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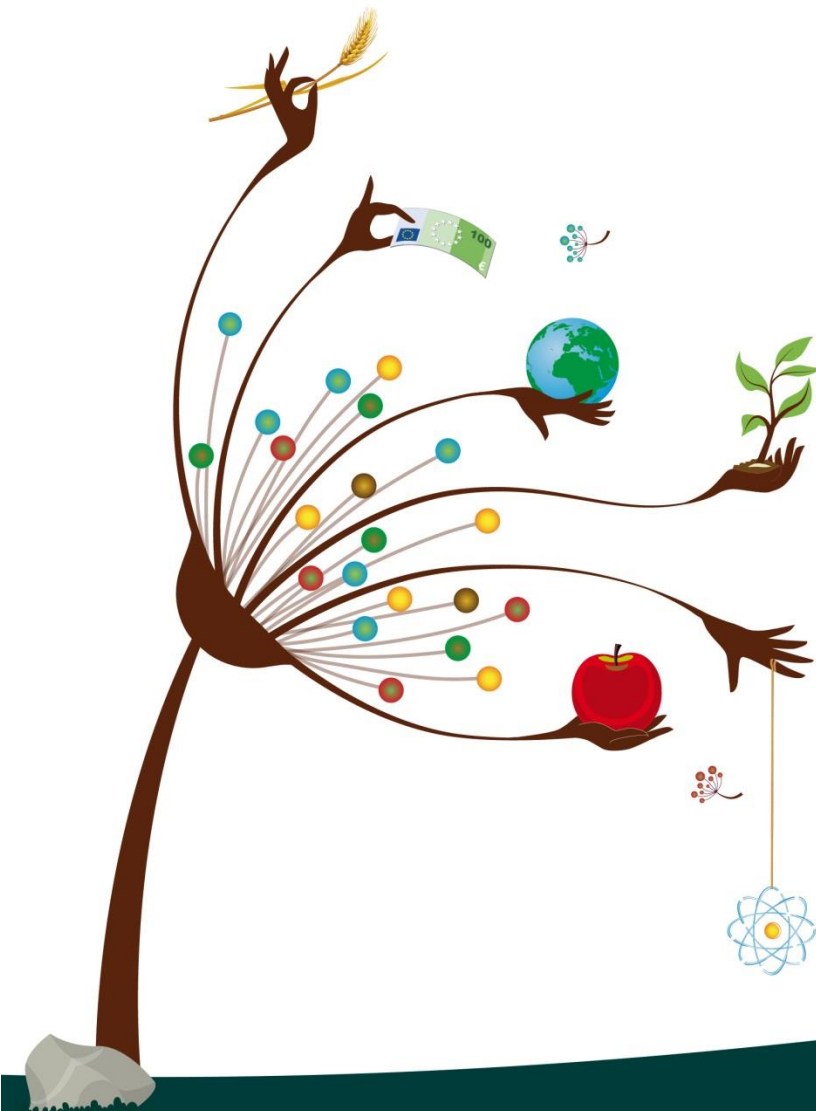
Joint Research Centre

EU electric vehicle deployment

Christian Thiel

Scientific Project Manager
European Commission, Joint Research Centre
Energy, Transport & Climate

**5th International Conference of the
Armand Peugeot Chair,
Paris, 14/12/2017**



OVERVIEW

- Recent developments
- Policy context
- EU electric vehicle deployment estimates
- Conclusions

