

# Flinders Power Facts Boiler Demolition



## Background

The 544 MW coal fired Northern Power Station was commissioned in 1985 and operated for approximately 30 years before closing in May 2016.

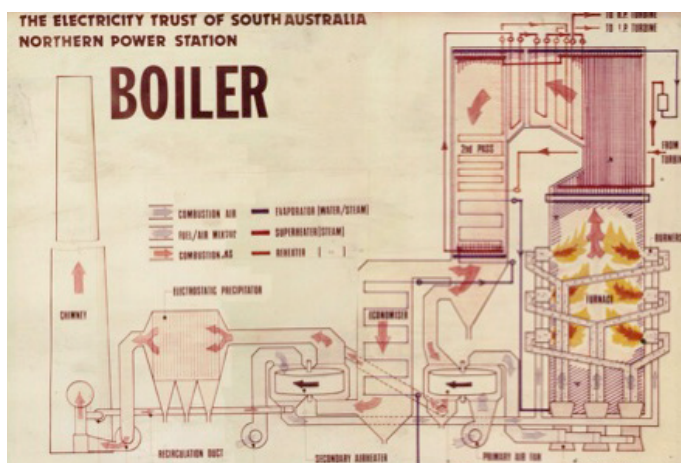
The power station was constructed with a two-boiler system. Each boiler was designed as a once through Benson type featuring a traditionally configured radiant furnace with a cross duct tunnel connecting with a down flow back pass. The boilers were designed by Vereinigte Kessel Werke AG Germany.

Operating conditions for the two boilers were as follows:

- MCR steam flow: 225 kg/sec
- Superheater outlet steam temps: 535°C
- Re-heater outlet steam temps: 535°C
- Final feedwater temps (to economiser): 250°C
- Superheater outlet operating pressure: 17 Mpa

Each boiler was equipped with:

- 6 Mill Pendular Saucer coal pulverisers rating 42 tonnes/hr, 4 burners per mill
- 24 round, turbulent burners, front and rear wall firing and light-up oil burners
- 1 Primary radial flow air fan
- 1 Primary rotary regenerative air heater
- 2 x stages of economiser
- 2 x electrostatic precipitators
- 2 x radial flow Induced Draft Fans
- 1 x radio flow Forced Draft Fan
- 1 Rotary regenerative secondary air heater
- 1 x gas recirculation radial flow fan
- Ash and dust plant
- Coal handling plant





## Demolition works

Since May 2016, Flinders Power and McMahon Services Australia have been working to dismantle and remove the power station plant and equipment from site to leave it in a safe and stable condition suitable for future industrial use. Demolition works commenced in July 2016 and will continue through to June 2018.

The two Northern Power Station boilers stand adjacent the stack and can be seen from a number of kilometers away. Together with the stack they form the shape of the power station that residents and visitors of Port Augusta have come to know.

On 9 November 2017, the two boilers will be felled using charge-cutting explosives under controlled conditions. The safe and efficient felling of the 2 x 10,000T structures, which are each 83m high x 46m long and 22m wide, will enable subsequent conventional demolition processes to safely occur from ground level. The scrap will be processed and form part of the 50,000T of scrap steel expected to be salvaged from across the site. Flinders Power, McMahon Services Australia and Precision Demolition have coordinated the demolition with the relevant government agencies and emergency services to

ensure the highest safety and environmental standards.









The boilers have been washed through since ceasing operations and water canons will be used to minimize the generation of dust as far as possible. Northern Power Station has only a limited amount of asbestos installed at the burner fronts and this has already been safely removed under controlled conditions prior to today's felling.

Flinders Power would like to take this opportunity to acknowledge the efforts of the thousands of dedicated and passionate people who have designed, constructed, operated, maintained and now demolished these landmark structures over the past 40 years.

With the demolition of the boilers, another key milestone for the project will be successfully achieved.

Once the demolition works have been completed in their entirety and in accordance with Government requirements, Flinders Power will take ownership of the site and actively seek to sell the site to a suitable buyer who will develop it in line with the industrial zoning.

## Demolition timeline

2017										2018					
MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
 West Coal bunkers and Transfer Towers charge felling	 East Coal bunkers and Transfer Towers charge felling		 Tower G and NPS Economisers charge felling		 Turbogenerator ring beams charge felling			 NPS Boiler charge felling	 Completion of Playford asbestos removal				 Northern and Playford stacks charge felling		 Practical completion
PORT AUGUSTA DEMOLITION															

## Where can I find out more?

If you would like more information about the project, or wish to arrange a group tour of the site, please contact us on 8372 8600 or email [enquiries@flinderspower.com.au](mailto:enquiries@flinderspower.com.au)

More information and videos of the demolition of the boilers can be found on our website: <http://flinderspower.com.au/community-information/>