



Low Emission Vehicles

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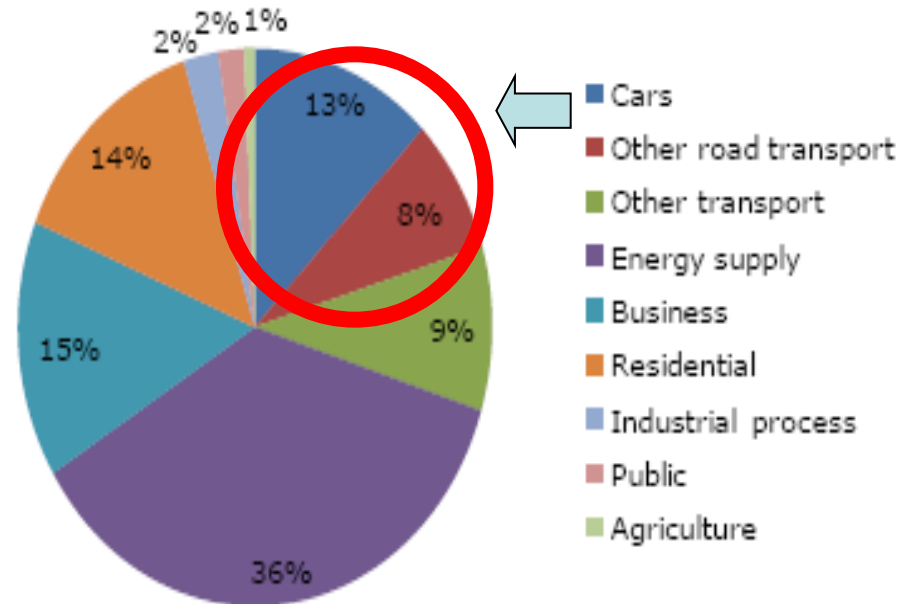
RENAULT
RETAIL GROUP



How much do Vehicles Pollute?

- 117 Million Tonnes of CO₂ per annum
- Over 20% of all UK CO₂ Emissions

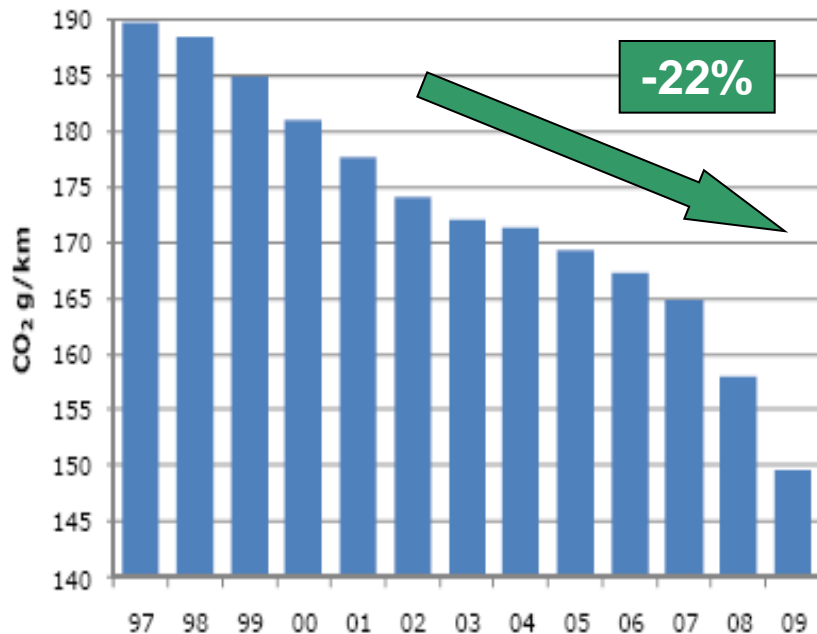
CO ₂ Emissions (Tonnes)			
Year	Total UK	Road	% Road
1997	582	117	20.1%
2000	587	116	19.8%
2007	586	121	20.6%
2008	574	117	20.4%



