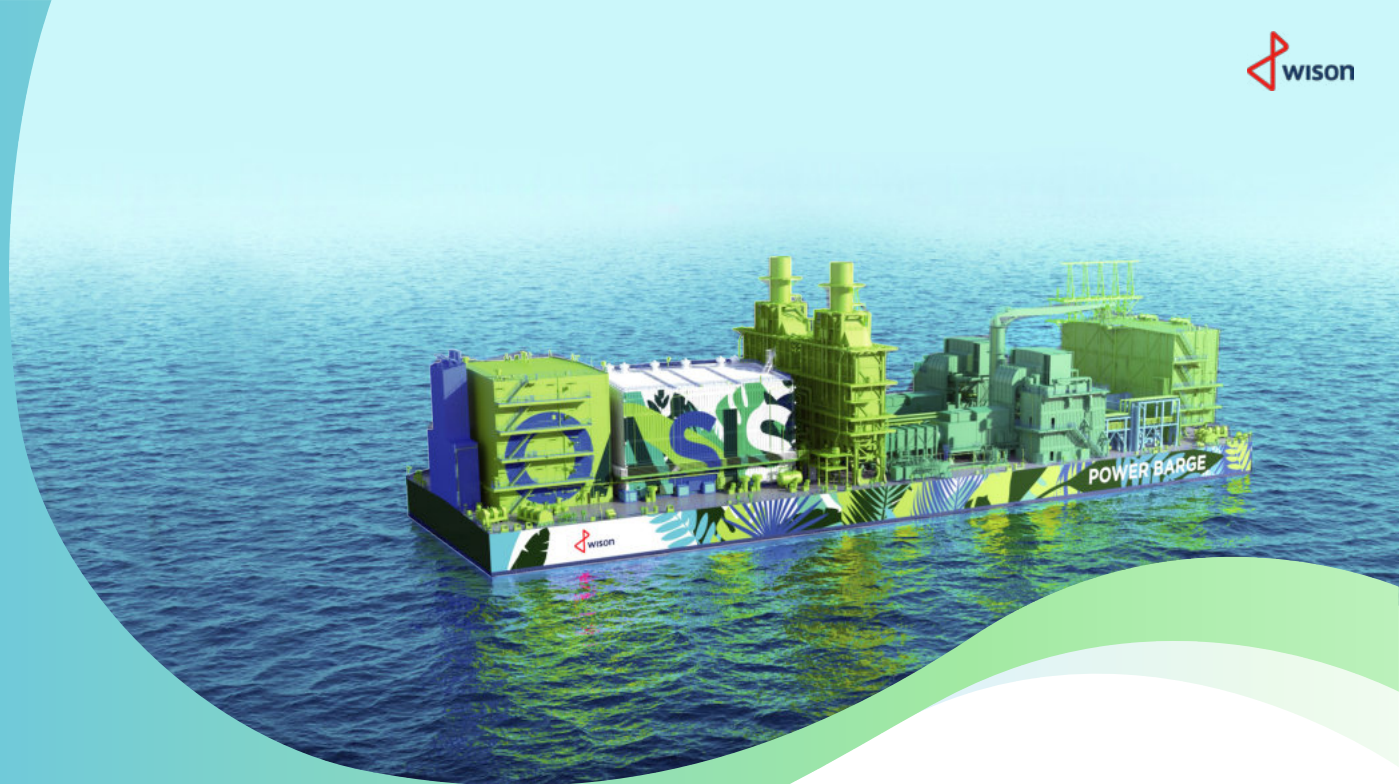




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FGPP

# Gas to Power

# Key Benefits

-  **Economical**  
Efficient solution with favourable gas price  
Saves cost and benefits end users  
Provides higher returns for local participants
-  **Security of Supply**  
Various power generating equipment suitable for gas or liquid fuel operations  
Providing options for continuous operations
-  **Flexible**  
Facility can be re-deployed to another location
-  **Quick-to-market**  
Shorter project lead time than conventional land-based power plant
-  **NIMBY**  
Facility that can be moored near-shore that is not at direct sight from the local community
-  **Permitting**  
Fewer permits requirements than land-based facility.
-  **Eco-Friendly**  
Environmentally friendly fossil fuel  
Almost zero PM and Sox  
Very low Green House Gas emissions.
-  **Low Execution Risk**  
Limited in-country scope.  
Facility built and tested in our yard.