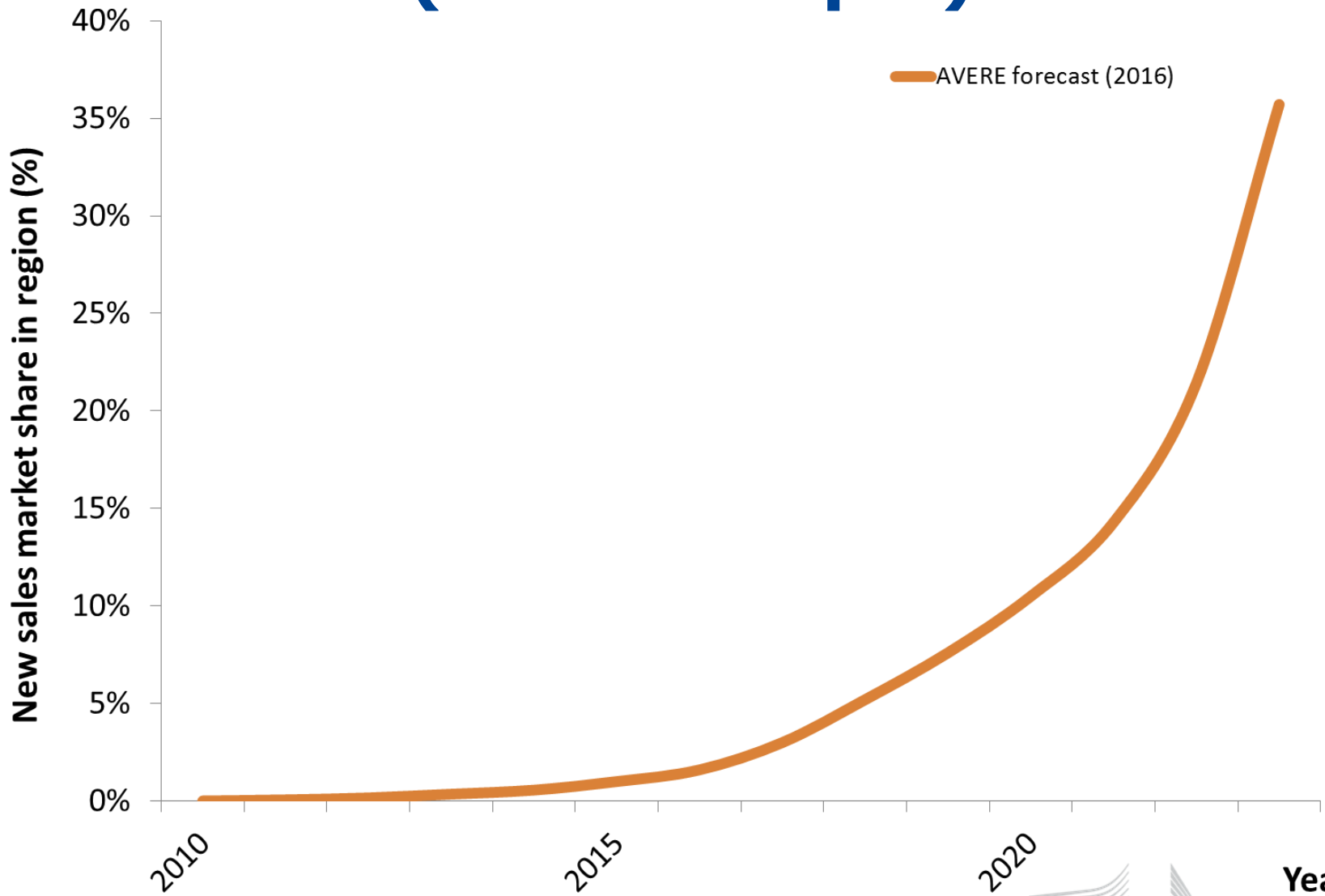


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