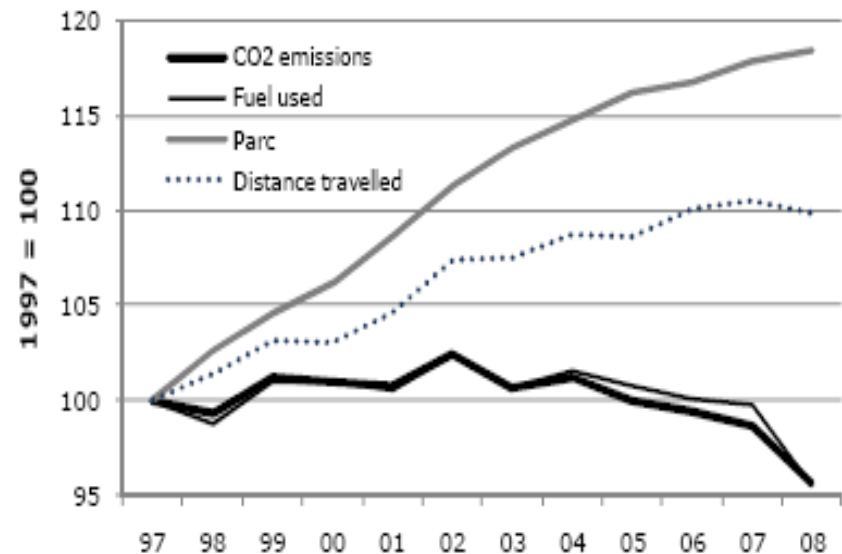
- But no real change since 1997

Why No Decrease?

- Emissions on New Cars reduced by 22% 1997
- But offset by:
 - ✓ 18% increase in Vehicles on the road (Parc)
 - ✓ 10% increase in annual mileage



CO₂ in g/km for New Cars sold



Evolution of Parc, Mileage & CO₂

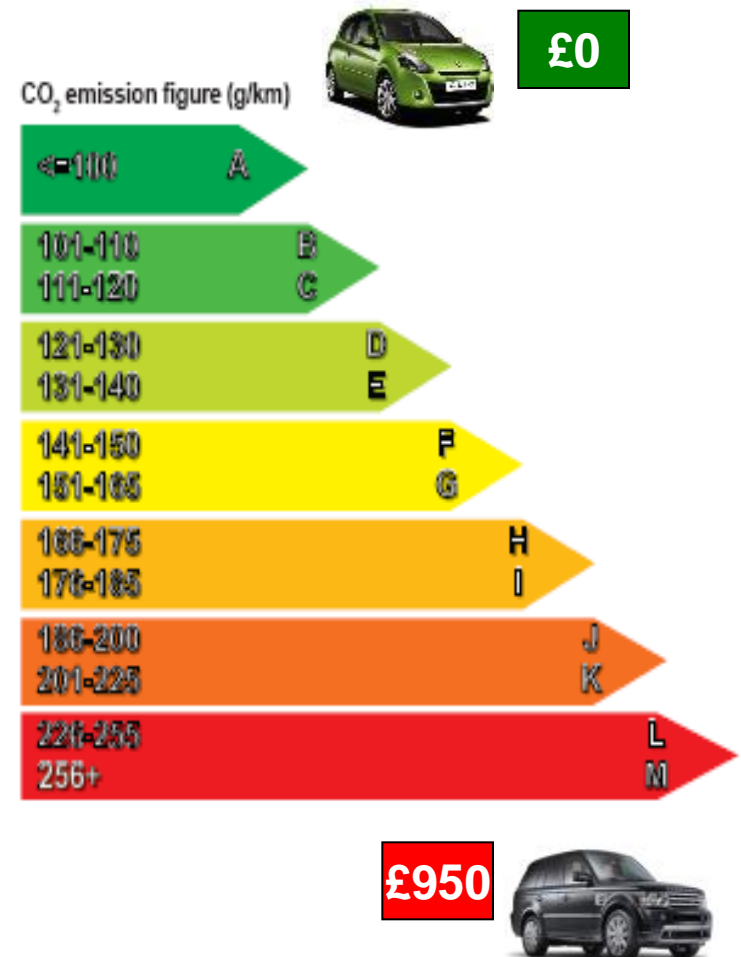
Emissions Targets

- UK adopted EU Targets on new cars:
 - Average 130 g/km by 2015
 - Average 95 g/km by 2020
 - = 6% gain per annum
 - vs < 2% in last 5 years
- Car Manufacturers issued with Target
 - 65% of sales must be < Target by 2012, 100% by 2015
 - Harsh penalties for missing Targets
 - eg +4g/km over Target → £75 per registration



Government Policy – Fuel Tax & VED

- Fuel duty: £25 billion
 - 20% higher than EU ave.
- VED: £5.5 Billion
 - New scheme 1st April 2010
 - Favouring low emission Cars
 - Introduction of 1st Year VED (£0 for Cars < 130 g/km)



