Power Plant Group West 1 - Scholven

Status date: 28.11.2017
A long tradition of energy generation
Scholven since 1908

Sinking of the coal mine pit Scholven

Increasing the output to 160 MW and supply of the nearby chemical industry with power and steam

Post World War II reconstruction is largely completed

July 1908

1912

until 1930

1944/1945

1948-1951

A 240 KW turbo generator is commissioned to supply Scholven pit with auxiliary power

Numerous bomb raids cause severe damage to the power plant
Scholven – site history

1968-1971

Commissioning of units B-E
(4 x 345 MW = 1.380 MW coal)

1970

Hibernia AG changes to
VEBA Kraftwerke Ruhr AG

1974/1975

Commissioning of units
G+H (2 x 714 MW oil)

1979

Commissioning of unit F
(676 MW coal)

1985

New district heating unit Buer (138 MWeq)
(installed capacity in total now 3,622 MW)
Scholven – site history

VEBA Kraftwerke Ruhr AG becomes PreussenElektra, later E.ON

- 1998-2000: Shutdown of units G and H
- 2001/2003: Complete dismantling of units G and H
- 2010: Installed capacity: 828 MW, production of steam and compressed air to surrounding industry
- from 01.01.2015: Shutdown units D, E, and F
- 31.12.2014: E-ON Kraftwerke GmbH changes to UNIPER
- 2016:
Power Plant Group West 1 today

- Heating plant Westerholt
- Scholven power plant
- Heating plant Marl
- Steam plant Zweckel
- District heating exchanger Schlägel & Eisen
- Heating plant Recklinghausen
Scholven supplies a large interconnected district heating network...

- Distance East to West: 28.4 km
- Distance North to South: 20.4 km
- Length of pipeline: 705 km

Diagram:
- Heating plant
- Heating plant (auxiliary/peak)
- Mine gas CHP
- External heat source under contract
- Interconnected district heating network
- Directly supplied areas
- Areas supplied by sales partners
Scholven makes the most out of coal: cost effective and environmental friendly cogeneration of heat and power

- Scholven power plant generates heat for more than 100,000 regional households.
- Neighbouring industries are supplied with electrical energy, steam and process heat.
- Buer CHP-plant is optimized for heat production. Result: fuel efficiency of more than 90%.
- Together with the district heat generation of units B und C the usage auf coal is 50% in relation to the plant as a whole. This is much better compared to electrical generation only.

![Diagram showing energy usage and efficiency improvements with CHP.]
Functional diagram of a coal fired power plant

Buer CHP unit has neither condenser nor cooling tower:
The condensing heat is fed directly into the district heating system.