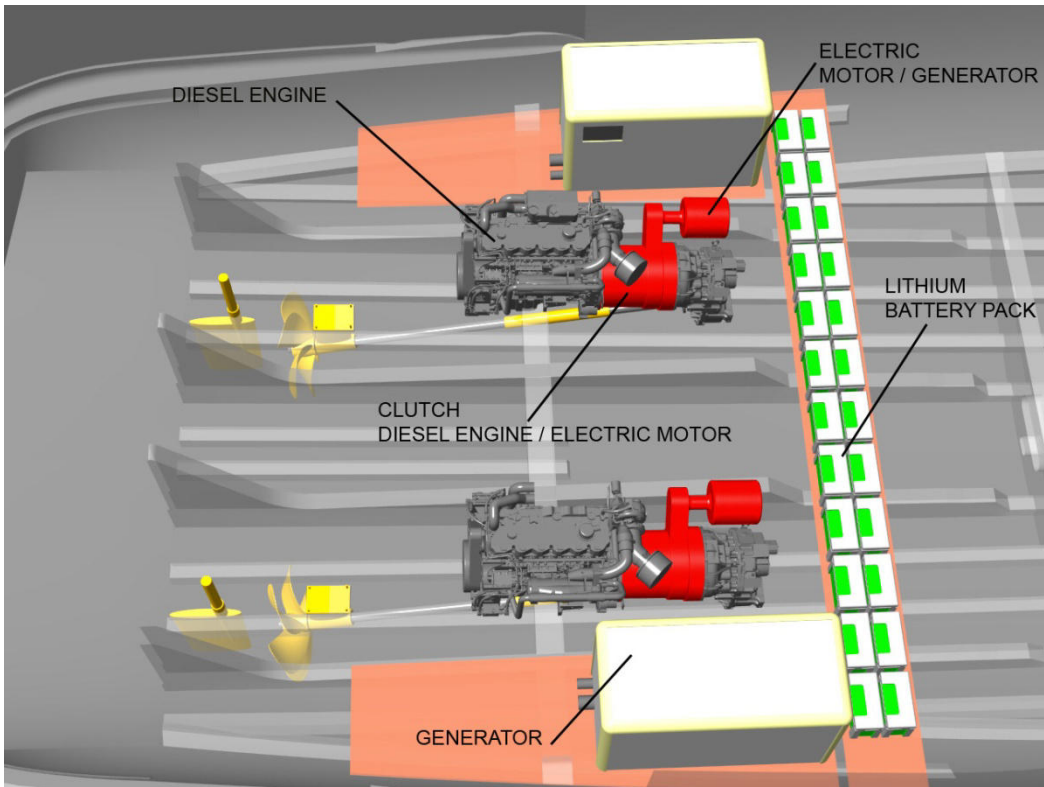
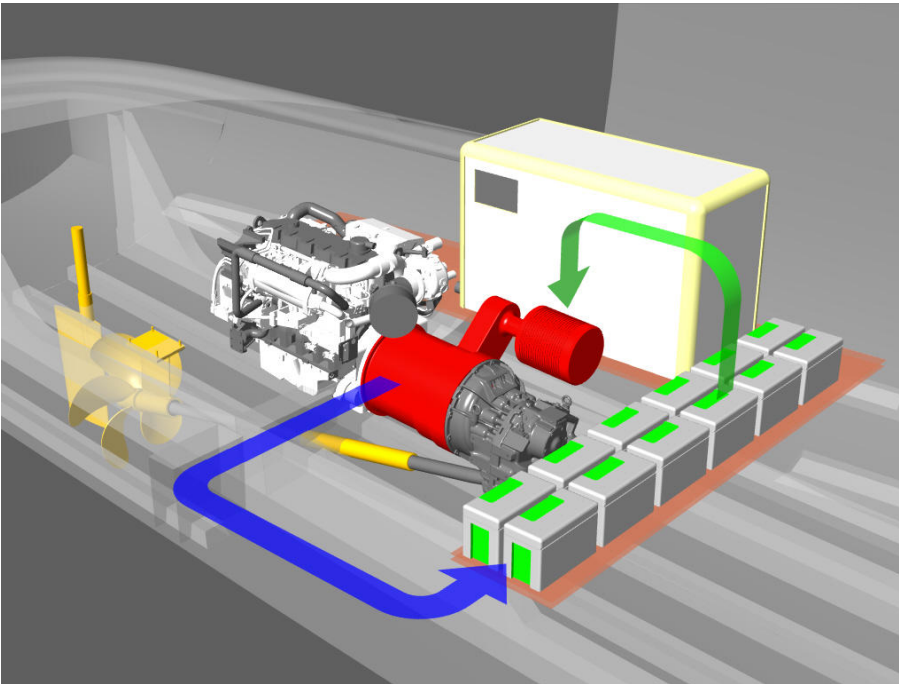


