



PRESS RELEASE

Release date: September 2020

LONGRUN: Development of efficient and environmental friendly long distance powertrain for heavy duty trucks and coaches

30 partners from across Europe (13 countries) are joining forces in the green vehicles project LONGRUN to accelerate the path towards a smarter and more sustainable future.

Led by FEV, LONGRUN is one of the largest Green Vehicles (GV) projects which is receiving funding from the European Union's Horizon 2020 research and innovation programme.

An official launch took place in January 2020, in Aachen with a welcome speech by Prof. Stefan Pischinger, FEV who stated his future transport vision: "The overarching objectives of our time: the digital and carbon-neutral society."

Around 90 people were present to discuss strategies how to reach the LONGRUN objectives for heavy duty vehicles:

- To achieve over 10% energy saving (tank to wheel (TtW), excluding effects of plug-in hybrids) and correspondent CO₂ reduction; Realisation of robust ICE engine technology for use of future fuels (HVO, dual fuel mixtures), to achieve a major (>90%) CO₂ reduction well to wheel;
- To achieve an internal combustion engine performance which reaches a 50% target in terms of peak thermal efficiency; Aftertreatment systems integrated into hybrid powertrains with advanced engines.

The European-wide project, which runs over 3,5 years, brings together six European OEMs and 24 other partners from research, networks and industry.

Taking a collaborative approach, the six OEMs will all work closely with their own Tier 1 and engineering suppliers to develop technologically-innovative solutions.

LONGRUN will equip the demonstrators with the latest technologies and they will be shown at trade shows in the coming years. Keep an eye on our agenda.

Background

Road transport is one of the biggest sources of GHG emissions in the EU. Europe's transport emissions account for 25% of total GHG emissions in the EU. In the heavy duty long haulage transport sector, the reduction of real driving emissions, fuel consumption and its related CO₂ emissions is the main societal challenge. The LONGRUN project will contribute to lower the impacts by developing different engines, drivelines and demonstrator vehicles with 10% energy saving (Tank to Wheel) and related CO₂ reduction, 30% lower emission exhaust (NO_x, CO and others) and 50% Thermal Efficiency. The European Commission has proposed sharp targets to reduce CO₂-emissions of minus 15% by 2025 (compared to 2019) and minus 30% by 2030 (compared to 2019) to counter the growth in transport and related emissions (see Figure 2-1). The review of the CO₂ emission standards for heavy-duty vehicles will be starting in 2022 and LONGRUN results will be just in time to feed into and support the decision-making process.

Road transport accounts for about 75% of goods transport on land today and is projected to increase in the coming decades. Heavy goods vehicles are the pillar of the European transport market, delivering 18 billion tons of goods per year. To counter this development, innovative and pragmatic solutions enabled by a flexible regulatory framework are needed to decouple economic development and transport demand.

The European Commission 2050 net-zero greenhouse gas emission long term strategy (vision how to make Europe climate-neutral by 2050) was published in 2018. According to the special report of the Intergovernmental Panel on Climate Change, IPCC, presented in 2018 in Katowice, this target is not even enough to achieve the 1.5°C target. GHG emissions and the air quality in cities and highly populated areas are a major societal challenge. Additionally, in its 2018 Special Report 'Air pollution is the biggest environmental risk to health in the European Union' many EU Member States were found to be in breach of their air quality targets by the European Court of Auditors (ECA). According to the World Health Organisation (WHO), air pollution is the most serious environmental risk to health in the European Union (EU) and people in urban areas are particularly exposed. Particulate matter, nitrogen dioxide and ground level ozone are the air pollutants responsible for most of these early deaths.

Passenger transport (long-distance heavy duty coaches) is next to heavy goods vehicles another sector this LONGRUN project will address, in terms of emission reduction and energy savings. Transport and tour operators are required to provide Zero Urban Emission Zone solutions, like Hybrid Coaches (long haul) for personnel transport and hybrid tractor units for long haul goods transport. The reason for this is that several European cities have started to go beyond the European Commission's targets, announcing emission free inner-city zones. The Dutch city of Utrecht for example has a CO₂ emission reduction target by 100% by 2030 and together with several other Dutch cities has agreed to emission free inner cities by 2030 ('Green Deal Zero Emission Stadslogistiek'). Copenhagen may even top this by becoming carbon neutral in 2025. The LONGRUN proposal is a stepping stone towards reaching these targets and for providing the right technologies for zero urban emission passenger transport.

Furthermore, LONGRUN contributes to the reduction of emissions of carbon dioxide (CO₂), the main greenhouse gas (global warming) and the lowering of polluting emissions of

nitrogen monoxide and nitrogen dioxide (NO_x), carbon monoxide (CO), hydrocarbons (HC), particulate matter (PM₁₀ and PM_{2.5}) and particle number (PN). Improving air quality, especially in urban areas, has significant impact on human health. With regard to particle number (PN), and NO_x emissions, Gas, flex-fuel (Diesel) engine technologies and hybrids are in the position to provide clean solutions thanks to the integration of efficient particulate filter systems and overall reduced NO_x emission levels.

LONGRUN also believes in showcasing future fuel pathways and the potential of alternative fuels for future sustainable and efficient transport in the heavy duty long haul sector. Bio-based components such as ethanol and HVO, and electricity based fuels such as hydrogen, methanol as well as Fischer-Tropsch products and alcohols derived from hydroformylation, will play a major role in future long distance transport.

The project runs until 2023.

More information can be found on the website: www.H2020-LONGRUN.eu

LONGRUN

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NOTES TO EDITOR:

Information on the visual documents provided:

- LONGRUN sketch infographic
- Group picture: "30 partners gathered at the LONGRUN project launch, Aachen, January 2020"
- Logo

About LONGRUN

LONGRUN is a green vehicles project funded under the European Union's Horizon 2020 research and innovation programme. It brings together six OEMs: Ford, DAF, VOLVO, VDL, IRIZAR and IVECO and 24 Tier 1, engineering firms as well as research partners to test, implement and accelerate the developed technologies across Europe.

About Horizon 2020

'Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.'

For reference and more information visit: <http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020>

The following partners are part of the project consortium:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 874972. The sole responsibility for the content of this document lies with the LONGRUN project and does not necessarily reflect the opinion of the European Union.