



COMMITTEE OF THE REGIONS
AUTOMOTIVE INTERGROUP

"FUELLING CLIMATE CHANGE? »
AUTOMOTIVE REGIONS TAKING UP THE SUSTAINABILITY
CHALLENGE

ID4CAR

**The Hybrid Vehicle challenge: how to use it? What are
the challenges for public partners?**

ID4CAR at a glance

Vehicle Smart Manufacturing & Digital Mobility Services

350 members (companies and research centres)
Cooperation with local government (experimentations)
4 markets *Automotive, Mobility, Off Road, Industry 4.0*
35 projects / year
10 EU projects
Cooperation @ international level (USA, Quebec, NL,
Spain, Italy, Germany)



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What is an hybrid vehicle?



1. *Micro-H*: hybrid without really being one, economy is minimal depending on the type of driving
2. *Full-hybrid*: both engines work separately or together
3. *Rechargeable hybrid*: Very energy intensive if the battery is empty vs allows zero consumption on a daily basis if you can charge every night.

So depends above all on the possibility to charge on a daily basis ...

In the city, these systems are more interesting than on the main roads because the electricity consumption explodes above all with the speed. Any hybridization, whatever its technology (heavy or light), is advantageous at low speed.



The reduction in fuel consumption and therefore CO2 emissions depends on the degree of electrification of the vehicle:

3 to 7% for Stop & Start models which stop the heat engine when the vehicle is stationary,
 20 to 30% for Full hybrid models capable of operating in all-electric mode over short distances (between 1 and 5 km), thanks in particular to the recovery of electrical energy during braking.

As for models that can be recharged on the electricity grid and can operate in all-electric mode over long distances, their CO2 emissions can be reduced by 50 to 90% in urban use, provided, however, that the electricity is produced from a low carbon source.

The development of Low Emission Zone is an incentive for the acquisition of hybrids vehicles

Thoughts are needed not to limit low emission to numbers (Critair, speed limits etc) but also to give incentive on behaviour changes and "proper use" of technologies by individual and for fleets owners.



Debates:

Are hybrids “only” a transition technology towards all electric?

Is it a solution for zones remaining with a low density of charging stations?

Vehicles are expensive → social inclusion?

Actions to develop locally for value chain (batteries second life)?

Charging and infrastructure:

The problem can be that charging is not fully available and the vehicles run on fuel → the impact on emissions is not optimal as the vehicle is heavy and produces particles (tires, brakes etc)

Industrialisation:

Dependence on production of batteries and components from Asia before producing batteries in EU

Light weight vehicles vs batteries weight and safety equipment

Changing the behaviours:

Replacing 1 for 1 is not the solution...

Driving it properly...

Sharing, pooling...

Incentives and Zoning strategies...

