

## DSME Technology Roadmap for Decarbonization & Digitalization

Decarbonization is accelerating in maritime industry.

IMO agreed to initiate the revision of IMO initial Green House Gas emission Strategy (final draft by MEPC 80, spring 2023), and approved the Work Plan to develop mid- and long-term measures in line with initial IMO strategy (MEPC 76).

As EU and UN also aim Net Zero Green House Gas emission by 2050 (Fit for 55 Package / COP26 Glasgow), maritime decarbonization seems to be accelerated.

DSME's target, as a shipbuilder, is "to secure technologies for the commercialization of zero carbon emission ships by 2030". In addition, DSME will implement a marketing policy to propose zero emission vessels as default unless clients require otherwise by 2050 at the latest.

To achieve the targets, DSME's decarbonization activities will take place in the short-term, mid-term, and long-term future focusing on the following technologies, respectively;

- Short-term(Current): LNG fuel with energy saving devices
- Mid-term: Hybrid propulsion and ammonia fuel which are expected to be used in the near future
- Long-term: Active exploration of the opportunities in alternative fuels as well as onboard carbon capture and storage

DSME is also developing digital technologies and solutions to improve the competitiveness and efficiency along the decarbonization path.

DSME is applying smart ship solution of DS4 for smart economic and safe navigation, simple & automated operation, onboard monitoring and operation guidance. The Smart ships will be evolved into autonomous ships with advancement of smart navigation and remote & condition based maintenance.

In order to achieve Net Zero Green House Gas emission by 2050, DSME as a shipbuilder is making efforts to research and develop various solutions for decarbonization and digitalization along its technology roadmap.