

Tour
2021



SUSTAINABLE POWERTRAIN 2021

One word, multiple meanings



Three webinars about
sustainability
in leisure boating, PG and off-highway



The idea

Sustainability is indeed a keyword in today and tomorrow's daily life. However, what is the true meaning of sustainability? Is it possible to find the right balance between economical, technological and environmental sustainability? Such questions are the starting point of the Sustainable Powertrain Tour 2021, promoted and organized by **Diesel International**, a bimonthly magazine in English language aimed at providing its readers with first-hand information about the current and future evolution of industrial engines and powertrains. The magazine is part of a broader platform including a daily updated website and the related social media.

The first edition of the **Sustainable Powertrain Tour 2021** looks towards the future without neglecting the current requirements of OEMs as well as end users when it comes to choosing a machine or a system. In fact, we believe that these requirements need to be taken into consideration along with the ever-stricter emissions standards featuring nearly all the end sectors. As a matter of fact, cleaner diesel engines, hybridization, electrification and research on alternative (and much less polluting) fuels for internal combustion engines do not concern only automotive applications. **These trends have started** to show their potential also in off-highway applications, as well as in the leisure boating sector or in power generation (let's think about the smart grids, just to make an example).

The watchword for decarbonization is **'RIGHT NOW'**. In other words, it's time to talk about all this involving primary international institutions together with some of the main global players among the manufacturers of engines and powertrain components.

The Sustainable Powertrain Tour 2021 was created in the wake of a huge commitment for the promotion of sustainability carried out by Vado e Torno, our publishing house. It is no coincidence that Vado e Torno, through the various magazines published, has established during the years some well-known international awards. From the **Sustainable Bus of the Year**, addressed to the bus field, to the **Sustainable Truck of the Year**, up to the **Sustainable Tractor of the Year**, assigned yearly to the most innovative and game-changing industrial solutions.

Evolution of the species: the unplugged hybrid

March-April
2021

First Stage

IMO EPA Tier III and RCD2 are not enough. The tightening of regulations on exhaust emissions from leisure boats is called for by many to encourage shipyards to follow the virtuous example of on-road and off-highway applications manufacturers. Hydrogen and electric drivelines are little or more than style exercises, especially for hulls over 80 feet. **Is the hybrid really the most available solution to reduce significantly exhaust emissions?** And what hybrid technology is best suited to reduce the presence of the diesel engine in the engine room? What if the redemption of diesel is simply... diesel itself, from biomasses or synthetic?

What about tomorrow?

- Full electric or hybrid? What is the timeframe for the compliance of harbors electricity and LNG infrastructures?

And the day after tomorrow?

- Is it hydrogen the 'one way'? When and how?

What about today?

- Stage V emissions rules compliance, hybridization or...?



MARINE

Biomethane and Smart grids: the 'Eco-CHP'

July
2021

October
2021

**Off-road powertrain
Is it multitasking (or not anymore)?**

Second Stage

Third Stage

Flexibility is a must for human beings and complex organizations. Also and above all for the production of electricity. It is not difficult to understand why. Talking about renewable energies, the topic is the 'age-old' issue of storage. Wouldn't we have come to the end of a virtuous cycle? Obviously with the exception of the more remote areas, where diesel engine is still the only real option. Just a provocation: **What if all the motorway service stations in the EU, USA and China were powered by smart grids at the end of 2022?** What if it was the same for those energy-intensive entities at airports, harbors and train stations? Or is still diesel engine the best choice for the smart grids?

What about tomorrow?

- Stage VI emissions rules, variable speed or...?

And the day after tomorrow?

- Hydrogen, Bio-CNG or hybrid powertrain?

What about today?

- The Diesel resilience. A longer life for the Diesel cycle?

On the one hand, the more and more frequent appearance of electric prototypes in construction sites (mini-excavators and skid loaders). Even maxi-dumpers, sometimes. Hybrid tractors have sprung up in the countryside. On the other hand, we have become increasingly sure that off-highway mobile applications must fit the driveline to every kind of work cycles and infrastructure networks. In the third decade, **will we see the simultaneous development of mobile diesel, methane gas, hybrid, electric and hydrogen-powered machinery?** If sustainability must be right now, why not support public incentives for synthetic fuels and biofuels?

What about tomorrow?

- Full electric or hybrid?

And the day after tomorrow?

- Hydrogen?

What about today?

- Alternative fuels (LNG, Synthetic fuels, biodiesel)?



ENERGY



OFF
ROAD



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