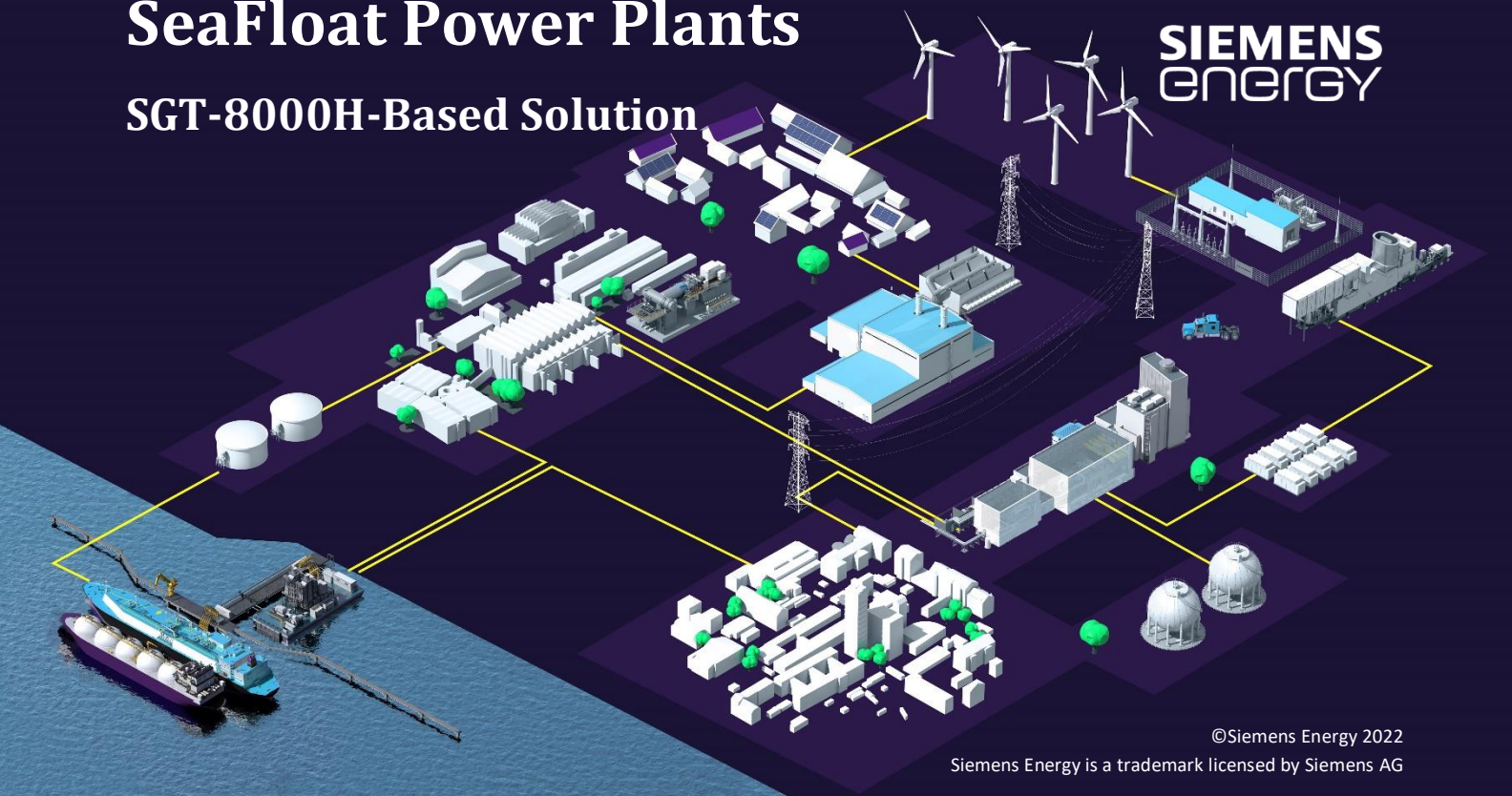


SeaFloat Power Plants

SGT-8000H-Based Solution

SIEMENS
ENERGY



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The SCC-8000H SeaFloat plant utilizes the advanced and robust SGT-8000H gas turbine designed for combined cycle applications with the highest possible efficiency

Short project duration

The SCC-8000H is modularized design and pre-assembled at state-of-the-art shipyard facilities with highly qualified labor. This degree of modularization minimizes both the manpower required at the yard and the installation and commissioning time at the final location.

