FUTURE & VESI Seminar

14th January 2015

Ian Turner

Office for Low Emission Vehicles

Office for Low Emission Vehicles

1. OLEV – why, what and when
2. Technology Challenges
3. OLEV support to Research and Development

What is OLEV?

Office for Low Emission Vehicles

Department for Transport

Department of Energy & Climate Change

Department for Business Innovation & Skills

Office for Low Emission Vehicles

R&D

Incentives

Energy issues

Infrastructure

Hydrogen & Supply Chain

Policy objectives

Office for Low Emission Vehicles

1. 

Inward investment, growth, jobs

2. 

Carbon

3. 

Air quality (£8-£17bn)

4. 

Energy security

And the £££….

One of the longest, most comprehensive packages of support in the world…

£400m **OLEV support 2010 to 2015**

+

£500m **for advanced propulsion centre 2013 on**

+

£500m **OLEV support 2015 to 2020**

+

£100m **fiscal incentives to 2020**


Press release

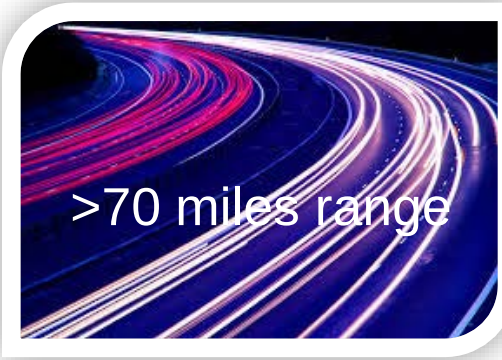
Making Britain number one for ultra low emission vehicles

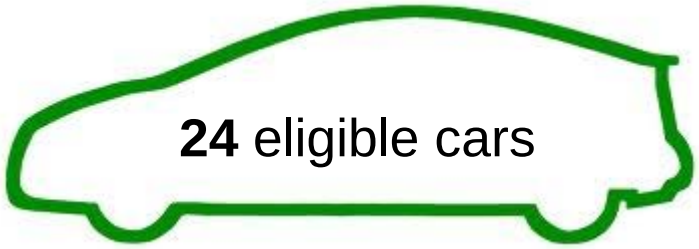
Organisations: Office for Low Emission Vehicles, Deputy Prime Minister's Office + 1 other
Page history: Updated 7 November 2013, see all updates
Policies: Reducing greenhouse gases and other emissions from transport + 1 other
Topics: Climate change + 2 others
Minister: The Rt Hon Nick Clegg MP

Deputy Prime Minister calls on industry to help UK accelerate deman

Plug in grants – the current scheme

Office for Low Emission Vehicles





25% off an eligible car (up to **£5000**)

20% off an eligible van (up to **£8000**)

PLUG IN GRANTS – ELIGIBLE VEHICLES

Infrastructure grants

Office for Low Emission Vehicles

8 “**plugged in places**” created to gain understanding of charging habits.

National infrastructure grants launched…

- ***75%*** *grant to install domestic chargepoints.*
- ***75%*** *grant to install chargepoints on the public sector estate (up to* ***£7,500****). Made available to public sector organisations*

