LNG FLOATING POWER PLANT
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A floating power plant equipped with world leading level high performance Gas Turbine/Gas Engine in its class. Reliable power supply with faster delivery to diverse locations.

Advantages

1. World leading level electrical efficiency in its class and flexible operation (quick start-up, high partial load efficiency, wide operating range)
2. Faster construction to complete in Kawasaki’s own shipyard
3. Lower environmental impact by LNG fuel firing

Applications

- Distributed power source with stability and high efficiency
- Peak power source capable of quick start-up and responding to steep load fluctuation (Gas Engine Model)
- Grid stabilization for various kind of renewable energy
- Towable, suitable for periodic and seasonal operation
- Heat and electrical power generation (CCPP Model)

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>CCPP 80</th>
<th>Gas Engine 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Plant</td>
<td>Combined Cycle Power Plant</td>
<td>Gas Engine X 4</td>
</tr>
<tr>
<td></td>
<td>GT Model: L30A</td>
<td>GE Model: KG-18-V</td>
</tr>
<tr>
<td>Power Output</td>
<td>80 MW</td>
<td>30 MW</td>
</tr>
<tr>
<td>Heat Rate</td>
<td>6.622</td>
<td>7.273</td>
</tr>
<tr>
<td>Electrical Efficiency</td>
<td>53.1%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Barge Size (m L×M×D)</td>
<td>110 × 48 × 20</td>
<td>120 × 36 × 6.5</td>
</tr>
<tr>
<td>Tank Capacity (m³)</td>
<td>11,000 (equivalent to 2 weeks full load operation)</td>
<td>7,000 (equivalent to 4 weeks full load operation)</td>
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<tr>
<td>Switchyard</td>
<td>Included</td>
<td>Included</td>
</tr>
</tbody>
</table>

Note

Inlet Air Temp : 15°C
Atmospheric Pressure : 101.3kPa
Natural Gas (100% CH₄)
LHV of Fuel : 35.9 MJ/Nm³
World leading level of gross electrical generation efficiency and emission performance in the 30 MW class

- **Kawasaki L30A Gas Turbine**
  - World highest level of efficiency in its class
    - Electrical efficiency: 49.5%
  - Flexible operation
    - High partial load efficiency and wide (30% to 100%) operation range
  - Low NOx emission in its class
    - 85 ppm or less (@ 15% O2)
  - Quick start-up
    - 10 minutes from start-up to rated full load

- **Kawasaki Green Gas Engine KG-18-V**
  - World highest level of efficiency in its class
    - Electrical efficiency: 53.1%
  - Low environmental impact
    - World lowest level of NOx emission in the 30MW class, 15 ppm or less (@ 15% O2) with Kawasaki DLE combustor

Kawasaki Technology

- Kawasaki has been a leading shipbuilder since its establishment in 1878 and Kawasaki, in 1981, delivered the first LNG carrier ever built in Japan
- Kawasaki developed gas turbines and gas engines of world’s highest level electrical efficiency in its class

Kawasaki Design

- Optimal design generated by a specialized team comprised of shipbuilding engineers and power generation system engineering experts who address specific client needs
- Hull design engineered for various weather and marine conditions
- Energy systems engineered to match continuing client demands

Kawasaki Manufacturing

- Quality management through the manufacturing of gas turbines and gas engines at our own factory
- An ideal, comprehensive shipbuilding process from hull construction, installation of power plant to commissioning as floating power plant, at our own shipyard
- Reliable after-sales service

Sakaide Shipyard

Kawasaki LNG Floating Power Plant will be built and completed in Sakaide Shipyard located in Kagawa Pref., Japan, cooperating with other Kawasaki’s engineering and manufacturing facilities.
**Kawasaki Products Line-up in LNG Value Chain**

**LNG Carriers**
Kawasaki Heavy industries, highly respected as a pioneer of LNG carrier construction and its technology, significantly contributes to safe and economical transportation of clean energy.

**LNG Bunkering Vessels**
Kawasaki is making use of its wide array of LNG-related technologies, e.g. large size and small scale coastal LNG carriers, in the development and design of our LNG bunkering vessel to correspond to the increasing demand of LNG powered vessels in the shipping market.

**LNG Powered Vessels**
The world’s first LNG fuel powered pure car and truck carrier (PCTC) with a capacity of 4,000 cars. Environmental friendly PCTC which can satisfy the SOx and CO2 emission regulations established by the International Maritime Organization (IMO).

**FPSO (Floating Production, Storage & Offloading)**
Use Marine Boilers

**Future Society**

**Kawasaki Hydrogen Road**

Our aim is to usher a large quantity of hydrogen into our society in a manner that is safe, stable and affordable to handle. As our technology moves ahead, the makings of a new road, the Hydrogen Road, will be created.