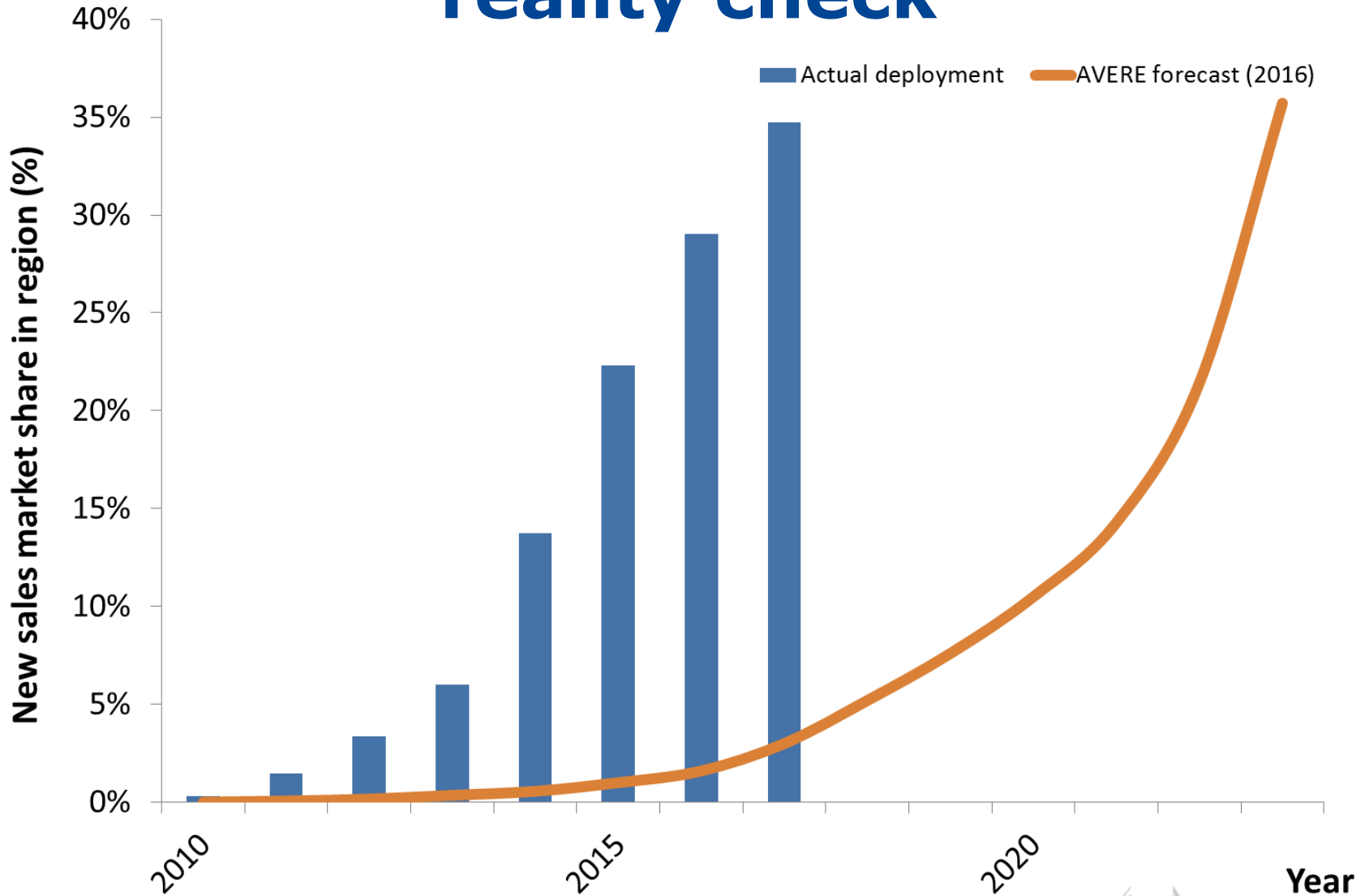


Electric cars – FORECAST (one example)



