



EVS29 Montreal 21 June 2016

Going Ultra Low: The UK strategy for zero emission vehicles



1. UK ambition

2. The UK offer

3. Elements in detail

4. Progress

5. Challenges

6. Next Steps

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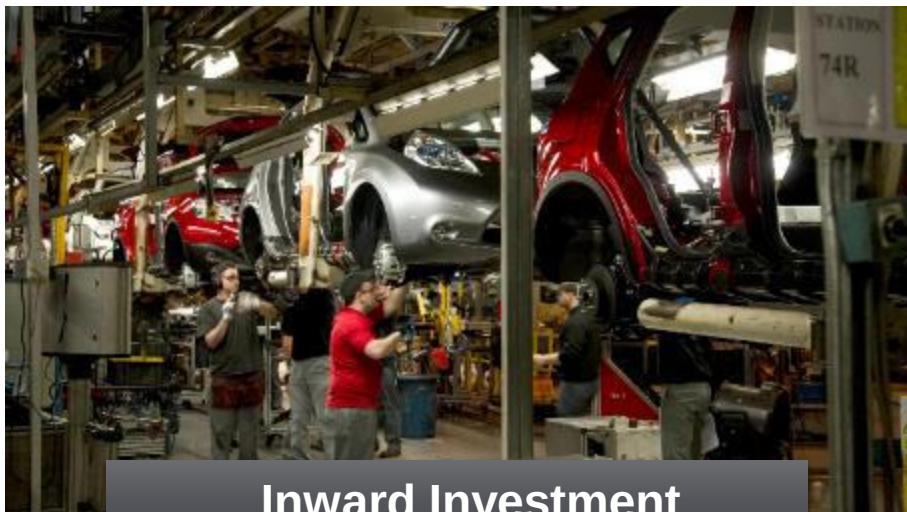
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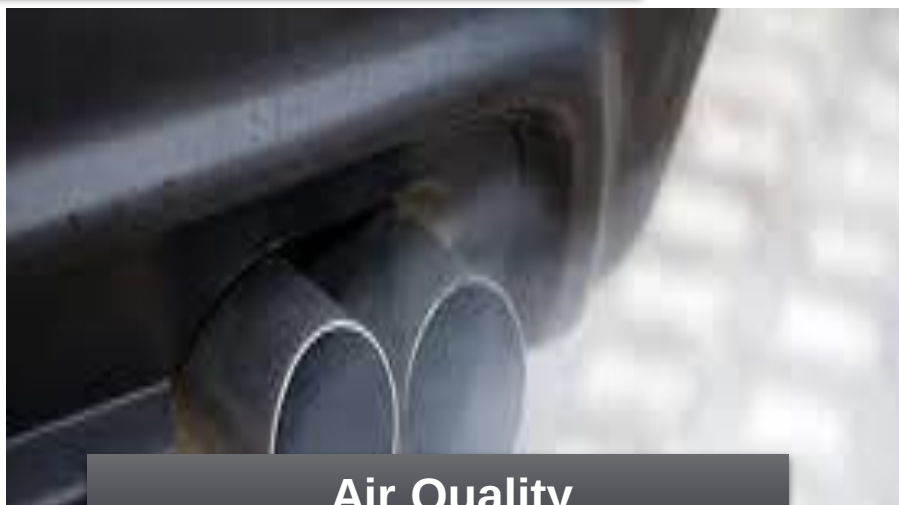
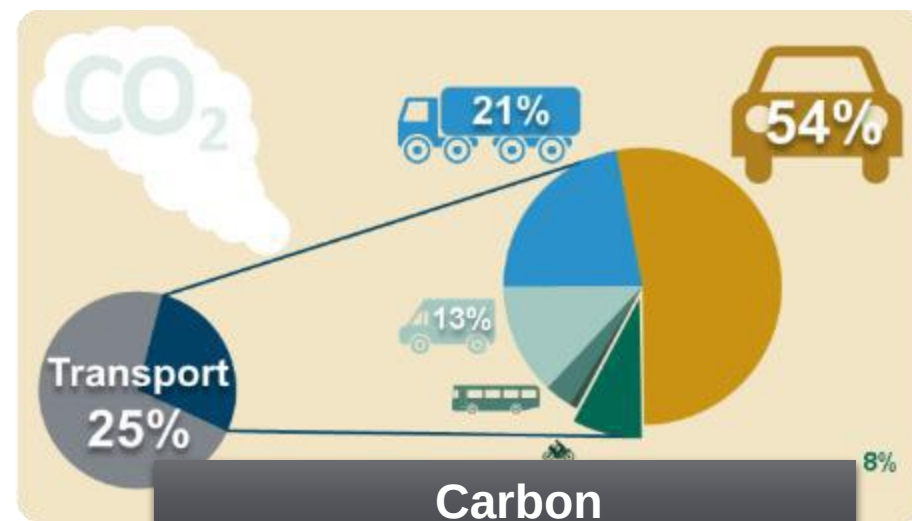




