

FEV Explores Standards on Climate-Neutral Fuels for Short-Term CO₂ Reduction

Aachen, September 2020 – Leading independent international engineering provider FEV is coordinating a collaborative “Methanol Standard” project, which has been launched on August 1, 2020. The two-year project is funded by the German Federal Ministry of Economics and Energy (funding ref. no. 19I20005A). The multi-sector consortium has set a target of exploring the technical bases for standardizing methanol fuels in Europe. Approximately 20 partners in science and industry are taking part in the project.

At the 2015 Paris Climate Conference, it was resolved that CO₂ emissions should be reduced 38% by 2030 and 80% by 2050. With the European Green Deal, the EU Commission set even stricter standards, aiming for at least a 50% reduction by 2030 and complete climate neutrality by 2050. In recent years, emissions have not fallen in the transport sector in particular due to the steady growth regarding transportation demands. In order to achieve these ambitious and important targets, FEV is not relying on just one solution, but rather on an effective mix of technologies.

“Given the high energy density of liquid fuels, power-to-liquid concepts are a very promising approach particularly in long-distance and goods transport,” said Christof Schernus, Vice President Research and Innovation at FEV. “The key advantage of liquid energy sources is that they can store energy on a large scale and are easy to transport over long distances.”

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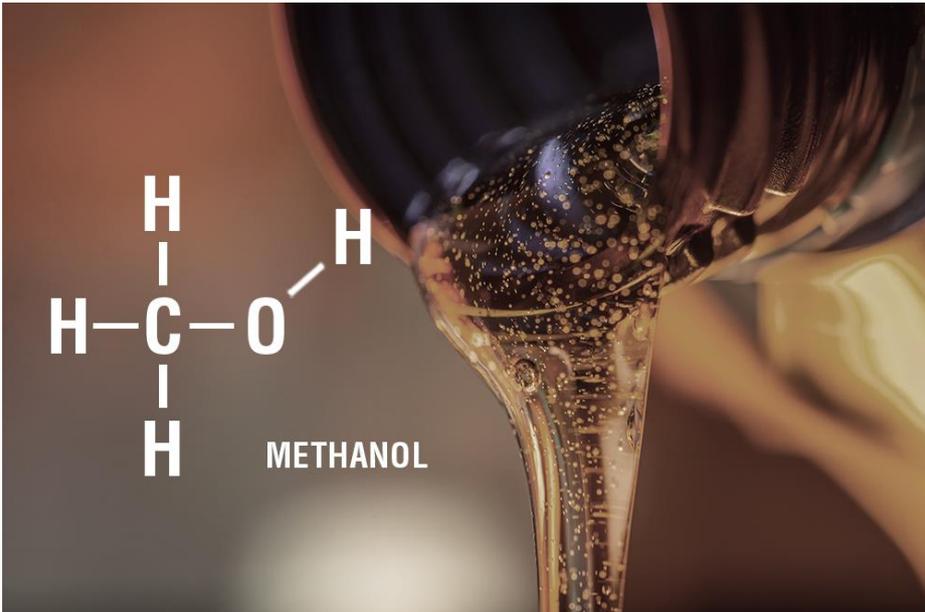


One example of a power-to-liquid product is methanol, which is obtained by synthesizing CO₂ and hydrogen. Hydrogen is produced through electrolysis using renewably generated electricity. This means electricity can be stored from regions with exceptionally abundant wind or sunshine. Ideally, the CO₂ is obtained from waste, or extracted from the air over the long run. The methanol created can then be transported by ship, rail, or pipeline and used in the existing infrastructure. Already by today, the production process for methanol has reached a high technological maturity.

The newly launched collaborative project focuses on two methanol fuels: M100 – i.e. pure methanol – and M15, a blend of methanol and gasoline. Also known as a drop-in fuel, M15 can already be used in the existing fleet to obtain significant CO₂ reductions over the short and medium term. Aside from fuel production and use in the transport sector, safety aspects are also a component of the research project. The results are meant to ultimately be implemented in a prototype engine.

FEV has also gained experience in researching methanol-based fuels in another of its projects: The consortium C³-Mobility is exploring methanol and its further processing into other synthetic fuels as well as the use of these in various engine variants and sizes.

Renewable drop-in fuels – i.e. synthetic fuels – that are compatible with the existing fuel standards can be used directly in the entire vehicle fleet and the impact is thus climate neutralizing. As such, prompt availability could significantly contribute to achieving the climate goals.



The collaborative “Methanol Standard” project coordinated by FEV started last month. Source: FEV Group

About FEV

FEV is a leading independent international service provider of vehicle and powertrain development for hardware and software. The range of competencies includes the development and testing of innovative solutions up to series production and all related consulting services. The range of services for vehicle development includes the design of body and chassis, including the fine tuning of overall vehicle attributes such as driving behavior and NVH. FEV also develops innovative lighting systems and solutions for autonomous driving and connectivity. The electrification activities of powertrains cover powerful battery systems, e-machines and inverters. Additionally FEV develops highly efficient gasoline and diesel engines, transmissions, EDUs as well as fuel cell systems and facilitates their integration into vehicles suitable for homologation. Alternative fuels are a further area of development.

The service portfolio is completed by tailor-made test benches and measurement technology, as well as software solutions that allow efficient transfer of the essential development steps of the above-mentioned developments, from the road to the test bench or simulation.

The FEV Group is growing continuously and currently employs 6700 highly qualified specialists in customer-oriented development centers at more than 40 locations on five continents.