

# World's First LPG Fueled Ferry Design to Use GE COmbined Gas turbine Electric and Steam System



The world's first Liquid Propane Gas (LPG)-fueled ferry design to use a GE COmbined Gas turbine Electric and Steam (COGES) system has successfully completed Hazard Identification (HAZID) meetings. The ship is designed to ensure both economic benefits and environmental performances, adopting LPG as the main fuel for lower fuel costs and no emission of sulfur oxides (SO<sub>x</sub>). GE's compact and lightweight COGES system will provide for all ship power, including propulsion.

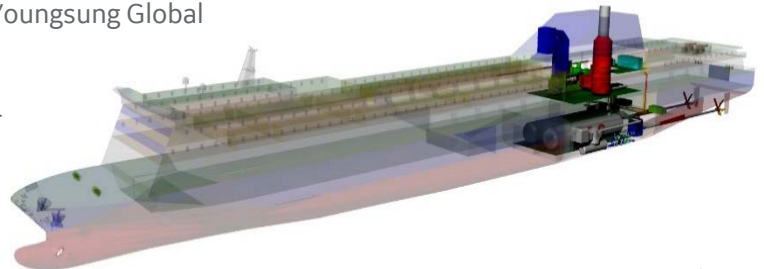
The consortium of Youngsung Global, DINTEC, Korea LPG Industry Association, GE's Marine Solutions and Far East Ship Design & Engineering Co. (FESDEC) signed a multilateral memorandum of understanding in November 2016 to cooperate on this unique ferry design.

Bureau Veritas, a world-leading classification society, chaired the HAZID meetings. All consortium members were represented as well as SK Gas and E1 who are members of the Korea LPG Industry Association. These meetings are a crucial tool used to identify hazards and safeguards at the early ship design stage. The consortium will proceed with securing a shipbuilding contract and will seek Approval in Principle to further validate the safety of the ship design including the COGES propulsion system and the LPG fuel supply.

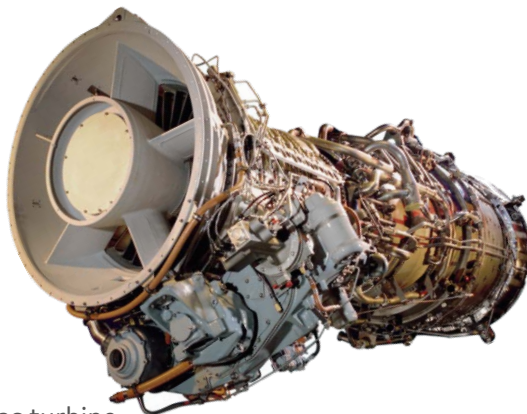
Traditionally, a new ship design undergoes a series of processes from research and development to ship architecture and design, HAZID and AIP certification, and finally onto contracts with the shipyard and suppliers. Therefore, meeting HAZID requirements is considered a key milestone in ensuring the final success of the LPG COGES ferry design process.

## COGES LPG Ferry Project Participants

- Hyun-Seong Marine Cruise Transport – a joint venture of Youngsung Global and DINTEC: Ferry owners
- DINTEC: Ferry operator
- GE's Marine Solutions: COGES propulsion system provider
- Answer: LPG fuel tank and gas supply system design
- FESDEC: Ferry naval architect
- Korea LPG Industry Association: LPG provider
- E1: LPG provider
- SK Gas : LPG provider



Shown above is an artist rendering of the world's first LPG-fueled COGES ship



GE's 25 MW marine gas turbine