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EU’s Ambitious Environmental Policies Pushing for Cleaner Fuels and Stringent Vehicle Emissions in Member States

Stratas Advisors

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Fighting climate change and minimizing its effects is one of the main priorities of the European Union (EU). During the past decade, the EU has been very active in promoting environmental and energy policies which peaked in 2020, when the 27 EU Member States (MS) committed themselves to achieve a 55% CO2 emissions reduction target by 2030, relative to 1990 levels, and to become the first net zero carbon continent by 2050.

Ambitious environmental and energy targets have undoubtedly affected also fuel quality, vehicle emission standards or energy efficiency. During the past years, Stratas Advisors has observed numerous major developments such as a shift from diesel to less polluting gasoline fuels, promotion of ‘clean fuels’ with high blends of biofuels and synthetic fuels playing an ever-increasing role, but also a growing share of alternative fuels. Even a very ambitious target of 30 million zero-emission vehicles on European roads by 2030 has started to look more realistic given the recent boom in uptake of battery electric vehicles and hybrid electric vehicles. The EU has also focused on ‘cleaning’ of internal combustion engines by adopting very stringent vehicle emission limits, applicable from 2025, which will definitely constitute a challenge for car manufacturers.

With respect to fuel quality, the most expected legislative revision of 2021, the revision of the Fuel Quality Directive (FQD), has been put on hold, without indication of any further timeline. Nevertheless, when adopted, possibly in 2022, the revised FQD is expected to bring significant changes to the market: blends with a renewable content of over 30 vol% for both gasoline and diesel and gaseous fuels are likely to be covered, an increase of minimum RON in gasoline is being considered, hydrotreated vegetable oil (HVO) and hydroprocessed esters and fatty acids (HEFA) blending components are expected to be used in diesel fuel by 2030 along with other synthetic components such as power-to-X (PtX) or e-fuels (see figure below). With respect to fuel specifications for non-road mobile machinery (NRMM), these might be aligned with on-road fuel specs, while fuel quality monitoring could be expanded to gas oils for NRMM.

Despite the positive trend in biofuels blending and roll out of emerging vehicle technologies as alternatives to internal combustion engines, transition in the transport sector is expected to be gradual and would take at least two decades.
Bearing this in mind, the EC kicked off the development of post-Euro 6/VI emission standards in order to ‘clean’ combustion engines, as this technology is likely to remain on the market longer than planned.

The outbreak of COVID-19 in the world has led to significant disruptions in the global supply chains. At the European level, manufacturers of NRMM have been strongly hit and therefore requested the EU moratorium for implementation of certain deadlines for the production and placing on the market of transition engines. The European Parliament along with the European Commission accepted the request and legalized the request to postpone the deadlines by 12 months.

Potential Changes to the FQD

Source: Stratas Advisors, 2021

The full report examines key developments and significant changes that have occurred regarding key aspects of the EU regulatory framework on conventional and alternative fuels, the implementation of legislation in the 27 MS, vehicle emission and fuel efficiency (CO2) requirements and future developments affecting the transportation sector.

The following topics are covered in the full report:

- Developments in relation to the FQD;
- MS implementation of the FQD and its deviations;
- Gasoline and diesel grades available in the MS, and their biofuel blending levels;
- Specifications of CNG, LPG and other alternative fuels;
- Non-road diesel specifications;
- Fuel additives;
- Energy taxation; and
- Vehicle emissions and fuel efficiency.
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