UK Policy Drivers



Inward Investment



Air Quality



Energy Security

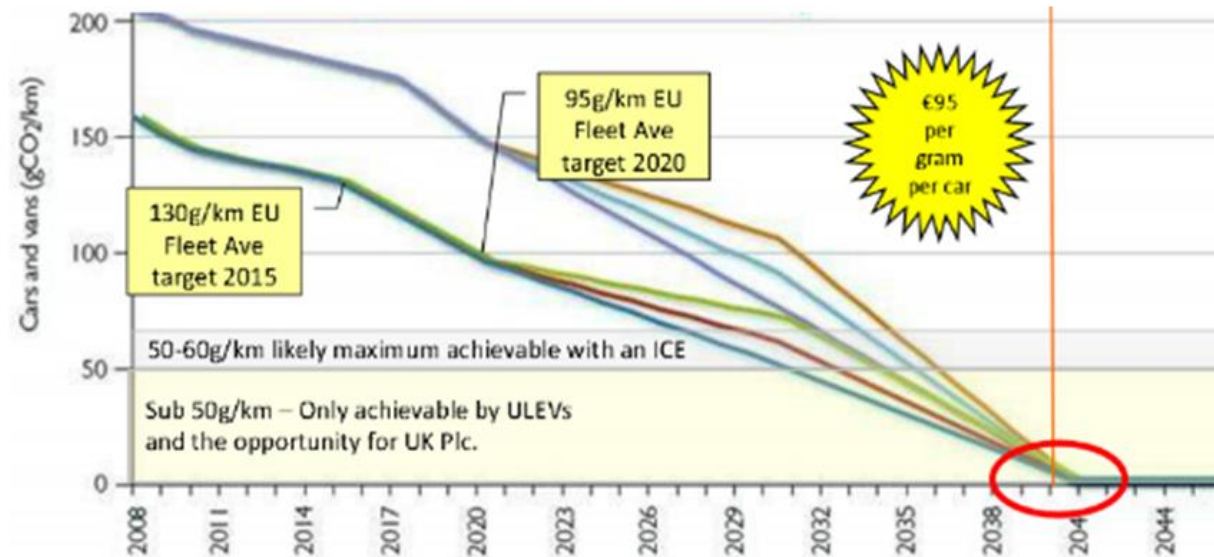
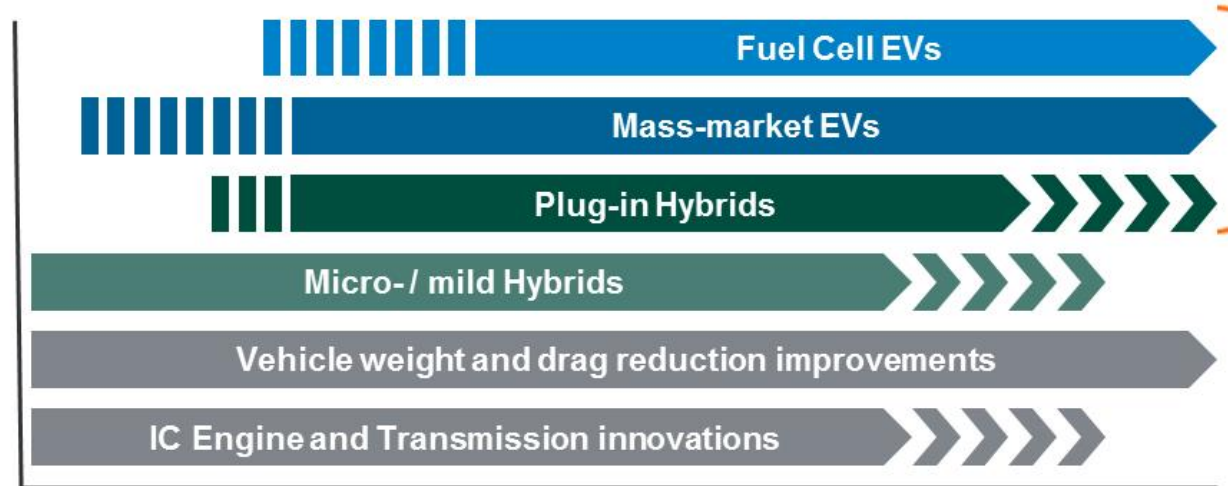




Technology is transitioning...