Various Solutions Available

Solutions  
A

## Reciprocating Engine Configuration

Capacity range typically:  
30MW ~ 150MW

Efficiency of Plant :  
approx 47%

Solutions  
B

## Gas Turbine Configuration

Capacity range typically:  
150MW ~ 600MW

Efficiency of Plant :  
approx 56%

# Reciprocating Engine Power Barge



Demand-driven



Cost-optimized



Quick-to-market



HV Transmission with high degree of automation



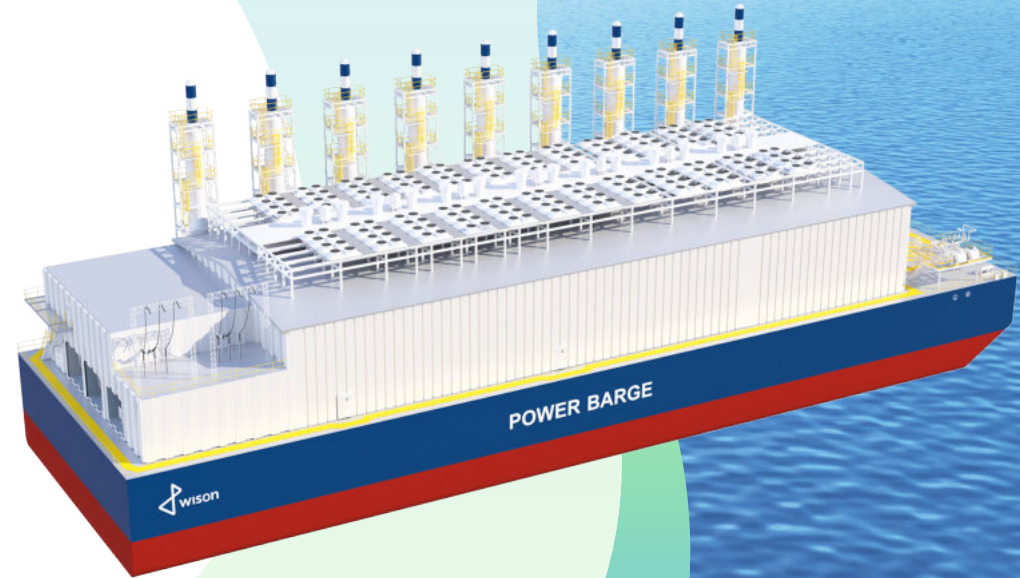
High-efficiency dual-fuel engines provide flexible power output while maintaining low fuel usage



Integrated hull with power plant utilities



Shore-compatible natural gas receiving manifold



# Combine Cycle Gas Turbine Power Barge

- 1** Once Through Steam Generators (OTSG)
- 2** Steam Turbine Hall
- 3** Deck House with Central Control Room, Offices
- 4** In Hull Machinery Space with Pumps and Auxiliary Equipment's
- 5** By-Pass Stack (Option)
- 6** Gas Turbines connected to OTSG
- 7** Aux. Transformers, Gas Insulated Switchgear(GIS) & Transmission Gantry
- 8** Fuel Sources: pipeline system or re-gassed from an LNG source.

