



# H2020-NMP-GV-2014 Post lithium-ion batteries for electric automotive applications

**Contribution from the "Leadership in enabling and industrial technologies" (LEIT) part of Horizon 2020 to the European Green Vehicles Initiative-PPP**

*This call is **complementary** to a separate one present in the Horizon 2020 Work Programme under the Transport Challenge "**Smart, green and integrated transport**":*

*Call Mobility for Growth H2020-GV-2014 GV-1-2014  
"Next generation of competitive lithium ion batteries to meet customer expectations"*

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- *Specific challenge:* **Electrification of road transport is key for environmentally friendly mobility**
  - Need to **develop** cost competitive and sustainable **storage technologies for Electrified Vehicles (EV)** with **significantly improved performance**;
  - Get EVs with similar performance of current internal combustion engine vehicles (e.g. driving range);
  - **Build on the progress already obtained** through previous projects (mainly through the Green Car PPP);
  - Gain competitiveness so that the next generation of batteries will be “made”, i.e. developed and produced in Europe.

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- **Scope: Progress well beyond current Li-ion cell is needed**
  - Increase energy density, power density, the ability to work under severe thermal conditions, charging speed, and inherent safety of the battery cells (including crash and abuse conditions);
  - Address e.g. **new chemistries** and/or develop **new materials e.g. for cathodes and electrolytes** to get high-energy densities;
  - Understand and improve ageing of the new chemistries, in order to achieve a longer battery lifetime;
  - Consider competitive cost, environmental issues, raw materials, LCA;
  - **Develop prototypes to show clear progress** beyond existing post Li-ion technology (**durability, cyclability and energy density**);
  - Consider scalability up to full scale for automotive applications (TRL4).

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- *Expected Impact:* **Significant improvements of the usability of EVs**
  - **Extended driving range and improved battery durability** (recharging, cyclability and safety) obtainable at competitive costs;
  - The energy density of the proposed new batteries should reach at least **twice the energy density** in comparison to the best in class Li-Ion technology at the same power density;
  - **Better acceptance of EV** in society, and thus contribution to the improvements of sustainable transport, reducing pollution and noise in urban areas;
  - European **competitiveness** through development of new key technology and related production capacities.

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- *Type of action:*     **Research and Innovation Action**
  - Total indicative budget foreseen: 16M €
  - Proposed size of project 6-8 million € (not compulsory)
  - **Evaluation type: single stage**
  - **Deadline** for submission: **07 October 2014, 17:00 h**
  - Standard eligibility conditions (parts B and C of the General Annexes to the Work Programme), but - exception:
  - Outline of the initial exploitation and business plans needed!
  - Standard evaluation criteria apply (part H of the General Annexes to the Work Programme), but – exception:
  - Threshold of "Excellence" and "Impact": 4; Overall threshold: 12



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**Thank you for your attention!**

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