Tech

Regs



**2014: 1 in 4
EVs bought
in Europe
was built in
the UK.**



UK Government commitment



£400m

OLEV support
2010-2015



£600m

OLEV support
2015-2020



£500m

Advanced
Propulsion
Centre



£100m

Fiscal
incentives to
2020

- The right supporting infrastructure
- World class skills and facilities for EV tech
- A smarter electricity grid to max EV benefits
- The best place in Europe for EV industries.

EVERY NEW CAR ZERO EMISSION FROM 2040
ALL CARS BY 2050

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The Office for Low Emission Vehicles



The government will spend more than **£600m** between 2015-16 and 2020-21 to support uptake and manufacturing of ultra-low emission vehicles (ULEVs) ...and keep the UK on track for all new cars to be effectively zero emission by 2040.





The most comprehensive support package in the world?



£400m+ Plug-in Car Grant

£20m+ Other vehicles

£2m+ *Go Ultra Low* comms campaign

£40m Go Ultra Low Cities

£30m Buses

£20m Taxis

£35m London

£30m+ Chargepoint infrastructure

£10m+ Hydrogen

£15m Highways England chargepoints

£100m+ Research and development

£10m Battery prize



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Strong fiscal measures #1: Company Cars

CO2 (g/km)	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
	petrol	petrol	petrol	petrol	petrol	petrol
0	0%	5%	7%	9%	13%	16%
1-50	5%	5%	7%	9%	13%	16%
51-75	5%	9%	11%	13%	16%	19%
76-94	11%	13%	15%	17%	19%	22%
95-99	12%	14%	16%	18%	20%	23%
100-104	13%	15%	17%	19%	21%	24%
105-109	14%	16%	18%	20%	22%	25%
110-114	15%	17%	19%	21%	23%	26%
115-119	16%	18%	20%	22%	24%	27%
120-124	17%	19%	21%	23%	25%	28%
125-129	18%	20%	22%	24%	26%	29%
130-134	19%	21%	23%	25%	27%	30%
135-139	20%	22%	24%	26%	28%	31%
140-144	21%	23%	25%	27%	29%	32%
145-149	22%	24%	26%	28%	30%	33%
150-154	23%	25%	27%	29%	31%	34%





Strong fiscal measures #2 VED (road tax)

Table 2 - VED rates in 2015-16 (for cars purchased from 1 March 2001)

Band	CO ₂ emission (g/km)	First Year Rate (£)	Standard Rate (£)
A	Up to 100	0	0
B	101-110	0	20
C	111-120	0	30
D	121-130	0	110
E	131-140	130	130
F	141-150	145	145
G	151-165	180	180
H	166-175	295	205
I	176-185	350	225
J	186-200	490	265
K	201-225	640	290
L	226-255	870	490
M	Over 256	1100	505

Table 3 - VED rates for cars purchased from 1 April 2017

CO ₂ emissions (g/km)	First Year Rate (£)	Standard Rate (£)*
0	0	0
1-50	10	140
51-75	25	140
76-90	100	140
91-100	120	140
101-110	140	140
111-130	160	140
131-150	200	140
151-170	500	140
171-190	800	140
191-225	1200	140
226-255	1700	140
Over 256	2000	140





Infrastructure

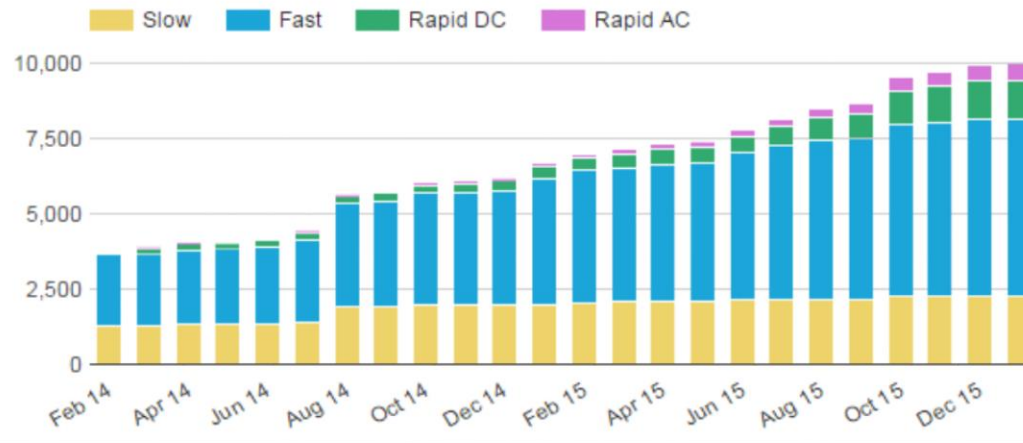


**900 43/50kw
chargepoints**



£30m+ Chargepoint infrastructure

GRAPH SHOWING PROFILE OF UK CHARGING POINTS BY CHARGER SPEED: ZAP-MAP, JANUARY 2016



Highways England: £15m

Infrastructure programme to ensure that you will never be more than 20 miles from a charging point on 95% of the Strategic Road Network.

