Press Release

An Electric Vehicle-only approach would lead to the loss of half a million jobs in the EU, study finds

- **Transition assessment confirms the essential role for electrification in reaching objectives of the Paris Agreement, but substantiates powertrain employment risks**
- **226,000 new jobs foreseen in EV powertrain production (assuming an EU battery chain), means a net loss of 275,000 jobs (-43% jobs) projected from now until 2040**
- **501,000 auto supplier jobs in Internal Combustion Engine (ICE) powertrain components production are expected to become obsolete if technology is phased-out by 2035**
- **Of those half a million jobs, 70% (359,000) will most likely be lost in just a 5-year period from 2030-2035, highlighting the limited timeframe to manage considerable social and economic impacts**
- **By complementing electrification, a *mixed technology* approach allowing use of renewable fuels could deliver a 50% CO_2 reduction by 2030, while maintaining jobs and creating value-add**

CLEPA, the European Association of Automotive Suppliers, commissioned PwC Strategy& to assess the impact of three different Green Deal policy scenarios on employment and value-add[1] among automotive suppliers across Europe[2] in the period of 2020-2040. The scenarios represent a mixed technology approach, the current EV-only approach proposed in the Fit for 55 package, and a radical EV ramp-up scenario. All three scenarios assume accelerated electrification to meet climate goals, with a high market share for electric vehicles[3] by 2030 of more than 50%, almost 80%, and close to 100%, respectively.

The automotive manufacturing sector is responsible for more than 5% of the overall manufacturing employment in 13 EU Member States,[4] with more than 60% of these workers employed by automotive suppliers. The study therefore provides a much needed European-wide assessment and further identifies the risks and opportunities in seven major production countries for automotive components (Germany, Spain, France, Italy, Czechia, Poland, and Romania). The study is also the first of its kind in evaluating the impact of different policy pathways to reach Green Deal objectives with a focus on automotive suppliers.

Many automotive suppliers are not structured enough to react with agility to a loss of activity in the powertrain domain, also because of long-term contracts with vehicle manufacturers. Moreover, hundreds of specialised companies and SMEs have a limited access to capital to invest in the transformation of their business models.

[1] Value-add is defined as revenue minus material costs and describes the part of the company's individual value creation that directly contributes to the country's economy

[2] EU+UK+EFTA

[3] Battery electric vehicles, plug-in hybrid electric vehicles and full hybrid electric vehicles

[4] Slovakia, Romania, Sweden, Czechia, Hungary, Germany, Spain, Poland, Slovenia, France, Belgium, Austria and Portugal.

Transition vs disruption

The study forecasts that in the EV-only scenario, 70% of the employment impact will be felt already in the period of 2030-2035 and substantiates that electric vehicle opportunities hinge on the establishment of a deep EU battery supply chain, the timing and likelihood of which are still uncertain. Western European countries appear best placed to be strongholds in EV powertrain production, while employment in Central Eastern European countries will remain highly dependent on the internal combustion engine.

Henning Rennert, Partner at PwC Strategy& Germany, stated:

"While electrification puts powertrain employment at risk on the one hand, other workforce skills around areas such as software or infrastructure will be needed in the future. The future value-add and job creation in powertrain technologies depends on local battery production in Europe."

CLEPA Secretary General, Sigrid de Vries, stated:

"The study highlights the risks of an EV-only approach for the livelihood of [hundreds of thousands of] people working hard to deliver the technological solutions for sustainable mobility. As automotive suppliers are responsible for most of the manufacturing employment in the automotive industry, it is critical that we put jobs with automotive suppliers front and center when managing the social and economic impact of the transformation. Innovations by automotive suppliers have made electric mobility increasingly accessible for consumers and an essential instrument to meet emission reduction targets. But society's needs are far too diverse for a one-fits-all approach. A regulatory framework that is open to all available solutions, like the use of hybrid technologies, green hydrogen, and renewable sustainable fuels will enable innovation as we redefine mobility in the coming decades."

According to Marco Stella, ANFIA Components Group President and ANFIA Vice President:

"*The components sector has considerable economic and occupational importance in Italy today, considering that components manufacturers' products are exported and appreciated all over the world – the annual positive trade balance is around 5.5 Bn €. The Italian and European automotive supply chain is highly integrated at international level, a characteristic that European approach to mobility decarbonization must take into account, keeping in mind how strategical is defending the sector competitiveness for the future of our industry and ultimately, of our economies. Supporting Italian components manufacturers in facing the transition to zero-emissions mobility also means to understand the present difficulties of around 30% of them, which are still concentrated on combustion engine technologies and in general of SMEs, that represent the majority of our sector, to take charge of huge investments in few years".*

An uncertain future for batteries

The study substantiates that up to 70 billion euros (70%) of the value creation related to electric powertrains will be connected to the processing of battery materials, the production of battery cells and cells modules, and the assembly of battery systems. It is important to highlight that these activities will not necessarily be with the same companies or in the same regions, as they require significantly different skills and expertise compared to conventional powertrain technology and are therefore unlikely to provide opportunities to most powertrain oriented automotive suppliers, in particular small and medium sized enterprises who employ around 20% of people working in the automotive supply industry. Earlier research by CLEPA illustrated that battery production provides relatively more jobs for academically schooled employees and less for the mechanical workers that are now producing parts related to the internal combustion engine.

Methodology

The study´s methodology is complementary to previous studies, (available through CLEPA's employment portal) as it models figures from a company perspective. Data was gathered with the support of CLEPA[5], national associations and companies in an explorative survey based on 199 questionnaires and validated with 33 expert interviews. To realistically model commercial decisions, production capacities at labour shift level (typically three eight-hour blocks) as well as country attractiveness, criteria have been assessed to develop wind-down scenarios for ICE vehicle technologies and ramp-up scenarios for EV technologies

CLEPA's policy recommendations[6]

The current Fit-for-55 proposal for CO_2 emission standards for cars and vans looks only at the emissions coming from the vehicle's tailpipe, ignoring emissions related to the production of vehicles or the fuels they use, including how electricity is generated. To incentivise technologies with the lowest overall carbon footprint, emissions from vehicles should ideally be regulated on life-cycle basis, with a Well-to-Wheel (WtW) approach as a first step, which considers the production and distribution of the fuel/electricity used to power a vehicle.

Technology neutrality gives industry the needed time to transition, while mitigating the social disruption often coupled with abrupt change, without compromising on climate. A planned and thoughtful transition consisting of a mixed technology approach keeps options open to adjust to new developments, be they technological breakthroughs, geopolitical events, or availability of resources, and at the same time, presents significant value creation opportunities in the automotive industry, one of Europe's biggest industrial assets.

Sigrid de Vries goes on to say "A technology open approach should include rapid electrification with clean and renewable energy, complemented by clean combustion technology with sustainable renewable fuels. There are more options than tailpipe-zero emissions, and we need to recognise the role that climate-neutral fuels can play in reducing emissions, preserving consumer choice, affordability and towards

[5] CLEPA is the European Association of Automotive Suppliers

[6] Policy recommendations are not within the scope of the study and represent CLEPA views only

maintaining Europe's global competitiveness. Technology is not the enemy here but rather fossil fuels, and tech openness will be critical to deliver a just transition."

About CLEPA

CLEPA, the European Association of Automotive Suppliers based in Brussels, represents over 3.000 companies, from multi-nationals to SMEs, supplying state-of-the-art components and innovative technology for safe, smart and sustainable mobility, investing over €30 billion yearly in research and development. Automotive suppliers in Europe directly employ 1.7 million people in the EU.

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