



EUROBAT e-Mobility Battery R&D Roadmap 2030

Battery Technology for Vehicle Applications

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Background

Hybridisation and electrification of transport are absolutely needed to meet EU CO₂ emissions targets.



Hybridisation and electrification offer important opportunities in terms of job creation (2,35M jobs by 2050), economic growth, energy security, health and environmental protection. New skills will be needed in the battery industry workforce for the shift towards hybrid and electric vehicles.

Technological improvements of battery technologies will further improve the performance, affordability and reliability of hybrid and full electric vehicles.



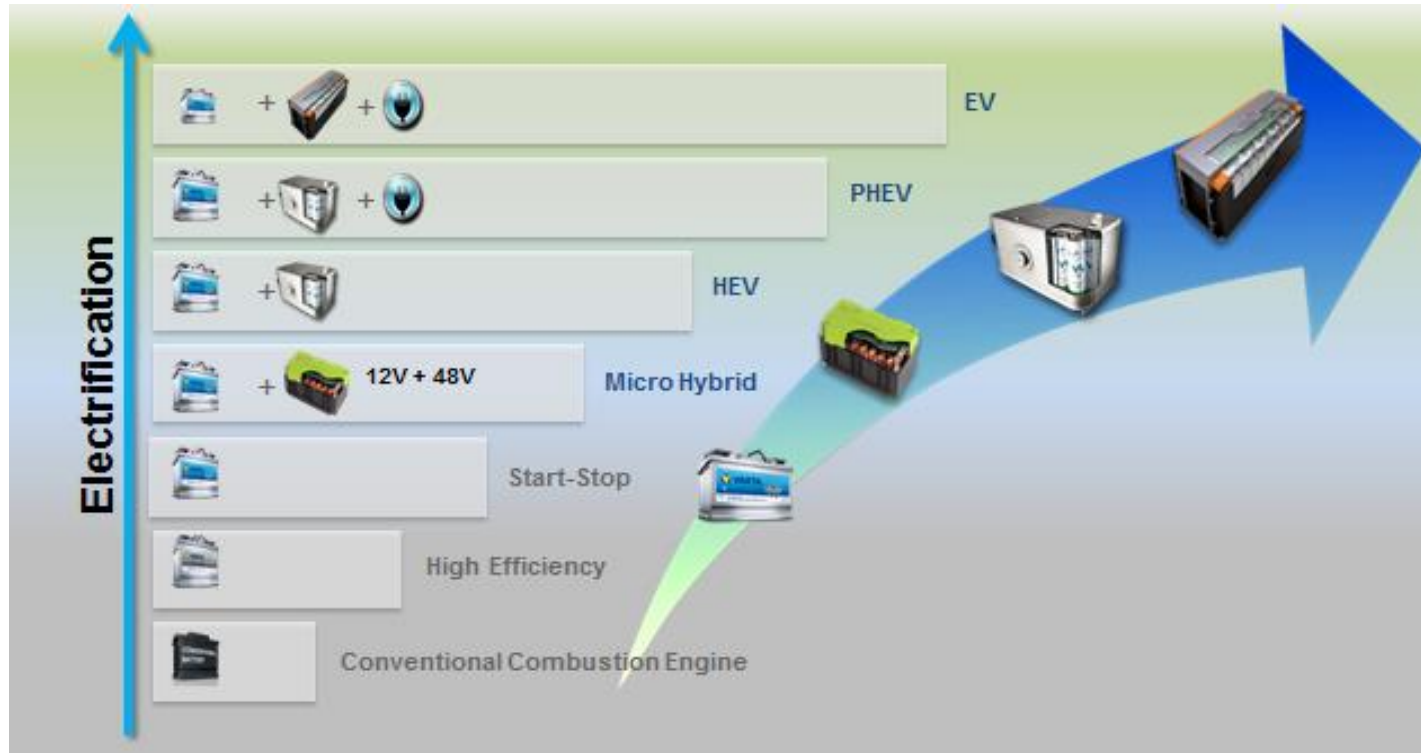
Targets of the Roadmap

- The EUROBAT e-mobility Roadmap looks forward to 2030 and identifies 6 R&D priority areas where improvements are mostly needed:
 - **Performances**
 - **Cost**
 - **System integration**
 - **Production process**
 - **Safety**
 - **Recycling**
- Specific recommendations to progress in these areas are identified for each battery technology.
- The Roadmap focuses on three battery technologies which we predict will have the greatest potential for further technological improvements:
 1. **Advanced lead-based batteries**
 2. **Lithium-ion based batteries**
 3. **Sodium based batteries**
- In 2014, EUROBAT published “A review of Battery Technologies for Automotive Applications”, presented during last year Eurobat Forum.
- The two documents together give a comprehensive picture of battery technologies for all vehicle applications, now and in the future.



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Types of vehicles covered in the roadmap



- Start-stop vehicles
- Micro-hybrid, advanced micro-hybrid and mild-hybrid vehicles
- Full-hybrid electric vehicles (HEVs)
- Plug-in hybrid electric vehicles (PHEVs)
- Electric vehicles (EVs)

Battery technologies and key priorities

Advanced lead-based batteries

- For start-stop vehicles and micro-hybrid vehicles
- Key priorities: improve performance and lower cost for the mass Micro-Hybrid vehicle market

Lithium-ion batteries

- For electric vehicles and all types of hybrid vehicles
- Key priorities: increase energy density, power density and to lower cost, with different performance priorities for each application

Sodium-nickel chloride batteries

- For commercial and professional vehicles, LCV to Heavy duty, in pure electric and plug-in hybrid configuration
- Key priorities: production process, systems integration, cost reduction are the primary development targets for this technology

- Thank You -

For more information
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