- UK has largest rapid network in Europe. 96% of MSAs have 1 – 6 rapids
- Over 11,000 publicly available chargepoints. 3, 7 and 22kw
- 6 major network operators, 3 UK SMEs
- 8 strong regional networks attracting increasing private investment
- 60,000 residential chargepoints installed



£600m+ support 2015-2020

£400m+ Plug-in Car Grant

GRANT CATEGORIES	1	2	3
CO2 EMISSIONS (NEDC)	<50g CO ₂ /km	<50g CO ₂ /km	50-75g CO ₂ /km
ZERO EMISSION RANGE	70 miles+ (>112 km)	10-69 miles (16-111 km)	20 miles+ (>32 km)
GRANT OFFERED	£4,500	£2,500	£2,500
PRICE CAP	-	£60,000	£60,000



<75g
CO2

10-70+
miles range

>60 mph top
speed

35% off an
eligible car



£600m+ support 2015-2020

£30m Buses

£20m Taxis

ULEV taxis
& buses

urban air
quality

ULEVs
normalised





City scheme: the power of 'soft' measures

£40m Go Ultra Low Cities

Nottingham is a Go Ultra Low City

ULEVs can use **13.6 miles** of bus lanes in low emission corridor through city centre

Up to **195** new public fast chargers

ULEV Business support package including 'try before you buy' option



Milton Keynes is a Go Ultra Low City

Opening **20k** parking bays for free to all ULEVs

Use of **all** bus lanes – same priority at lights as buses

EV Experience Centre in city centre



London is a Go Ultra Low City

New chargepoint delivery partnership providing single port of call

8 'Neighbourhoods of the Future' to normalise ULEVs

Car Club strategy to have **1m** members by 2025



Bristol is a Go Ultra Low City

Opening **3 High Occupancy Vehicle lanes** to ULEVs

4 rapid charging hubs in key locations with up to **30** Rapids

Proposals for a **Clean Air Zone**



Winners:

Nottingham

Bristol

Milton Keynes

London

Seeded:

Dundee

Oxford

York

North East





£600m+ support 2015-2020

£7.5m+ Hydrogen

- **£5.5m Hydrogen Refuelling Station Infrastructure Grant Scheme**
 - Funding 12 HRSs around London, Swindon, Sheffield, South Wales and two mobile refuellers
 - First upgrade station complete and on-line, others completing between now and November 2016
 - Significant first step towards the initial network of 65 HRS by 2020 identified by UKH₂Mobility
- **£2m Fuel Cell Electric Vehicle Fleet Support Scheme**
 - Up to £2m funding competition for public and private sector fleet deployment of FCEVs
 - For M1 and N1 vehicles (cars and vans)
 - Providing support over 3 years of vehicle operation
 - Target competition launch in early May



CONSUMER COMMUNICATIONS



What is Go Ultra Low?

Normal not novel

Campaign to raise awareness, interest and understanding of ULEVs, establishing ULEVs as 'normal not novel'

One stop shop

Creating a trusted, honest gateway for ULEV information, cutting through consumer uncertainty and advice variability

Collaborative

Innovative and unique government and multi manufacturer consortium approach

Increased sales

Widening the sales funnel for VMs and increasing the number of ULEVs sold, including fleets





