

---

---

---

# Combined Heat and Power

Bynov, City of Decín CHP-Plant



*Main Contractor*

**BWSC** 

# Bynov, City of Decín CHP - Plant

- Background** In order to improve environmental impact from energy production, and still be able to offer lowest price of district heating, City of Decín decided to convert the existing lignite heat plant and heat distribution system (DH) based on steam and centralized preparing of warm water into a natural gas-fired engine-based combined heat and power plant (CHP).
- Turn-key Contractor** The Danish company Burmeister & Wain Scandinavian Contractor A/S is the main contractor for the complete supply of CHP plant and DH network. The delivery will be completed within the 1996-97 winter season.
- Project Specification** The project is based upon four (4) lean burn gas engines of a total of 5.2 MW<sub>e</sub> and 7.1 MW<sub>heat</sub>, two 5.5 MW peak load gas boilers together with conversion of the heat distribution system to hot water system using 4000 m of preinsulated pipes, 49 compact house heat transfer stations and one heat storage tank approx. 600 m<sup>3</sup>.
- Installation Proposed** The project is designed with a view to obtain the lowest possible net price of heat as well as the shortest period of depreciation together with maximum reliability for the Customer.
- Control System** The plant will be Controlled, Regulated and Monitored automatically by a PLC-based system.  
Control includes start-up and optimizing electricity and heat production based upon graduated tariffs and current heating requirements. Furthermore, heat consumption and use of hot water at individual houses can be controlled. The compact control stations transmit information and control signals via cable to main CRM-PLC system.
- Environmental Improvement** The town of Decín will get rid of more than 90 tons sulphur dioxide (SO<sub>2</sub>), 18 tons nitrogen oxide (NO<sub>x</sub>), 2000 tons ash and slag and 2000 tons CO<sub>2</sub> per year.  
Furthermore, noise levels will be kept down to comply with the requirements of 40 dB (A).
- Financing** From SFZP, 37% as loan without interest, payback period 6 years and 37% as a grant. Approx. 7% from the US center for clean air policy without interest, payback period 30 years, and approx. 9% from the Danish Ministry of Environment as a grant.  
Remaining approx. 10% from own financial sources of the town of Decín.



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

P.O. Box 235 · Gydevang 35 · DK-3450 Allerød · Denmark

Tel. +45 48 14 00 22 · Fax +45 48 14 01 50 · E-mail: sales@bwsc.dk · Homepage: www.bwsc.dk