Government Policy – Company Cars

- Company Car Tax

- Since 2002 link to CO² emissions

- BIK ranges from 10% to 35% (of vehicle price)
 - Diesel +3% vs Petrol

- Further changes in 2012-2013

- Lowest Band = <100 g/km
 - Increasing by 1% per 5 g

- Capital Allowances

- 100% in 1st year on Vehicles < 110 g/km

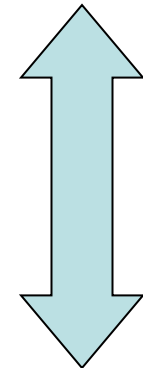


115g

£600

<120

10%



>235

35%

294 g

£12000



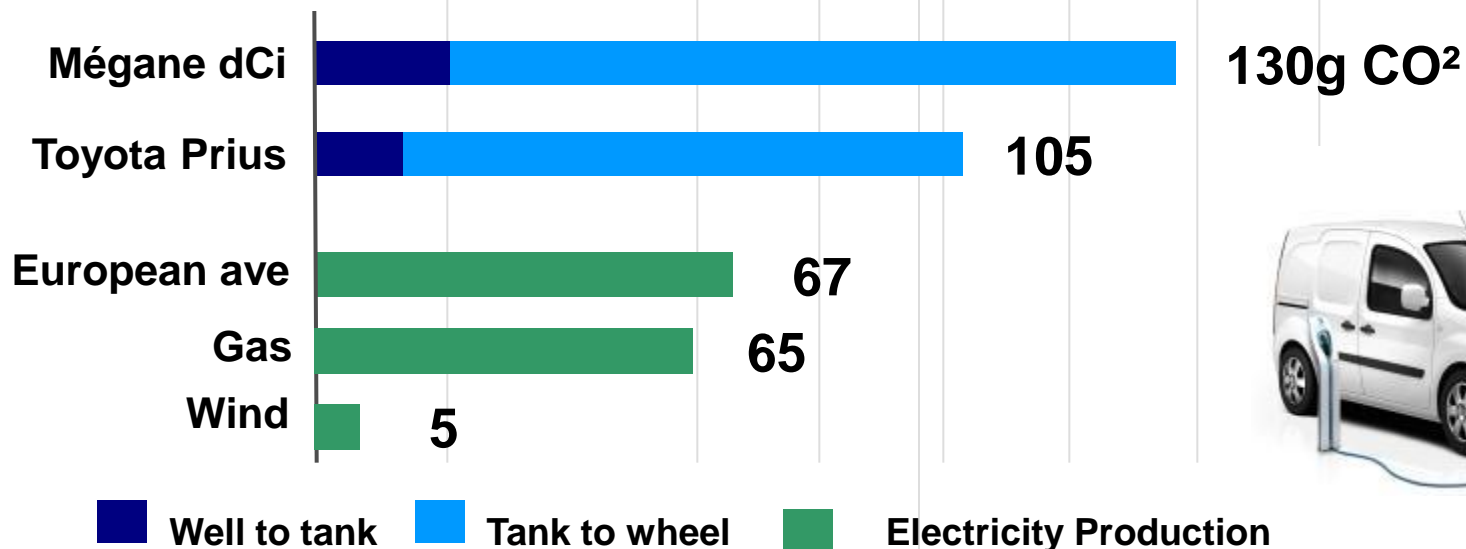
Renault's Answer - Today

- Leader in low-emission vehicles
 - 25% of Range sub 120 g / km (Nil VED, 10% BIK)
 - 75% sub 140 g (15% BIK)
- Smaller, higher output engines
- Ultra-low emission engine
 - 98 g/km CO² / 76 mpg
- Dry Clutch Automatic
 - 114 g CO² / 64 mpg



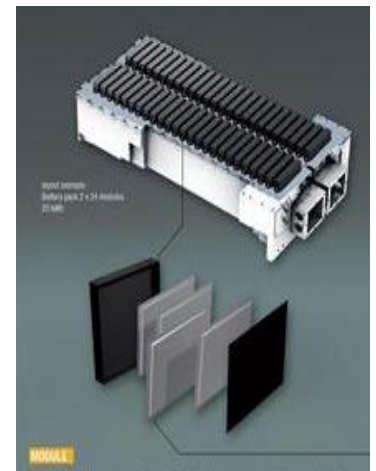
Renault's Answer - Tomorrow

- Electric Vehicles – Why?
 - Only EVs have Zero Emissions in Use
 - And lowest overall 'Well to Wheel' Emissions
 - 55% lower than best ICE vehicles
 - 40% lower than Hybrid vehicles



But are they Viable?

- Today, yes...
- Technological breakthroughs - Lithium-Ion Batteries:
 - Lighter, smaller, cheaper
 - Significantly improved autonomy, reduced charging times
- Consistent with current vehicle usage
 - 50 % cars drive < 12 miles a day
 - 90% <40 miles a day
- Gov't & Local Authority initiatives:
 - Purchase & Fiscal incentives
 - Infrastructure projects