Office for
Low Emission
Vehicles

£600m+ support 2015-2020

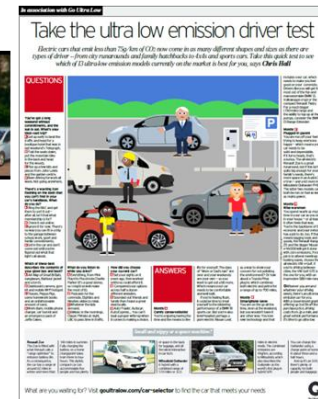
£2m+

Go Ultra Low comms campaign



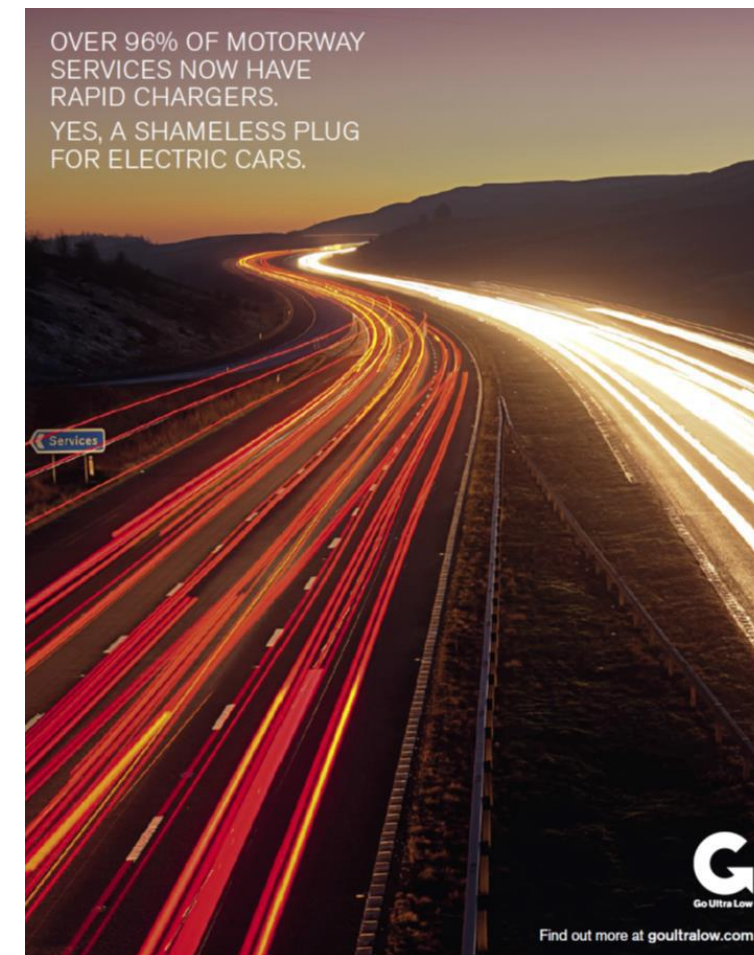
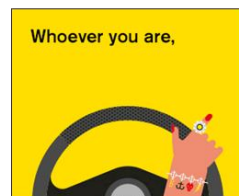
Transport
for London

