

Jera



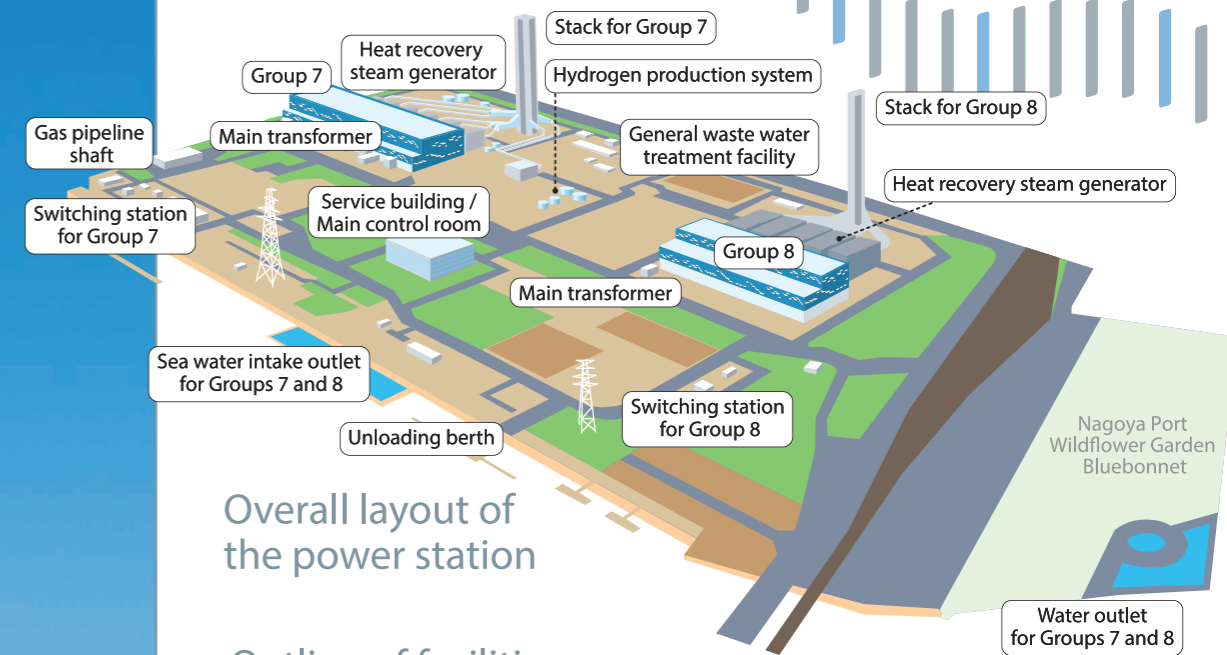
WELCOME TO SHIN-NAGOYA THERMAL POWER STATION!

Features and key points of the Shin-Nagoya Thermal Power Station

- The only thermal power station located in Nagoya City which went into commercial operation in 1959.
- By switching fuel from coal to oil, LNG-flued highly efficient combined-cycle system has been adopted since 1998.

Only thermal power station in Nagoya City

Located on the Shiomi Pier of the Port of Nagoya, the Shin-Nagoya Thermal Power Station is the only thermal power station in Nagoya City, appropriately designed for an urban power station: featuring stacks that resemble a high-rise building and facilities with a simple, modern appearance, the power station blends in with the city environment. In 1959, it went into operation as a coal-fired thermal power station. Subsequently, the fuel was switched to oil, then in 1998 the station was relaunched as a cutting-edge thermal power station fueled by LNG, a clean energy source. The highly efficient combined-cycle power station consists of gas turbines and steam turbines. It plays a key role in ensuring the stable supply of electricity in the Chubu region and other areas while helping to conserve energy resources and reduce environmental impact.