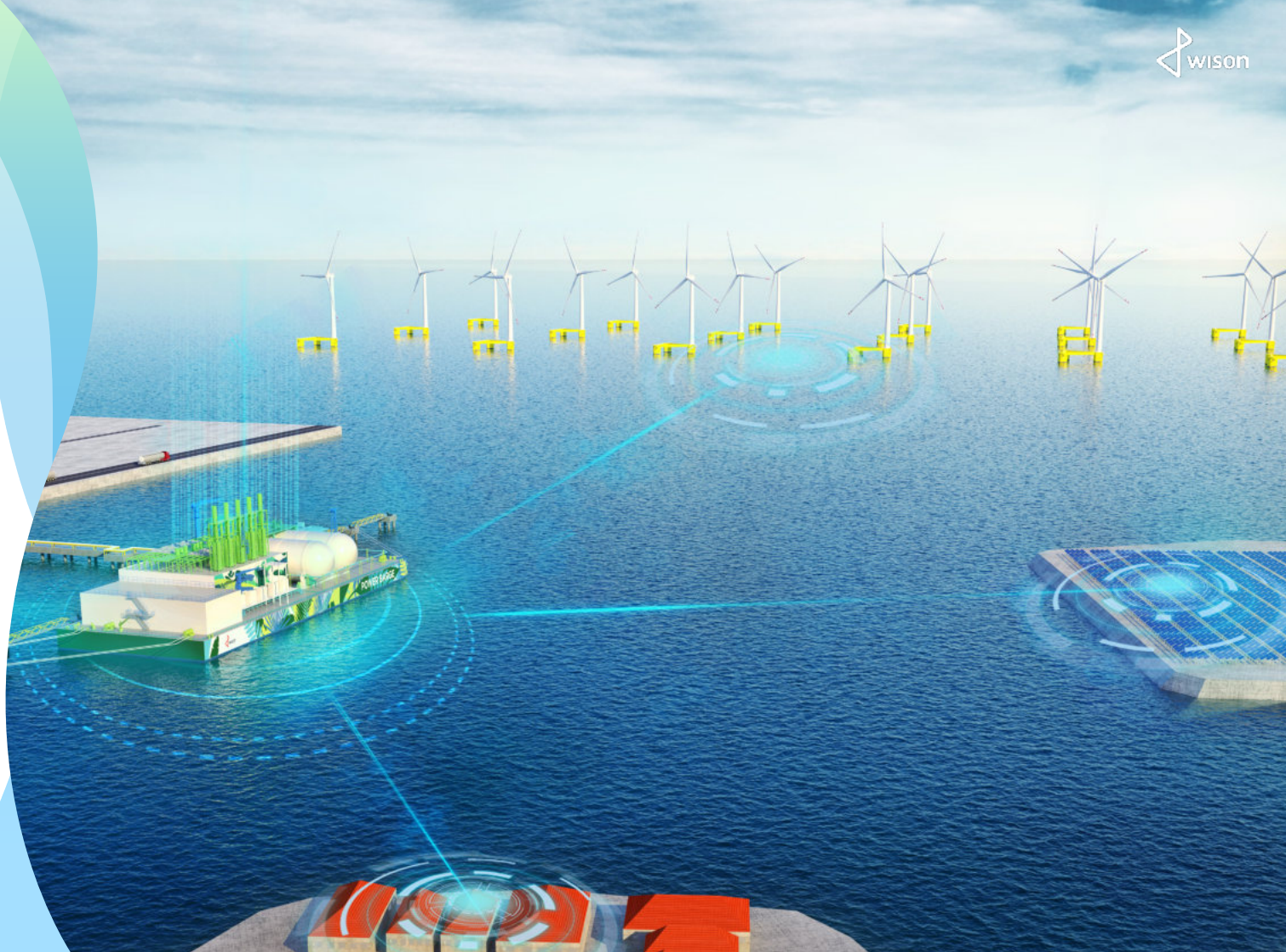


# Distributed Energy System (DES)

Distributed Energy System (DES) is a complete technology and management system that integrate multi-energy including renewable energy, energy storage and combined heat and power to form a resilient microgrid system.

DES - an artificial intelligence (AI)-based power management, and control of renewable energy systems (RES) can effectively overcome issues related to integrating variable renewable energy with power system, such as solar and wind forecasting, power demand profile analysis, power system frequency analysis and control, and transient stability assessment and to facilitate generation-to-demand control.

DES provides a breakthrough in integrating power system with multi renewable energy system and diversity energy storage system, and thus improve the applicability, efficiency, reliability, and economic viability of these systems.





## Application and Key Benefits

### Synergy of Renewable and Clean Energy



Accelerate the synergy of energy storage, renewable energy and clean fuel power generation through DES by overcoming the intermittency and fluctuation challenges in renewable energy.

### CO<sub>2</sub> Reduction



Optimal sizing of power generation capacity with maximizing the utilization of renewable energy and energy storage.

### Improve Power Quality & Stability



The power quality & stability of multi-energy system are improved through optimal power flow algorithm, energy forecasting, system monitoring, control strategies, and grid integration.

### Improve Security of Supply



The availability and reliability of power supply is enhanced with integration of multi-energy system and managed under DES.