FleetNews



BusinessCar
magazine | website | email | events | mobile

The Telegraph



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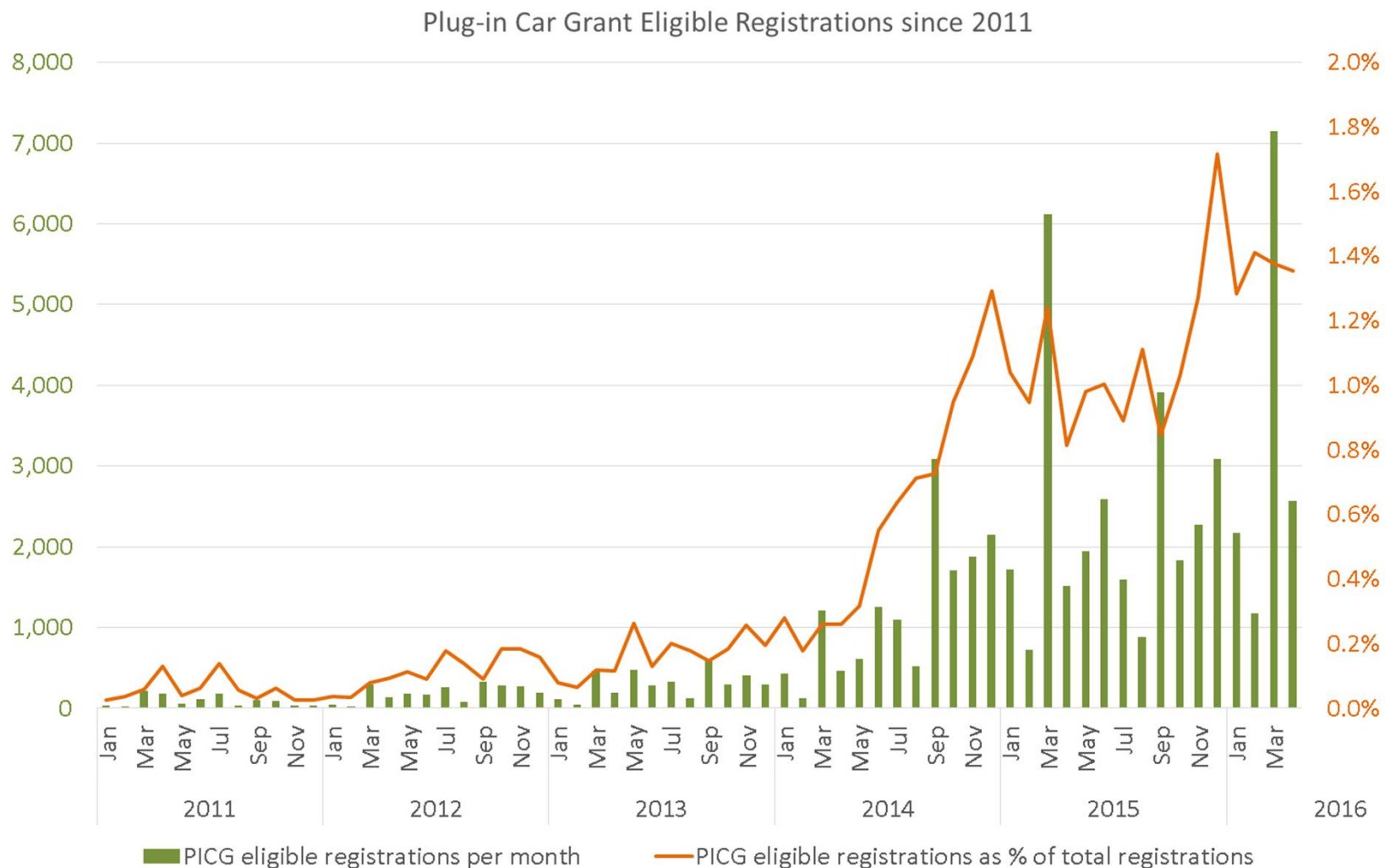
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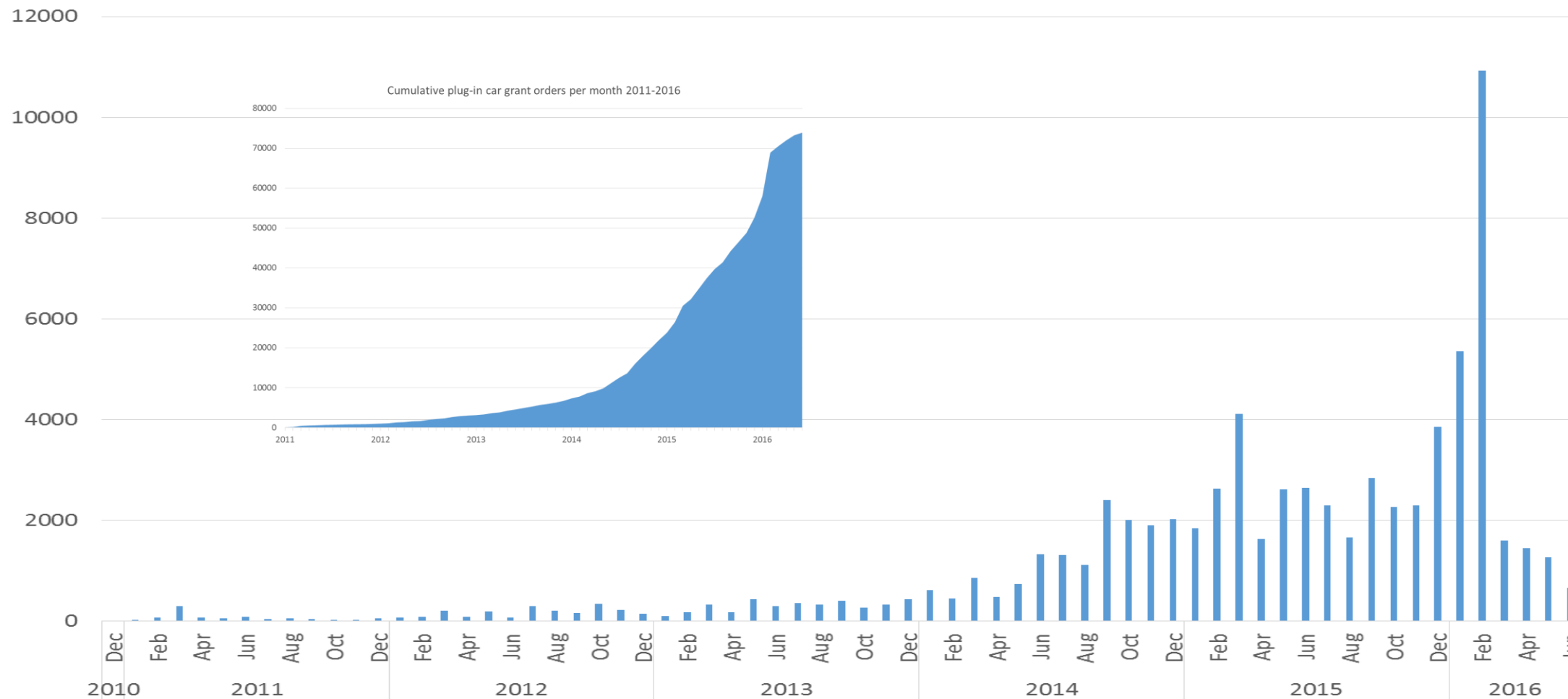
UK Uptake #1