Outline of facilities

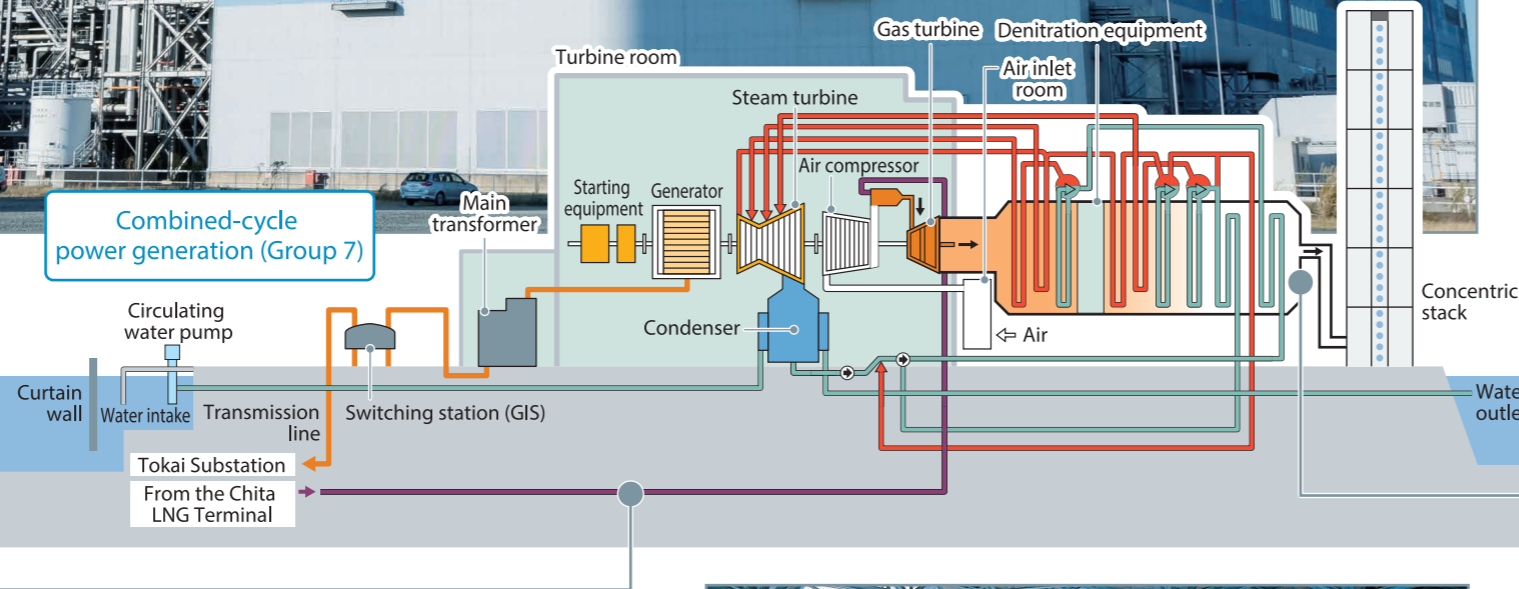
Unit No.	Output (MW)	Fuel	COD	GT combustion temperature (°C)	Power generation type
Group 7	7-1	LNG	August 1998	1,300	Combined cycle
	7-2		October 1998	1,300	
	7-3		November 1998	1,300	
	7-4		November 1998	1,300	
	7-5		December 1998	1,300	
	7-6		December 1998	1,300	
Group 8	8-1	October 2008	1,500	Combined cycle	
	8-2	July 2008	1,500		
	8-3	June 2008	1,500		
	8-4	April 2008	1,500		

Name: Shin-Nagoya Thermal Power Station Location: Minato-ku, Nagoya City Site area: Approx. 340,000 m²

CHECK! Features

Building walls designed based on musical notes

Construction of Group 7 started in 1991, which marked the 200th anniversary of the death of Wolfgang Amadeus Mozart. For this reason, the design is based on Symphony No. 40 in G minor by Mozart.



Gas pipelines

Fuel is transported to the power station through a gas pipeline that runs approximately 17 km from the Chita LNG Terminal in Chita City.

Turbines and generators

The driving force of gas turbines is combined with that of steam turbines to generate electricity with high thermal efficiency. To create a good working environment, the steel frames inside the turbine building are painted in six shades of blue; the bright, refreshing, and clear appearance is suitable for an urban power station.



Heat recovery steam generator

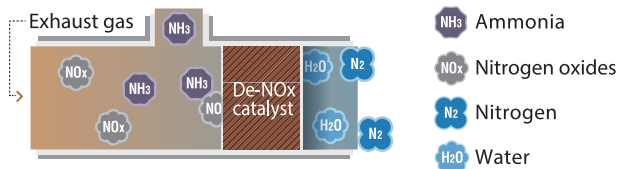
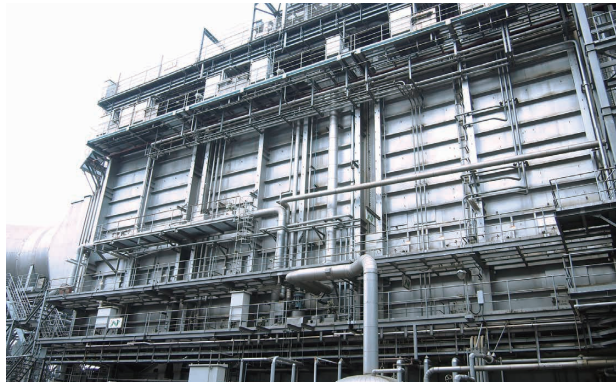
The heat recovery steam generator generates steam by extracting the heat from the high-temperature exhaust gas used for operating the gas turbine.

Environmental Initiatives

Preventing air pollution

The power station is fueled with LNG and therefore does not discharge the sulfur oxides which are the cause of particulate matter and acid rain. The use of low-NOx burners and exhaust gas denitration equipment has also reduced the discharge of nitrogen oxides. The white smoke rising from the plant stacks on cool days is steam.

Exhaust gas denitration equipment (removal of NOx)



Ammonia is injected into the exhaust gas. The de-NOx catalyst stimulates a chemical reaction that turns the nitrogen oxides into harmless nitrogen and water.

Keeping the oceans clean

The equipment cleaning water and general waste water generated at the power station undergoes pre-processing such as oil separation and neutralization. It is then purified by means of condensation, sedimentation, filtration and neutralization, and the water quality is checked before it is discharged.

Protecting the global environment

Since power stations make use of the earth's enriched resources, it is important to achieve high level of thermal efficiency when generating electricity due to preservation of the global environment. In addition, greater generating efficiency means that less carbon dioxide, which causes global warming, is produced.

We are committed to conserve the earth's finite resources and curb global warming by leveraging the technical capabilities we have accumulated over the years and by introducing highly efficient power generating equipment.

In-house production of hydrogen for cooling generators

JERA set up a hydrogen production system on the site of the Shin-Nagoya Thermal Power Station. Hydrogen for cooling generators is produced locally at each power station. Hydrogen is expected to become an important energy source in Japan and projects are underway to build a hydrogen society. JERA is working on hydrogen production to gain new expertise which it can apply to the utilization of hydrogen energy in the future.



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