Typical fields of application

The SeaFloat SCC-8000H is a noteworthy alternative to any land-based base load power plant with around 675 MW gross power output. It provides competitive CAPEX and OPEX due to the numerous advantages. One application is the replacement of outdated (coal fired) power plants. The outdated asset can be kept operating until the moment when the SeaFloat power plant is arriving at the site and hook up to the grid has started.

Less project risks

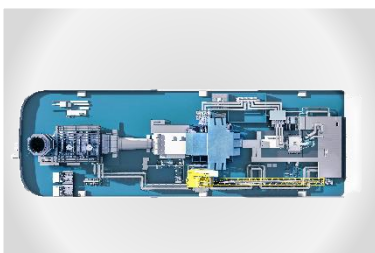
Typical soil risks do not apply to SeaFloat. Project risk resulting from brown field activities such as demolition works, site leveling activities, relocation of existing structure can be avoided by using SeaFloat power plants, such as replacing outdated plants. Due to fabrication and assembly offsite, project progress is not dependent on availability of qualified labor and infrastructure at the final location of installation/operation.

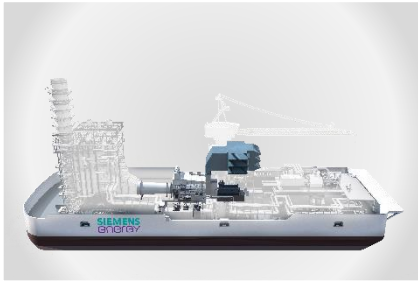
Consideration of marine conditions

While the SCC-8000H SeaFloat plant is based on technology from Siemens' vast experience in land based combined cycle power plants, marine conditions, such as movements, accelerations, and hull deflections have been considered and optimized.

Key benefits

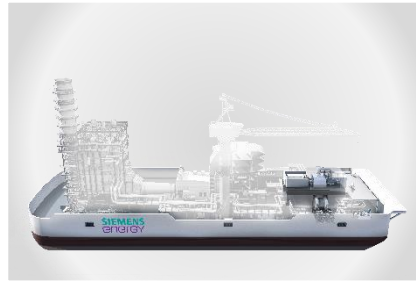
- High efficiency
 - up to 41% simple cycle
 - ~62% combined cycle
- Fast start-up capability, high operational flexibility
- Low lifecycle costs
- High reliability and availability
- High serviceability
- Reduced emissions per kWh
- High efficiency and low emission also in part-load operation
- Future fit, capable to burn up to 30% hydrogen





SGT-8000H

The gas turbine/generator set is a 3-point mount single lift package to de-couple it from deflections of the barge. Improved bearing capacity & anti-vibration mounts cope with movements and accelerations.



SST-5000

Steam turbine and condenser are placed in a common single lift frame which is 3-point mounted with anti-vibration mounts. Condenser partition plates and flexible elements have been considered.



HRSG

The HRSG is specially designed for a maritime environment. Baffle plates avoid sloshing of water in the drums and flexible elements and joints cope with hull deflections.

Simple cycle power generation

	50Hz	60Hz
Power output	450 MW	310 MW
Gross efficiency	> 41 %	> 40 %

Combined cycle power generation

	1x1 50Hz	1x1 60Hz
Gross power output	~675 MW	~470 MW
Gross plant efficiency	>61 %	>61 %
Number of gas turbines	1	1

Note:

Emissions, NOx, [ppmV] <25 @ 15% O2 (50-100% GT load)

Emissions, CO, [ppmV] <10 @ 15% O2 (50-100% GT load)

Installed performance at ISO conditions