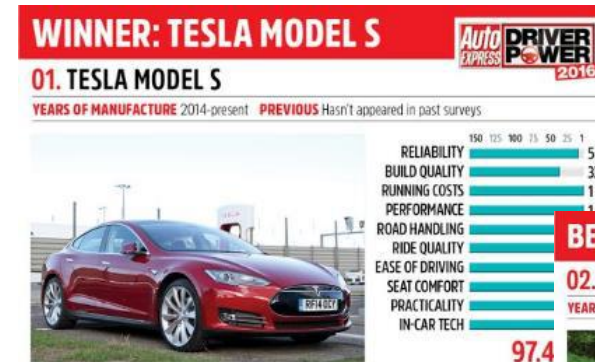
UK Uptake #2

Plug-in car grant orders per month 2011-2016





UK progress...



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CHALLENGES

PRICE / RANGE



+ RANGE

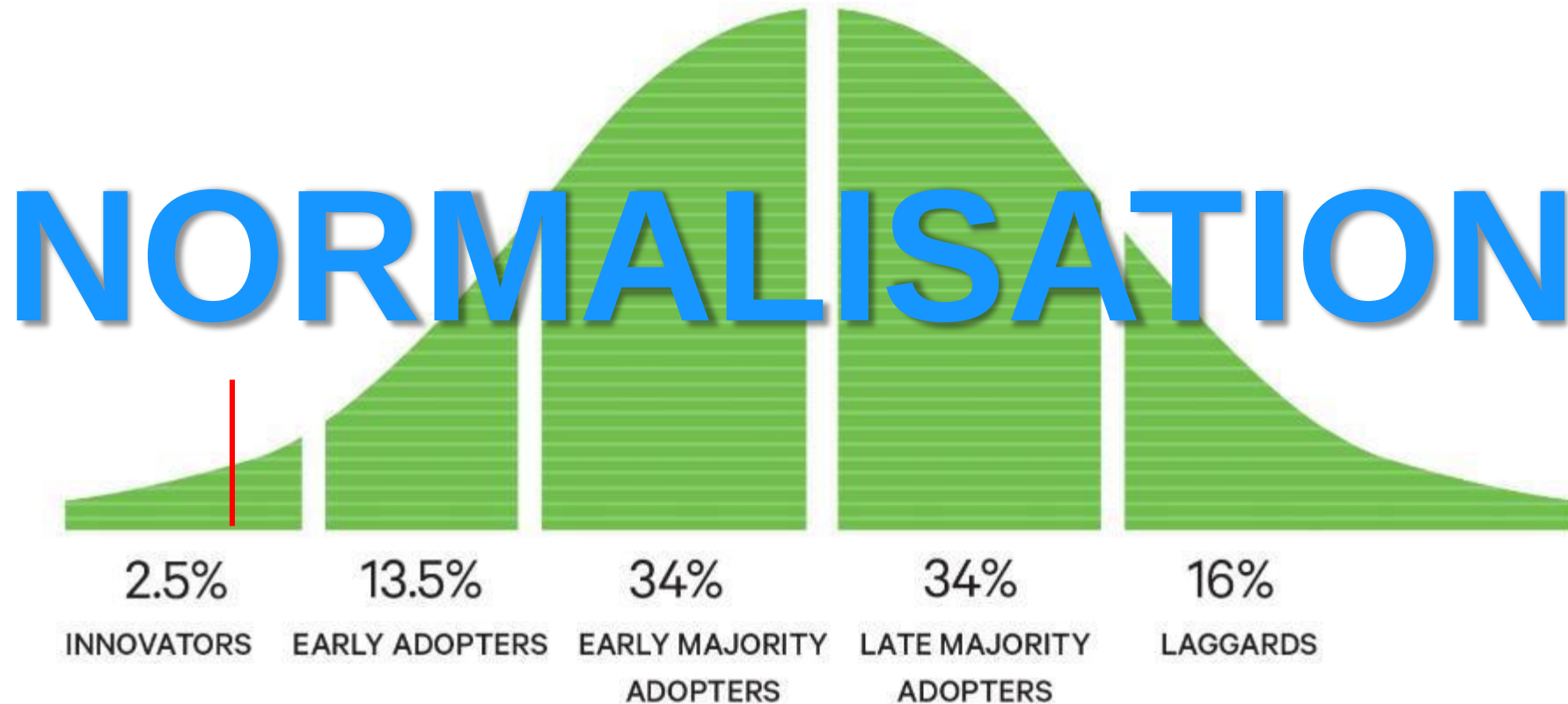
CHALLENGES



CHALLENGES

Technology Adoption Curve

EVERETT ROGERS - DIFFUSION OF INNOVATIONS 1962



CHALLENGES