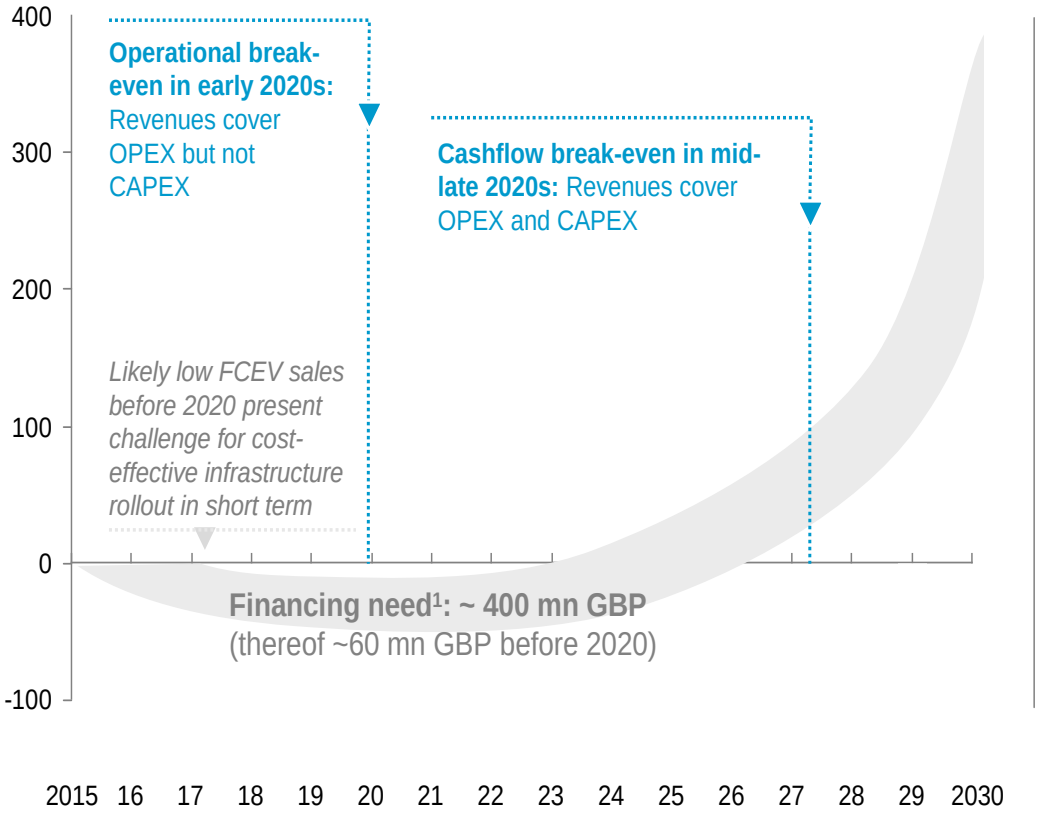
Office for Low Emission Vehicles

Hydrogen

- Fuel cell electric vehicle technology is now well proven and will be coming to market in 2015.
- On 9 October the Government announced a £11m funding programme to support hydrogen fuel cell vehicles and to position the UK to be a lead market for their introduction: https://www.gov.uk/government/news/multi-million-pound-fund-to-get-hydrogen-cars-moving
- Toyota have announced that the UK will be one of the first markets for its hydrogen fuel cell vehicle when it goes on sale in 2015.

