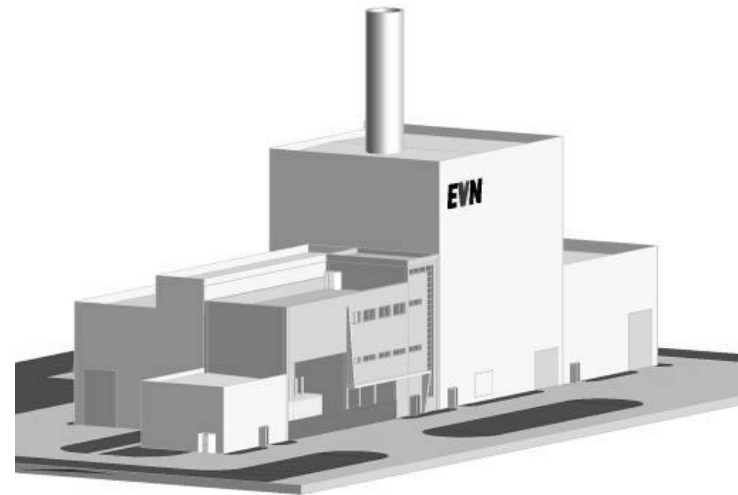


A new cogeneration plant in Plovdiv



Jörg Sollfelner
Regional Manager EVN Bulgaria

EVN Group in South-East Europe

- ▶ Retail markets:
 - ▶ Bulgaria
 - ▶ Macedonia
 - ▶ Croatia
- ▶ Whole-sale trading



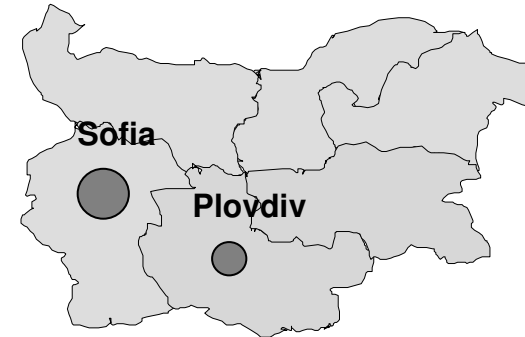
EVN Bulgaria – 5 years in a challenging market

- ▶ Jan 2005: Acquisition of 67% of EDC Plovdiv and EDC Stara Zagora
- ▶ Jan 2008: Acquisition of 100% of DHC Plovdiv
- ▶ 1,5 m electricity consumers, 35 000 heat customers
- ▶ Service area 42.000 km²
- ▶ Turnover 2009 of 552,7 m EUR

- ▶ More than 3.000 Employees
- ▶ Add. more than 3.000 working places with suppliers and service providers

- ▶ Investment and repair 2005-2009 of 316,2 m EUR:
 - Improvement of customer care
 - Increase of security of supply and higher efficiency
 - All profits were reinvested
 - Reduction of electricity grid losses from 17% auf 12 %
 - Solution of the Stolipinovo case

- ▶ Forecast 2010-2011:
 - Additional high investments in the electricity grid
 - Construction of a new cogeneration power plant in Plovdiv



Why the heat production in Plovdiv needs to be modernized

► Useful life of current plant

- TEZ Plovdiv Sever was built more than 30 years ago
 - Boiler 1+2 are already out of service
 - Boiler 3 should be decommissioned within a few years

► Change of user habit

- The current plant was designed for a huge steam load
- The current plant can not cope with the low summer load