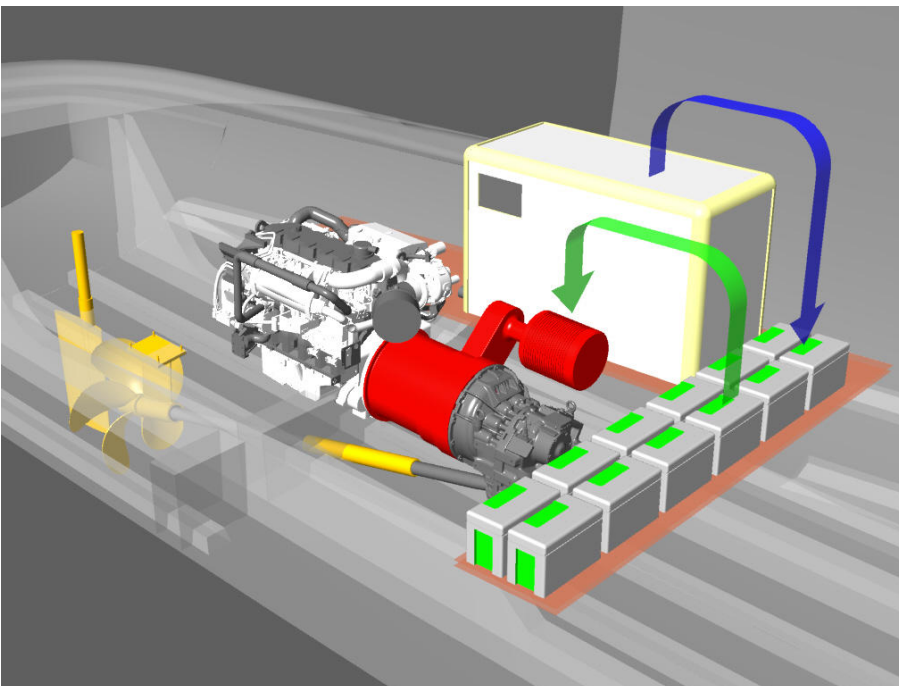
ENERGY EFFICIENCY and POLLUTION: for the new T85, the installation of the CAT HYBRID C9.3 engine on board will be offered as an option. From the technical point of view, the marine Diesel engine has a double clutch system for inverter-motor transmission (commercial standard) or motor-generator-inverter.



Its specialty lies in the fact that the generator is integrated in the motor-inverter system and thus the engine normally produces electrical energy that is stored in a specially prepared lithium battery pack. The energy stored can be reused to actuate the GE itself that serves, at this point, as an engine to transmit power directly to the reducer, thus resulting in propulsion. The advantage is that of not having a dedicated transmission with an electric engine but to exploit the normal power transmission, both in the conventional way (with diesel engine) as well as with electrical energy. This results in considerable savings both in terms of cost and useful space.

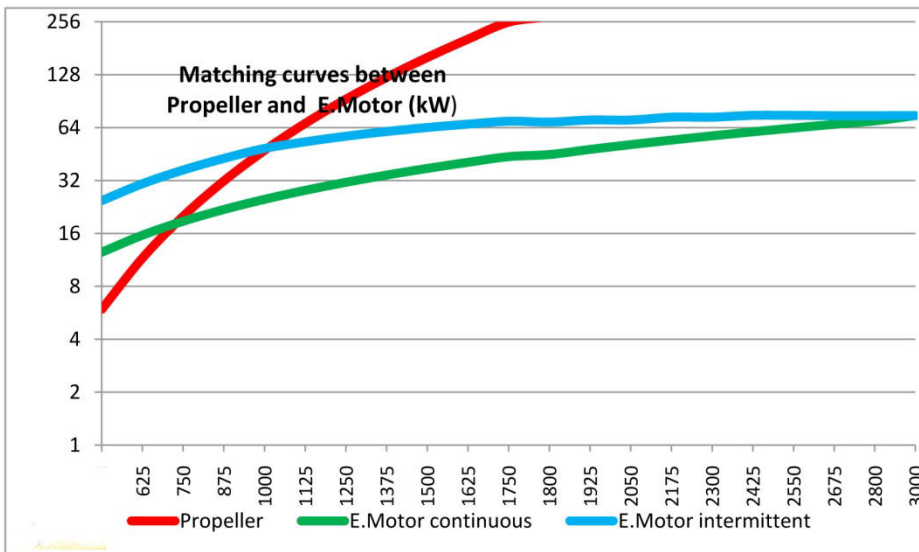


There is also the possibility of using electricity provided by GE to charge the battery pack directly and later re-use it to enable propulsion using only the electric engine, installed on the diesel engine. The main benefit of this technical solution is the ability to navigate in protected areas (parks, protected areas) where navigation using fuel/diesel propulsion is currently prohibited. In addition, in case of emergency or failure of the diesel engine, it is possible to navigate just using the electric propulsion system and the GE/electric engine system.



In terms of cruising range, it all depends on the number of lithium batteries that are installed on board. In general, with this CAT HYBRID C9.3 engine, up to 4 hours of cruising range are expected just using the energy stored by the batteries. Last but not least, we would like to underline the possibility of using the electrical energy stored in the battery pack even when using normal on-board utilities (air conditioning, instrumentation, home appliances, audio-video etc.) without having to start engines and/or generators. During this phase of preliminary study, indicative data has been obtained with regard to performance that can be achieved by using just electric propulsion. The calculations predict an estimated

speed of 5/6 kN, using the electric engine in “continuous mode”, with a propeller power of 20kW (assuming a half-load boat).



This new type of engines, like all the latest generation ones, can be enhanced with the installation of the particulate filter when the diesel version is used. This ensures that the unburned particles produced by the diesel engines and generators do not spread to the environment and water. The filter is mounted directly on the exhaust (before the muffler) and this also reduces noise and provides a remedy for all unpleasant inconveniences linked to exhaust gases.