Illustrative free cash flow development from HRS investments and operations

GBP millions

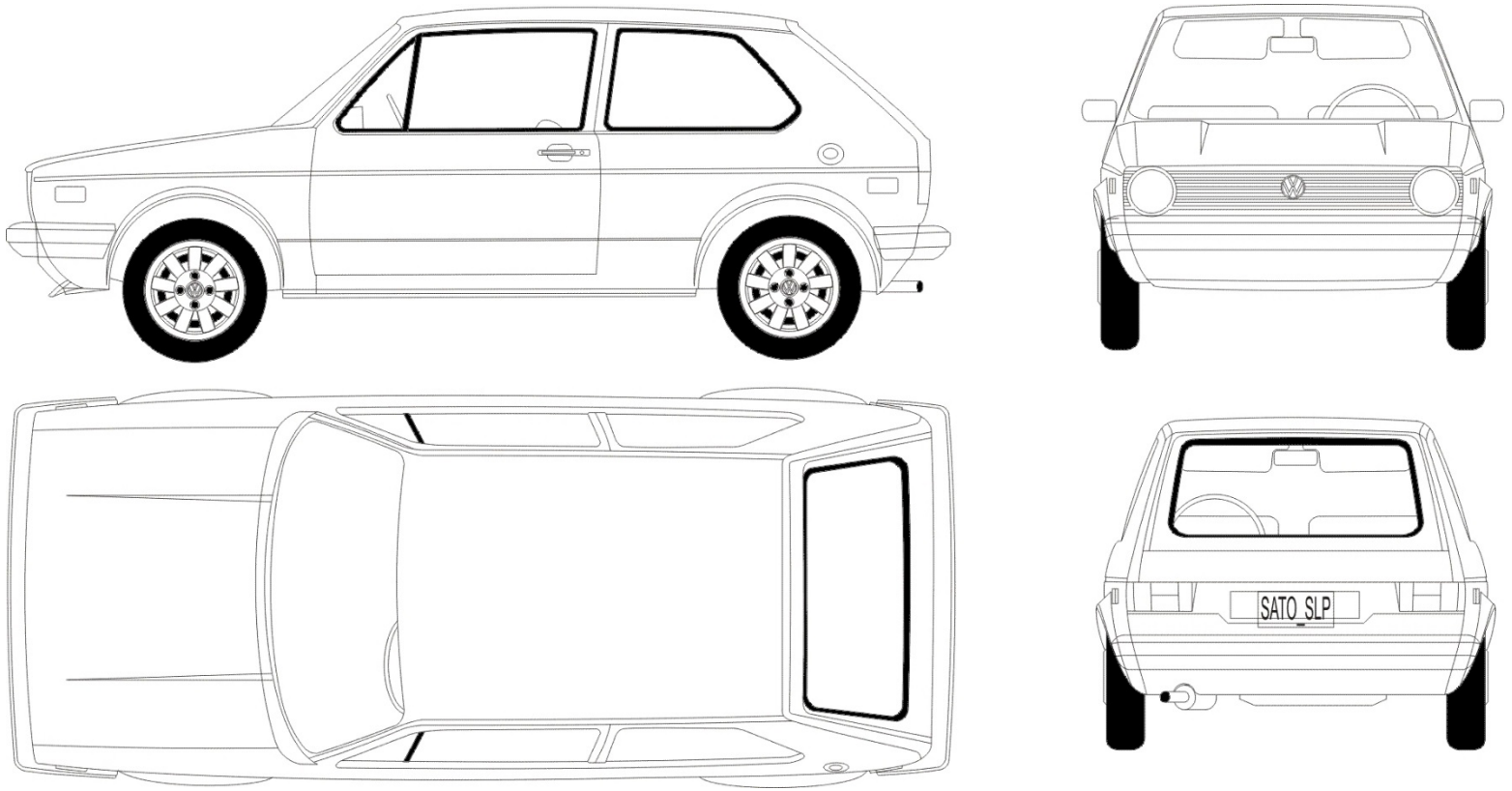


£500m support 2015-2020

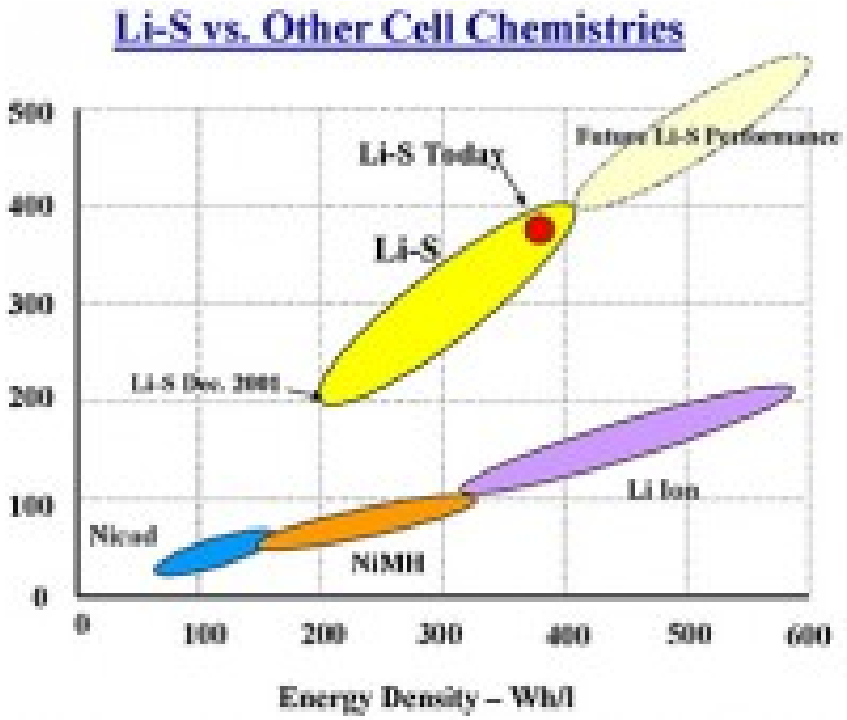
Office for Low Emission Vehicles

- £200m+ Plug-in car grant
- £30m Other vehicles grant
- £20m Taxi fund
- £100m R&D
- £32m chargepoint infrastructure grants
- £35m City schemes
- £30m Green bus support
- £4m HGV Gas infrastructure
- £m Hydrogen Infrastructure
- £m unallocated

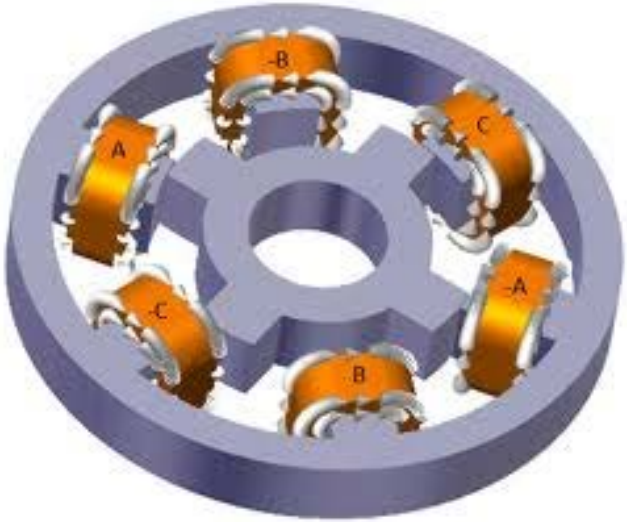
Technology Challenges
- **Vehicle Weight**



