



ENERGY EFFICIENCY:

Energy Saving Device Installation Design

- Wind-assisted propulsion design
- Appendage design for improved flow and efficiency
- Emissions Reduction
- CII Analysis and EEXI Evaluation

FUEL CONVERSIONS:

Repowering studies to determine feasibility and benefits

- Detailed repowering design to ensure a shorter shipyard period and an easier conversion
- Design and approval in principle from USCG and class
- Design of LNG systems for gas-ready engines installed without gas equipment.
- Complete re-engine for LNG conversion/retrofit
- Site Supervision

BALLAST WATER TREATMENT SYSTEMS RETROFIT:

- 3D Laser Scanning
- Detailed Piping Design for Production

SCRUBBER RETROFITS:

- 3D Laser Scanning
- Stack Extension Design

LIFE CYCLE MAINTENANCE AND REPAIR SUPPORT:

LNG Barge Design

- Transport
- Bunker Barges



Through Design:

Optimized Safety | Efficiency | Environmental Performance



Environmental Services for Optimized Performance

HEC is at the forefront of supporting the maritime community in the analysis of the environmental impact of ships and in the development of practical solutions to reduce these impacts. **HEC** provides a range of conversion and retrofit solutions to meet or exceed energy efficiencies and zero-carbon solutions [Ammonia, Hydrogen, Nuclear]

[ASK ABOUT OUR PROJECTS](#)

Engineering for Environmental Compliance



Technically rational, cost-efficient, and successfully-compliant vessel operations

Whether you desire an assessment of your current environmental performance, an evaluation of the impact of pending regulations on your operations, or simply wish to reduce your fuel consumption and emissions, HEC can provide the requisite engineering support.

CII Analysis

- Predict CII through historic data and vessel utilization projections
- Calculate CII through the year and provide projections of the year-end values
- Come up with long-term strategies for lasting CII compliance
- Evaluate fleet makeup and throughput that can be achieved within CII limitations

EEXI Evaluation
CII Analysis
Fuel Conversions
BWTS Retrofits

Life Cycle M&R Support
3D Laser Scanning
Design & Operational Risk
Energy Efficiency

Emissions Reduction
Scrubber Retrofits
Installation Engineering
Ship Integration

IMO CARBON INTENSITY INDEX:

Projection CII Evaluation