Renault EV Product Plan

2011



Fluence

95 bhp

Max speed 80mph

Range 100 miles



Kangoo Van

2012



Zoe



Twizy

Recharging Solutions

Home

Work

**Charging:
4-8 hours**



Supermarkets

Park & Rides

Public
Charging
Points

**Charging:
30'**



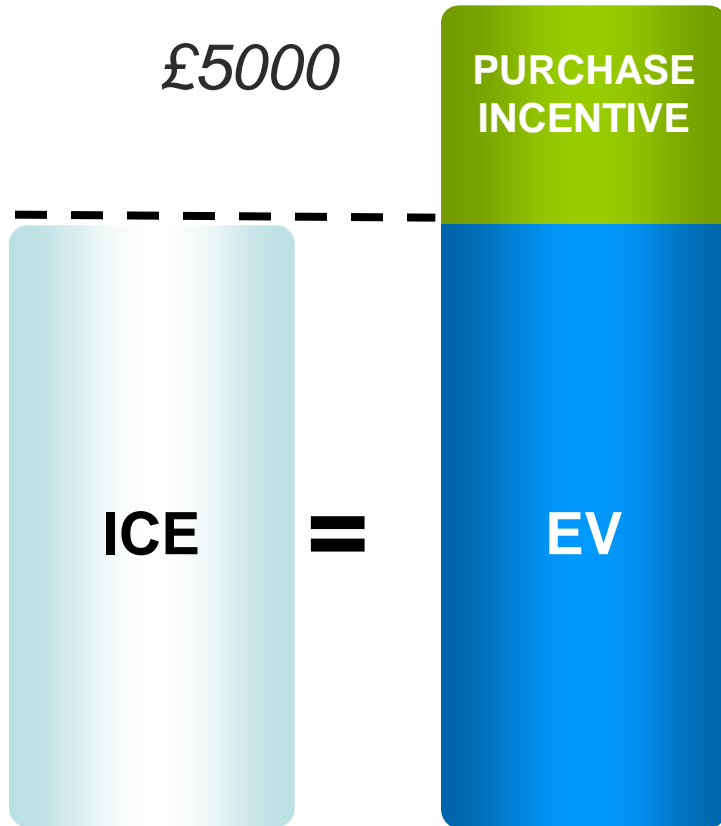
Battery Swap Points

Swap Time:5'

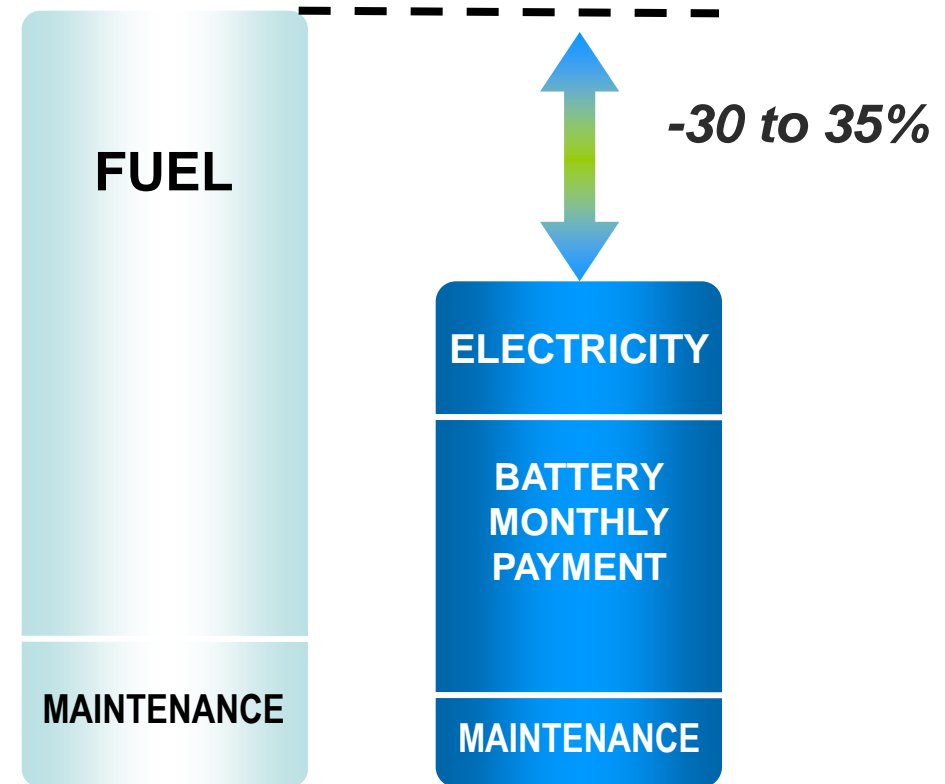


EV Costs vs ICE Solution

Purchase



Running costs



Central & Local Government Initiatives

- OLEV / Carbon Reduction Delivery Plan
 - Promotion of ultra-low emission vehicles
 - £230 M Budget
 - £5000 purchase incentive (from 2011-2014)
- Infrastructure / Recharging projects
 - £30 M Government scheme
 - Local initiatives
- Road Pricing?