- Energy Storage

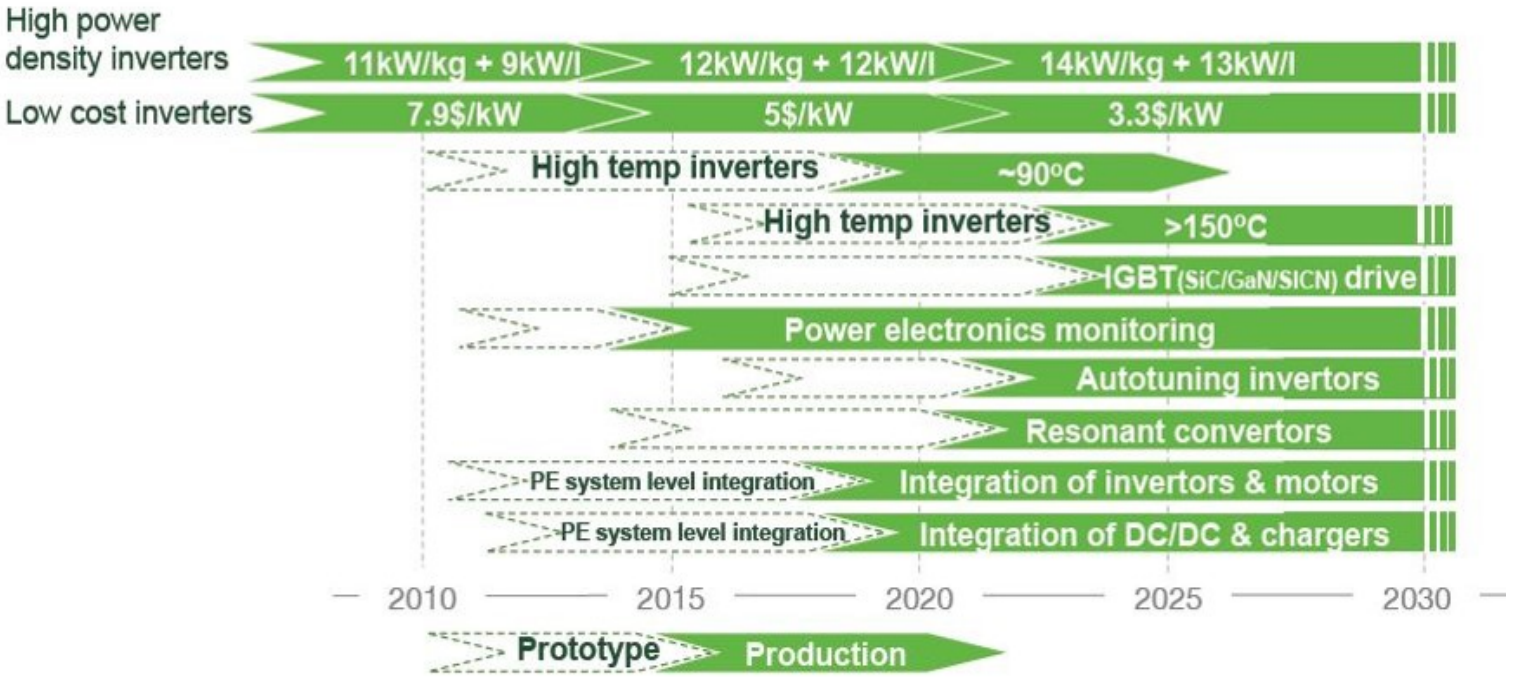


- Motors



Source: Ashwoods Automotive Ltd

Power electronics roadmap



Source:Automotive Council Technology Group 2013

OLEV Support to Industry led research and development

To accelerate technology development from concept to prototype
Building UK capability.

OLEV focus on 3 strategic technology areas:

- Electric machines and power electronics
- Energy storage and energy management
- Light-weighting

Innovate UK
Technology Strategy Board

2010-15 £82m support – fully committed

One Example Project – "**Intelligent Hybrid Electric Power Unit**" (IHEPU)

- Ashwoods Automotive Ltd, LifeBATT Ltd, Citroen, Sevcon Ltd, University of Bath

- Development of a hybrid electric power unit for a range of drive packages using lowest available £/kW motor, BMS and control systems. Dramatic reduction in cost – motor, battery and inverter use in LCVPPP Vans.

GKN Gyrodrive Project

Source: GKN and Alexander Dennis Ltd

A selection of R&D projects from recent competitions IDP7, IDP8, IDP9

Practical Lithium-Air Batteries Johnson Matthey, Queens University Belfast, Liverpool University

Revolutionary Electric Vehicle Battery OXIS Energy, Imperial College

Low Cost Auxillary Power Unit Ashwoods Automotive, Tata Motors, University of Bath

Ultra-light Car Bodies PAB Coventry Ltd, Imperial College

Retrofittable System for Vehicle Energy Recovery Artemis Intelligent Power Limited, Alexander Dennis Limited

Projects Database:
https://connect.innovateuk.org/publicdata/

Innovate UK
Technology Strategy Board

Thank you

ian.turner@olev.gsi.gov.uk

www.gov.uk/olev