

Expert group report: Alternative fuels could replace fossil fuels in Europe by 2050

Alternative fuels have the potential to gradually replace fossil energy sources and make transport sustainable by 2050, according to a report presented to the European Commission today by the stakeholder expert group on future transport fuels. The EU will need an oil-free and largely CO₂-free energy supply for transport by 2050 due to the need to reduce its impact on the environment and concerns about the security of energy supply. The expert group has for the first time developed a comprehensive approach covering the whole transport sector. Expected demand from all transport modes could be met through a combination of electricity (batteries or hydrogen/fuel cells) and biofuels as main options, synthetic fuels (increasingly from renewable resources) as a bridging option, methane (natural gas and biomethane) as complementary fuel, and LPG as supplement.

Vice-President Siim Kallas, responsible for transport, said: "If we are to achieve a truly sustainable transport, then we will have to consider alternative fuels. For this we need to take into account the needs of all transport modes."

The Commission is currently revising existing policies and today's report will feed into the "initiative on clean transport systems", to be launched later this year. The initiative intends to develop a consistent long-term strategy for fully meeting the energy demands of the transport sector from alternative and sustainable sources by 2050.

According to the report, alternative fuels are the ultimate solution to decarbonise transport, by gradually substituting fossil energy sources. Technical and economic viability, efficient use of primary energy sources and market acceptance, however, will be decisive for a competitive acquisition of market share by the different fuels and vehicle technologies.

There is no single candidate for fuel substitution. Fuel demand and greenhouse gas challenges will most likely require the use of a mix of fuels which can be produced from a large variety of primary energy sources. There is broad agreement that all sustainable fuels will be needed to fully meet the expected demand.

Different modes of transport require different options of alternative fuels. Fuels with higher energy density are more suited to longer-distance operations, such as road freight transport, maritime transport, and aviation. Compatibility of new fuels with current technologies and infrastructure, or the need for disruptive system changes should be taken into account as important factors, determining in particular the economics of the different options.

Further information:

Report of the European expert group on future transport fuels:

http://ec.europa.eu/transport/urban/vehicles/road/clean_transport_systems_en.htm

See also: [MEMO/11/41](#)