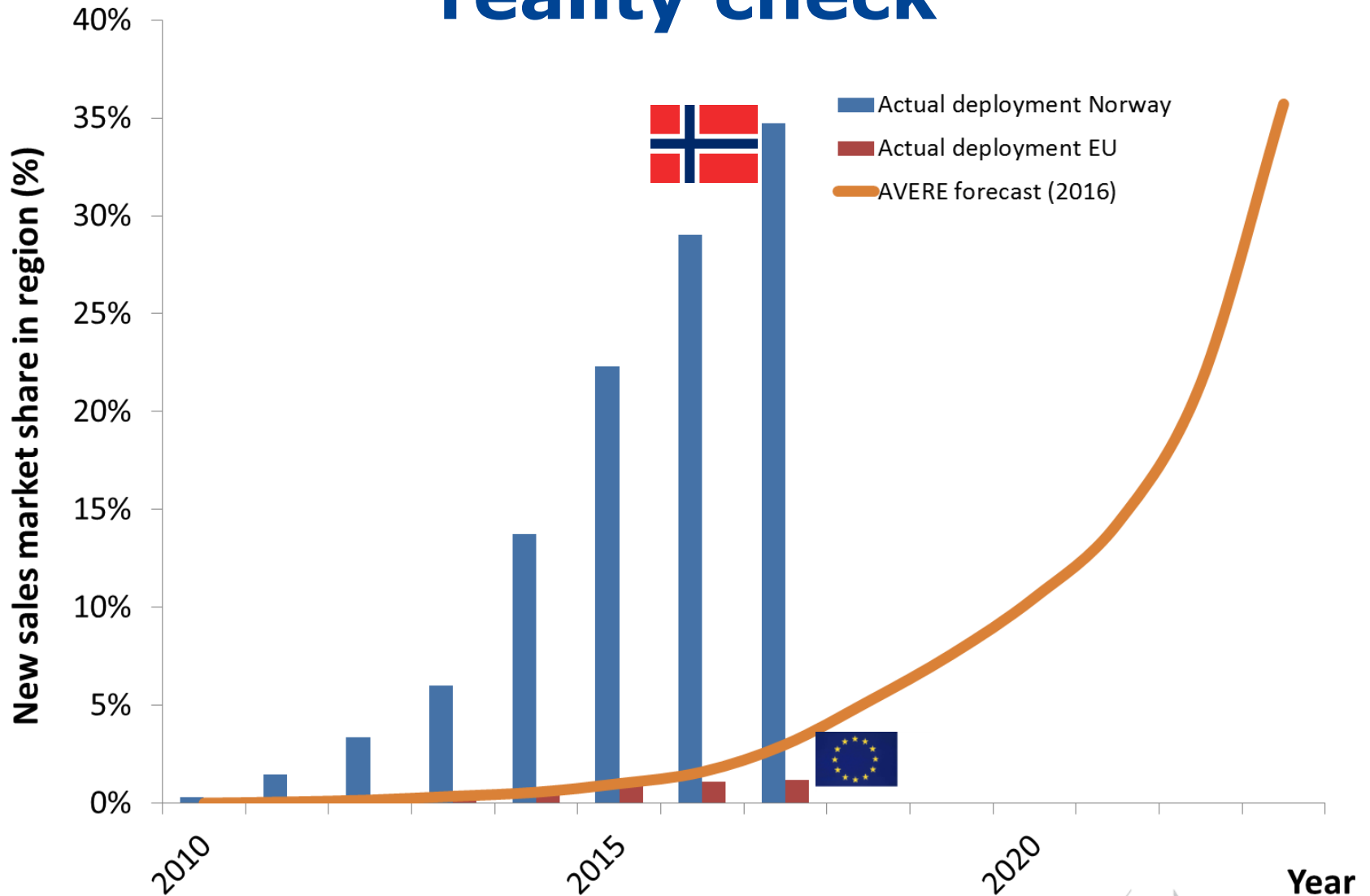
Source: AVERE

Electric cars – FORECAST versus reality check



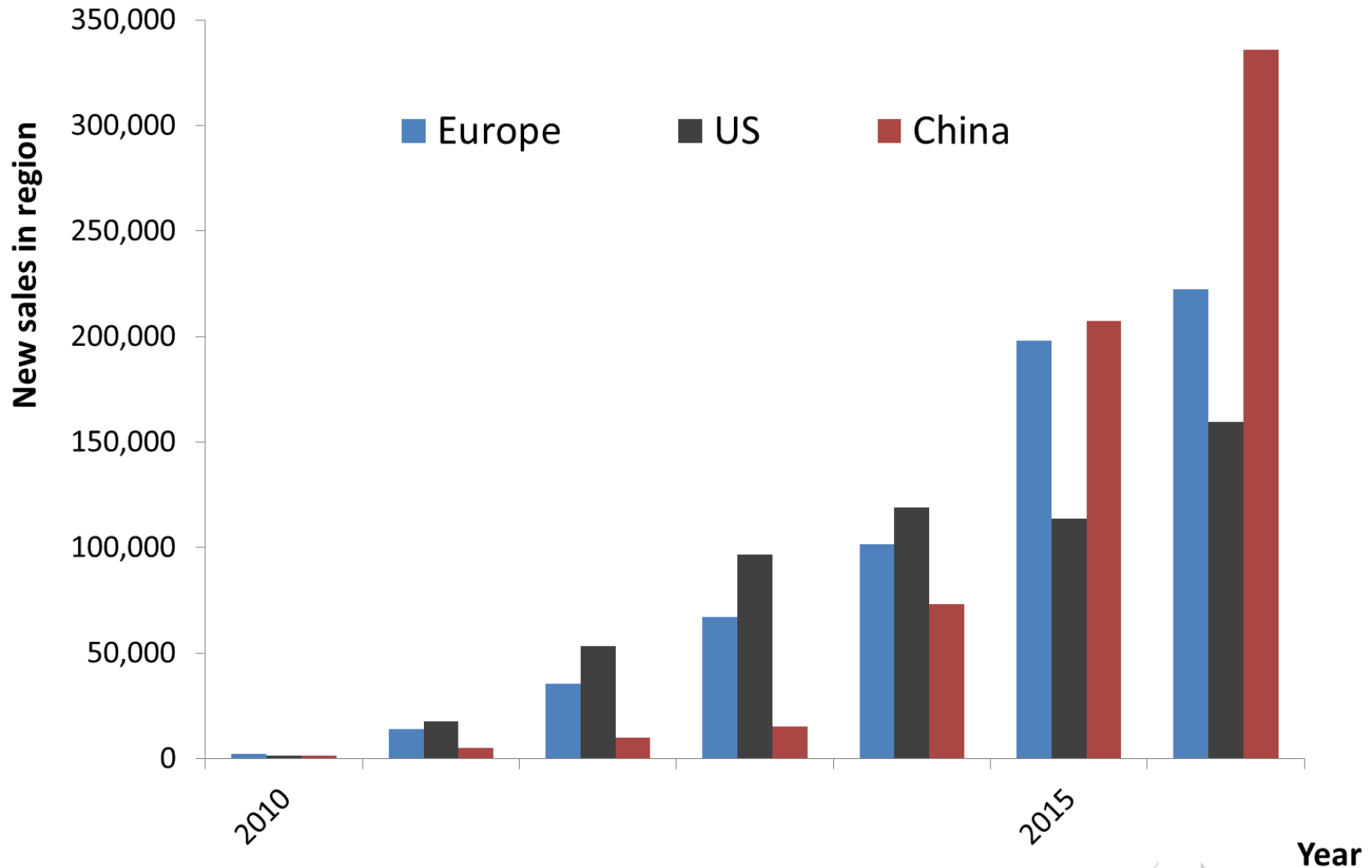
Source: AVERE, EAFO

Electric cars – FORECAST versus reality check



