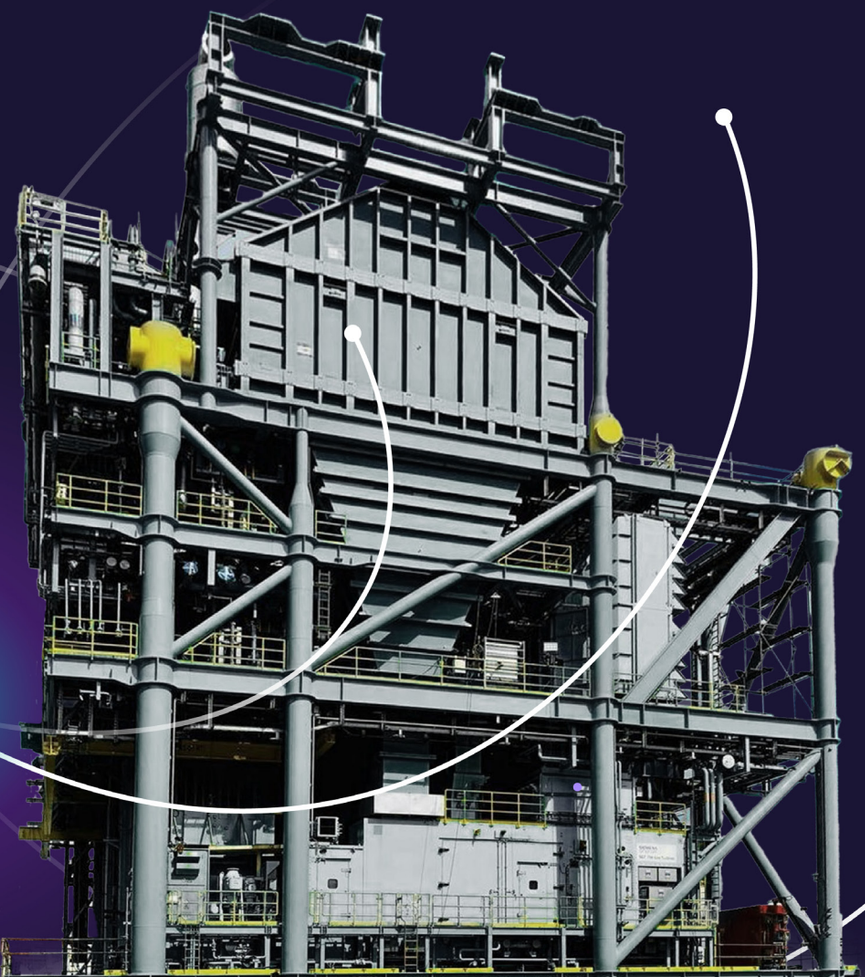
Combined cycle power plants for oil & gas offshore applications



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SIEMENS energy

Our offshore CCPP solutions

Siemens Energy combines technology and experience to provide cutting-edge offshore combined cycle power plants (CCPP) to meet the growing demand for efficient and sustainable power generation. These technologies deliver a low lifecycle cost of converting fuel into electricity.

With around 25% reduction in greenhouse gas emissions and the flexibility to match output to demand, we provide reliable power generation for the offshore Oil & Gas market.

Introduction | Components | Basic principles | Benefits & capabilities

A combined cycle power plant is a highly efficient type of power plant that uses both gas turbines and steam turbines to generate electricity.

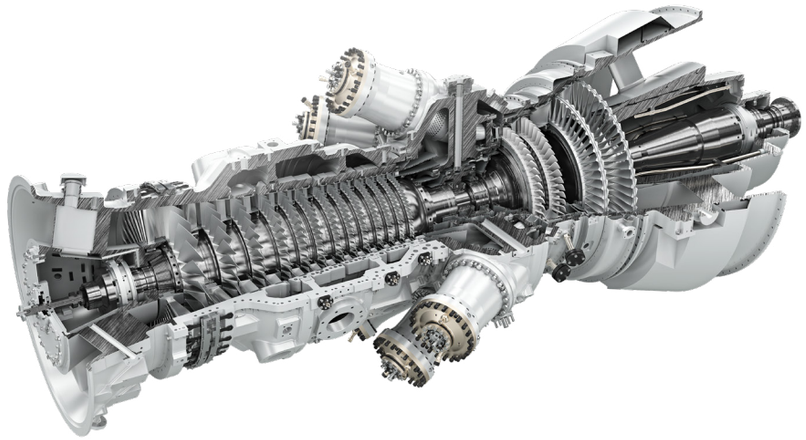
These plants generate more electricity from the same amount of fuel compared to a simple cycle gas plant, as they combine two thermodynamic cycles: the Brayton cycle (gas turbine) and the Rankine cycle (steam turbine).

For offshore applications such as FPSO (floating production, storage and offloading vessels) and fixed leg platforms, this can be achieved by using either one of our lightweight and compact SGT-750 or SGT-A35 gas turbines, combined with a steam turbine such as the SST-600.



Our gas turbine portfolio

Discover our gas turbine models SGT-750 and SGT-A35 which are both robust solutions for offshore combined cycle power generation due to their unique features and capabilities.



SGT-750 | SGT-A35

The SGT-750 is a **lightweight industrial gas turbine** designed and developed to incorporate the size and weight advantages of a larger aeroderivative gas turbine while maintaining the robustness, flexibility and longevity of the traditional heavy-duty industrial gas turbine. Maximized uptime, top-class performance, and a low environmental footprint are achieved through standard dry low emission-technology (DLE) in the SGT-750. This turbine stands out for its high lifetime profitability and is an ideal choice for offshore combined cycle power plants.

Performance data for offshore power generation*

Dry-Low-Emission (DLE)	SGT-750	SGT-750 2x1	SGT-750 3x1
Number of gas turbines	1	2	3
Number of steam turbine (STG)	0	1	1
Power output (MWe)	41,0	108,4	163,3
Plant efficiency (%)	40,5	54,1	54,4
Heat rate (kJ/kWh)	8884	6647	6622
Power STG included in above	0	29,3	44,6

Simple cycle power generation Combined cycle power generation

*All performance values are based on standard design, ISO ambient conditions and natural gas fuel.



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Siemens Energy Global GmbH & Co. KG
Freyeslebenstrasse 1
91058, Erlangen, Germany

For more information, please visit our website:
siemens-energy.com/global/en/home/products-services/product/combined-cycle-power-plants.html

E-mail: gs.sales@siemens-energy.com

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Gas turbine overview

Steam turbine overview