

WP7 - Technology Impact Analysis

This work package is dedicated to determination of the genset performance using future renewable fuels for green transport, techno- economic analysis of the genset, emission analysis of the proposed genset and perform its life-cycle analysis.

7.1 WP Leader

- Technische Universiteit Delft (TUD)

7.2 Tasks and Outputs

Future fuels analysis and deployment

- The performance of the genset will be evaluated for future fuels that are of interest for the marine sector. The deployment, bunkering, refuelling and storage will be some of the criteria of short list of the future fuels. Subsequently, model of the genset developed in WP3 will be adjusted to analyse its performance for these fuels.
- Deliverable D7.2 - Genset performance report with future fuels – completed.

Techno-economic analysis

- As a continuation of Task 7.1, the operational costs and cost reduction targets for the generation of electricity are analysed by applying future fuels within the Nautilus genset system. This analysis performs a technical economic analysis (TEA) together with a cost-benefit analysis.
- Deliverable D7.3 - Techno-economic analysis and cost prediction report of genset – completed.

Emission analysis

- A detailed emission analysis will be performed in this task to quantify the emissions from the proposed genset concept and compared to the emissions from current state of the art marine ICEs.
- Deliverable D7.5 - Emission analysis report of the genset – pending.

Life cycle analysis

- Environmental assessment will be carried out to evaluate environmental impacts of an integrated marine energy and propulsion system based on SOFC-Battery hybrid genset using LNG as a fuel.
- Deliverable D7.1 - Screening LCA report of the genset – completed.
- Deliverable D7.4 - Full LCA report on the hybrid genset and integration with cruise ships – pending.

7.3 Duration and Status

- Months 1-48
- Status – in progress.

7.4 NAUTILUS Follows Ups

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