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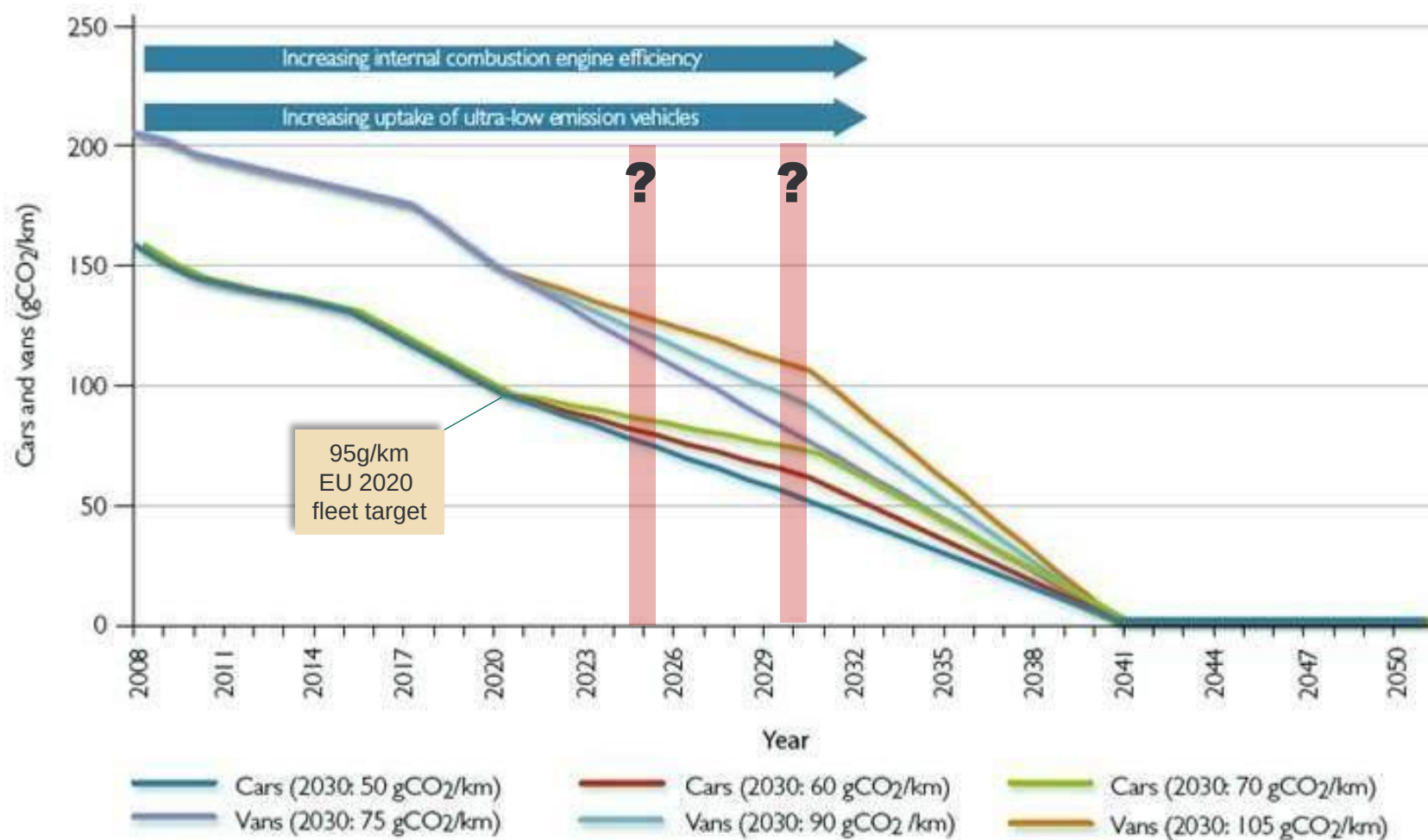
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Next Steps #1

**REGULATORY
PUSH**





Next Steps #2

**DEMAND
PULL ?**



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THANK YOU

Expert Dialogue Session 2 21 June 13:45-15:15
UK Pavilion (Booth 508)

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