

# From a climate problem to sustainable transport

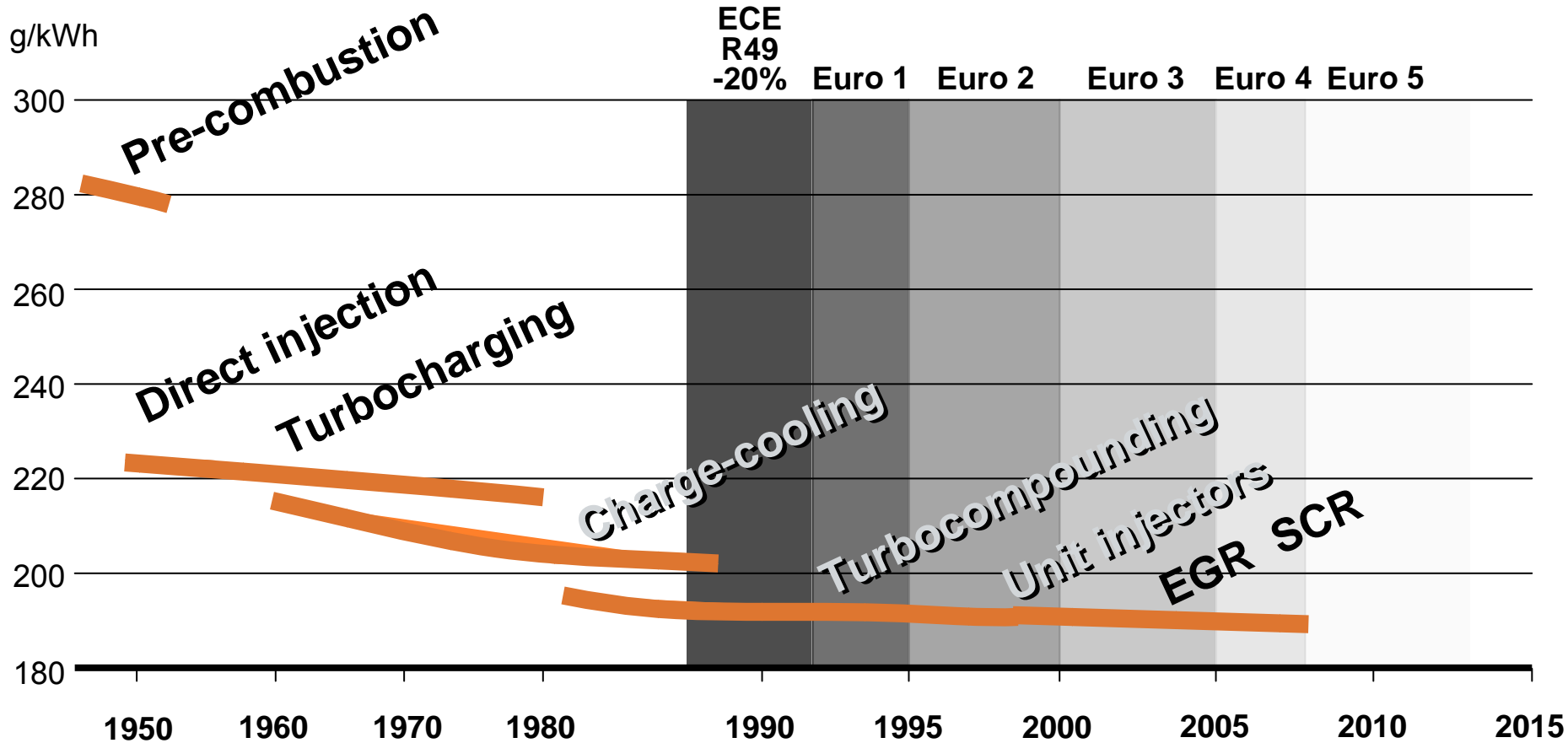


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# Diesel engine development

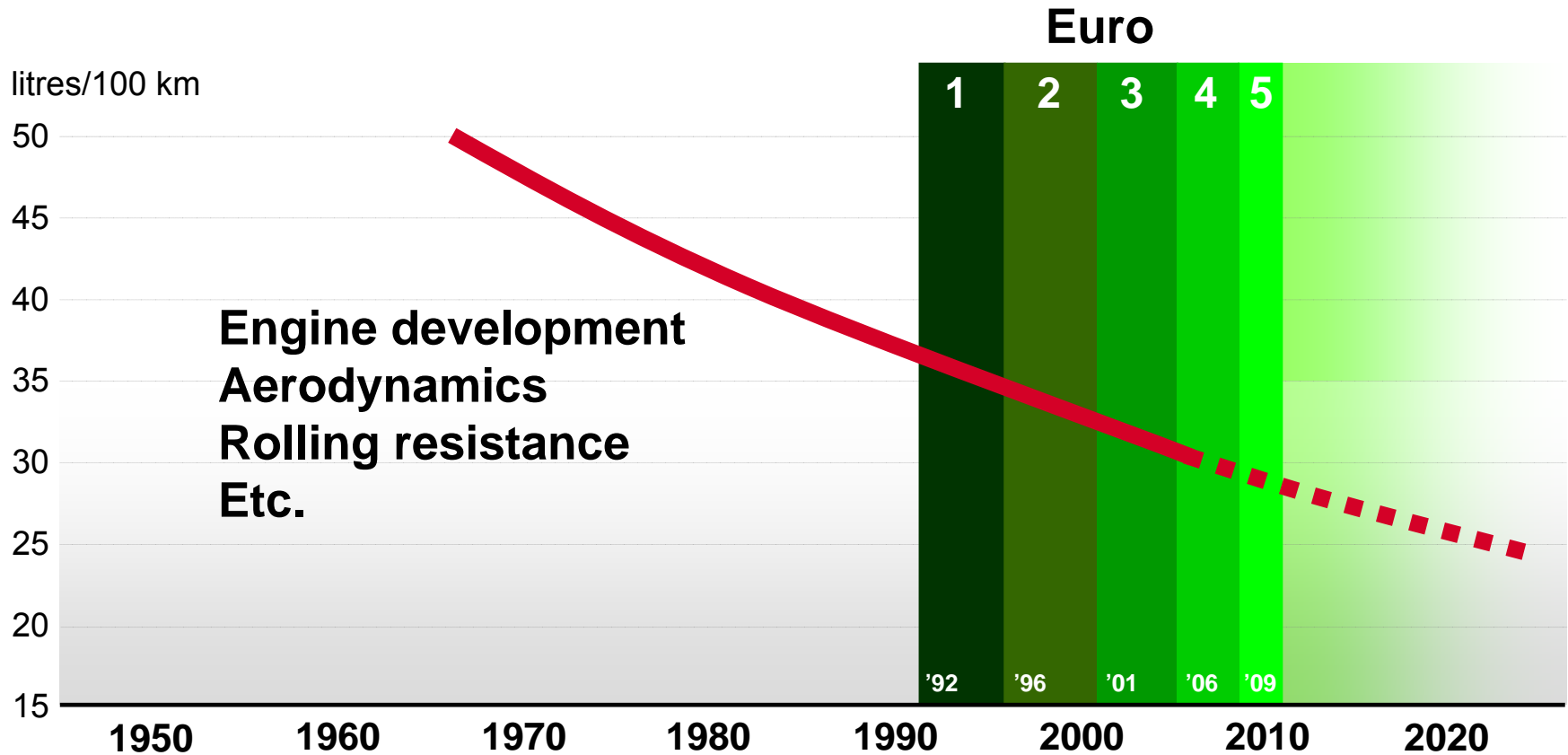
*Minimum specific fuel consumption*



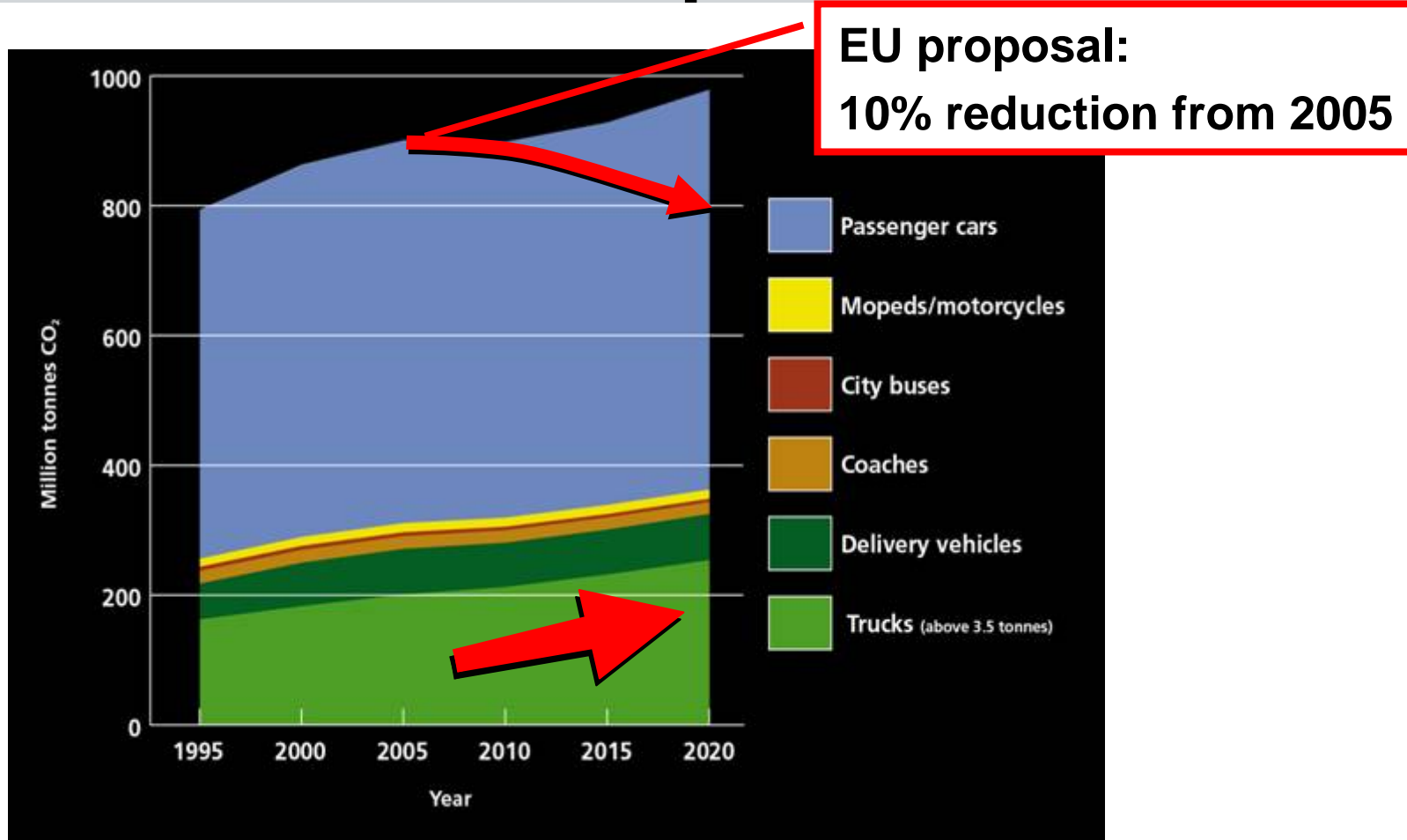
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# Fuel consumption development

## European tractor and semitrailer combination



# Projected CO<sub>2</sub>-emissions from road transport in EU



Data from TREMOVE



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# EU assignment for non-trading sectors

## Instruments

- Fuel taxes
- Incentives
- City zones
- Road fees

On average -10%  
2005-2020

	CO <sub>2</sub>
AT	-15%
BE	-15%
BG	20%
CZ	9%
DE	-14%
DK	-20%
ES	-10%
FI	-16%
FR	-14%
IE	-20%
IT	-13%
LU	15%
NL	-20%
NL	-16%
PL	14%
PT	1%
SE	-17%
SK	13%
UK	-16%

# Driver and vehicle

- Driver skills
- Speed limits
- Tyre pressures
- Support to logistics
- Vehicle engineering
- Hybrids



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# System thinking

- Attractive public transport
- Improved transport planning
- Multimodality



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# Roadmap – biofuels and new technology

Ethanol

BTL gen. 1

Biodiesel

Biogas

Hybrid + biofuel + plug-in

Alcohol from cellulose

BTL gen. 2

DME

Hydrogen + fuel cell

Now

2020

Availability at a competitive price

BTL = biomass-to-liquid  
DME = dimethyl ether



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**Sustainability  
certificate for  
biofuels**

