### **MAN Energy Solutions**

Future in the making



# MAN EcoLoad advisory tool

State-of-the-art MAN propulsion plants are highly efficient, cost-effective, and reliable. The combination of engines which are able to run on different operation maps (MAN ECOMAP) with an exhaust gas after-treatment system and even an electric and hybrid plant is customized to meet clients' needs. This has a huge impact on costs and emissions. However, the operation of a plant with many components can become rather complex. The MAN EcoLoad tool provides optimal operation advice for your MAN plant saving you money and protecting the environment.

#### Benefits at a glance

- Live feedback and advice on engine operation
- Recommendation on optimal load distribution
- Recommendation of optimal number of running engines
- Overview of potential savings/minimized OPEX
- Accessible from any device within the ship's network
- Route planning
- Individual settings possible
- Leveled running hours
- Tailored to your vessel configuration



# Unlock the full potential of your MAN plant

## Stay one step ahead of your operation

Modern power trains are highly efficient. To achieve the best efficiency, to save costs, and reduce the carbon footprint, operation must be constantly monitored and adapted. MAN EcoLoad gives you continuous feedback on your current operation and recommends which changes are possible to save fuel for greener and more economical operation. Select local optimization to see the potential with currently running equipment (such as engines, gensets, and PTOs) and find the optimal load distribution for your engines - or change to global optimization, which shows you what you can achieve by starting or stopping the various pieces of equipment. All information is displayed with clear graphics and texts so you can decide whether to apply the optimization recommendations or maintain the current state of operation.

# Plan your trip with the MAN EcoLoad route planner

If you know the operation profile of your next trip, you can plan your vessel operation with the MAN EcoLoad route planner. When using MAN ECOMAP, MAN EcoLoad will advise you on the best maps for each engine. In addition to this, the route plan will help you schedule minor maintenance on your equipment and level the running hours on your engines.

#### Tailor-made solution

We configure each MAN EcoLoad tool specifically for the plant it serves. Fuel consumption and optimal load points of engines and gensets, as well as other domain knowledge of the scope of supply from MAN, are used and combined with live data from your equipment to optimize your vessel during its voyage. Do you have a modern diesel electric plant with asymmetric load sharing? In this case, MAN EcoLoad recommends the best loads for each of your generators.

Do you have a complex mechanical plant with a twin-in single-out system, PTO/PTI and gensets? Not a problem!

MAN EcoLoad knows your equipment and helps you find the best settings for each piece of machinery. For example, you can use the PTO and your main engines and reduce running hours on the gensets, or use PTI plus gensets to keep a main engine turned off and reduce costs. MAN EcoLoad will find the most cost-efficient solution for you, based on your actual fuel prices. Are you experiencing extreme weather or do you have other special demands? With an individual configuration, such as running prioritization, electric power reserve, and emission restriction settings, you can adapt MAN EcoLoad to meet your needs.

#### **Key components**

#### - Online optimizer

Advice on optimized system operation and direct feedback at a glance.

#### - Route planning

Plan your trips in advance and find the best MAN ECOMAP engine maps for your trip.

#### - Cyber security

Optimizations are calculated on the ship. No communication is needed from or to the outside, giving you maximum cyber security.

#### - Accessibility

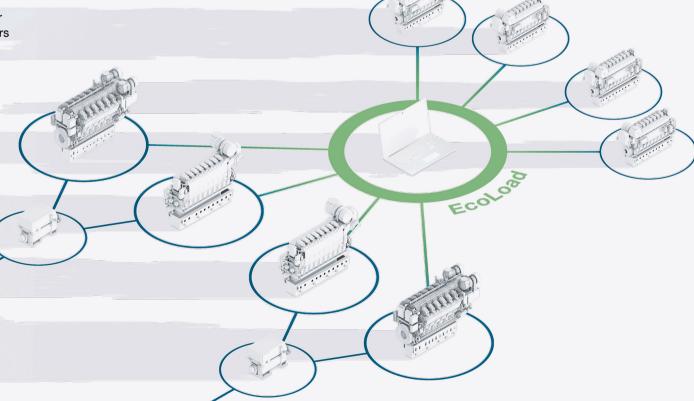
You can consult MAN EcoLoad on a handheld device or a computer. MAN EcoLoad is designed to work on any device that can access your ship's network, automatically adapting to your screen resolution.

#### - Hardware

The high-performance marinecertified hardware unit used for calculations is provided by MAN.

#### Integration

Single data connection to engine control system/PMS used as a data source for calculation. Hardware comes preconfigured for your plant.



#### **MAN Energy Solutions**

86224 Augsburg, Germany P + 49 821 322-0 F + 49 821 322-3382 info@man-es.com www.man-es.com

> is non-binding. This data serves infornational purposes only and is not puaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subect to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and poperational conditions.

Copyright © MAN Energy Solutions. D2366677 Printed in Germany GGKM-AUG-22030.5