# Dhekelia Power Plant, ICE 2 50 MW, Cyprus

**BWSC**

*- YOUR BEST PARTNER FOR GROWTH*



**BUILT in 2010**

**FOR**



Electricity  
Authority  
of Cyprus

**BY**

**BWSC** 

**Burmeister & Wain Scandinavian Contractor A/S**

# Electricity Authority of Cyprus

## 50 MW ICE2 Power Plant at Dhekelia Power Station

In continuation of the ICE1 project (Internal Combustion Engines), BWSC was awarded their second power plant project for Electricity Authority of Cyprus in December 2008.

The power plant is based on 3 seawater cooled medium speed diesel engines with generators with a total net output of 50 MW at 132 kV.

The power plant is a turnkey EPC supply consisting of engineering, procurement, construction and commissioning.

Priority has been placed on minimising impact on the environment. The power plant is equipped with a Selective Catalytic Reduction (SCR) system, reducing NO<sub>x</sub> emissions to around 1/10 of the unabated NO<sub>x</sub> emissions. This is achieved by injecting urea solution in the exhaust gas. As part of the SCR system, equipment for urea dry storage, mixing facilities and liquid urea storage tanks were installed.

The complete project was handed over on the contractual taking over date, 1<sup>st</sup> of June 2010.



### Summary

#### Contract

Type..... Turnkey  
Effective contract..... December, 2008  
Plant net output..... 50 MW

#### Technical Data

##### Diesel Engines

Make..... Wärtsilä, Italy  
Type..... 3 x 18V46, 4 stroke  
Speed..... 500 rpm

##### Alternator

Make..... ABB, Finland  
Voltage/frequency..... 11kV/50 Hz  
Output at 100% load..... 17,160 kW

##### Seawater Cooling Pumps

Make..... Iron, Denmark  
Type..... Submerged vertical pump  
Flow..... 3 x 770 m<sup>3</sup>/h

##### Central Cooler

Make..... Sondex, Denmark  
Type..... Titanium plate heat exchanger  
Cooling capacity..... 6 x 8,647 kW

##### Selective Catalytic Reduction (SCR) System

Make..... H+H, Germany  
Type..... Honeycomb/full contact catalyst (TiO<sub>2</sub>)

##### Step-up Transformer

Make..... ABB, Italy  
Cooling..... 1 x ONAN/ONAF  
Ratio..... 11 kV/132 kV  
Rated power..... 65 MVA

##### Power House, Building and Stack

Size (W x L x H)..... 30.7 x 32.8 x 14.9 m  
Overhead crane..... 1 x 8 ton  
Stack..... Ø 3.5 x 60 m

##### Civil Work

Subcontractor..... Iacovou Brothers Ltd, Cyprus



**Burmeister & Wain Scandinavian Contractor A/S**  
Cydevang 35, P.O. Box 235, DK-3450 Allerød, Denmark  
Phone +45 48 14 00 22, Fax: +45 48 14 01 50  
bwsc@bwsc.dk, www.bwsc.dk