Modernization
of production
facilities

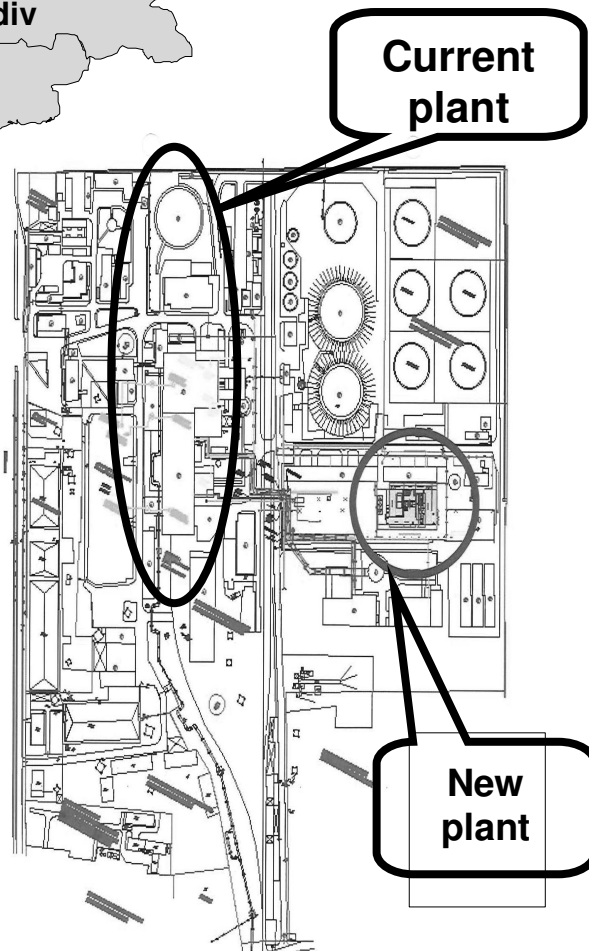
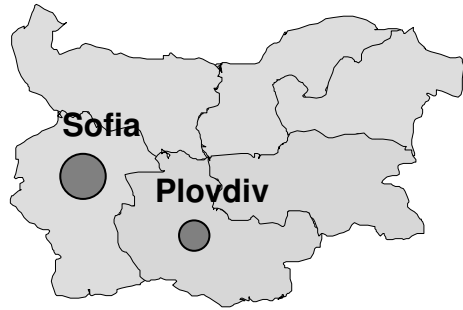
► Efficiency and Security of supply

- The new installation will show contemporary standards of efficiency
- A new plant is more reliable and decreases the risk of blackouts

► Environment protection

- A new plant through increase of efficiency decreases CO₂ and NO_x emissions

Location of the plant – TEZ Plovdiv Sever (next to the Trakia Highway)



Our solution: Gas-fired Combined Cycle Heat and Power Plant

Every modernization of the old heat system in Plovdiv should be one step into the 21st century

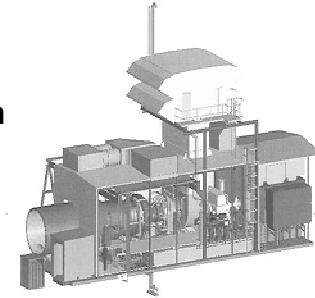
▶ Production parameters:

- Total heat load $54,0 \text{ MW}_{\text{th}}$
- Total electricity load $49,9 \text{ MW}_{\text{el}}$
 - Gas turbine $29,1 \text{ MW}_{\text{el}}$
 - Steam turbine $20,8 \text{ MW}_{\text{el}}$

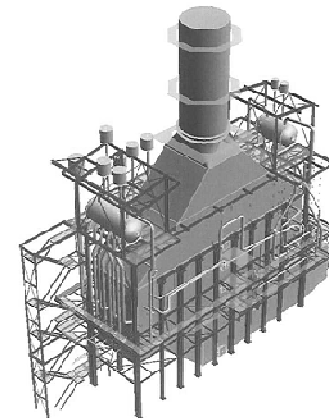
▶ Investment cost $\sim 100 \text{ Mio BGN}$

▶ General contractor Siemens

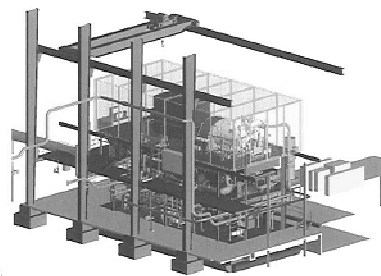
Gas turbine with generator



Steam generator



Steam turbine with generator and heat exchanger



Milestones for commissioning the new cogeneration plant in Plovdiv