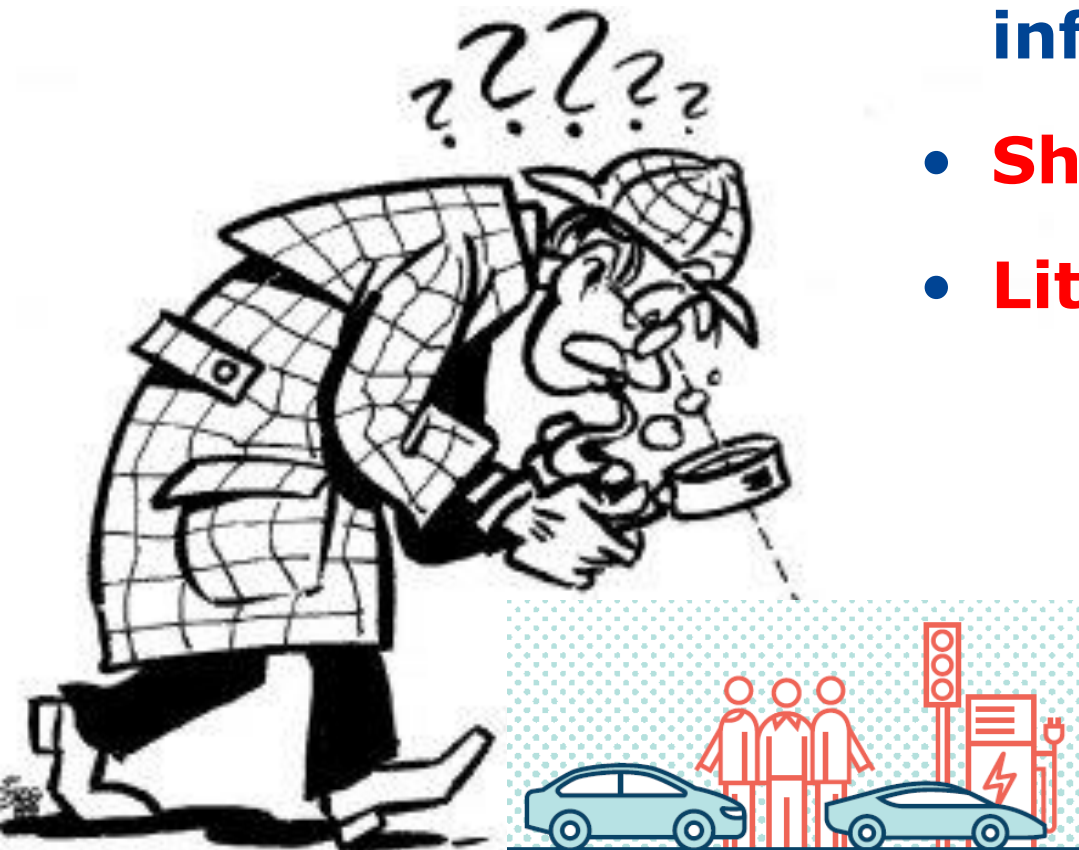
Source: AVERE, EAFO

Global developments



Barriers for EV adoption

- **High** Purchase price of EVs
- **Lack** of recharging infrastructure
- **Short** range
- **Little** model choice



OVERVIEW

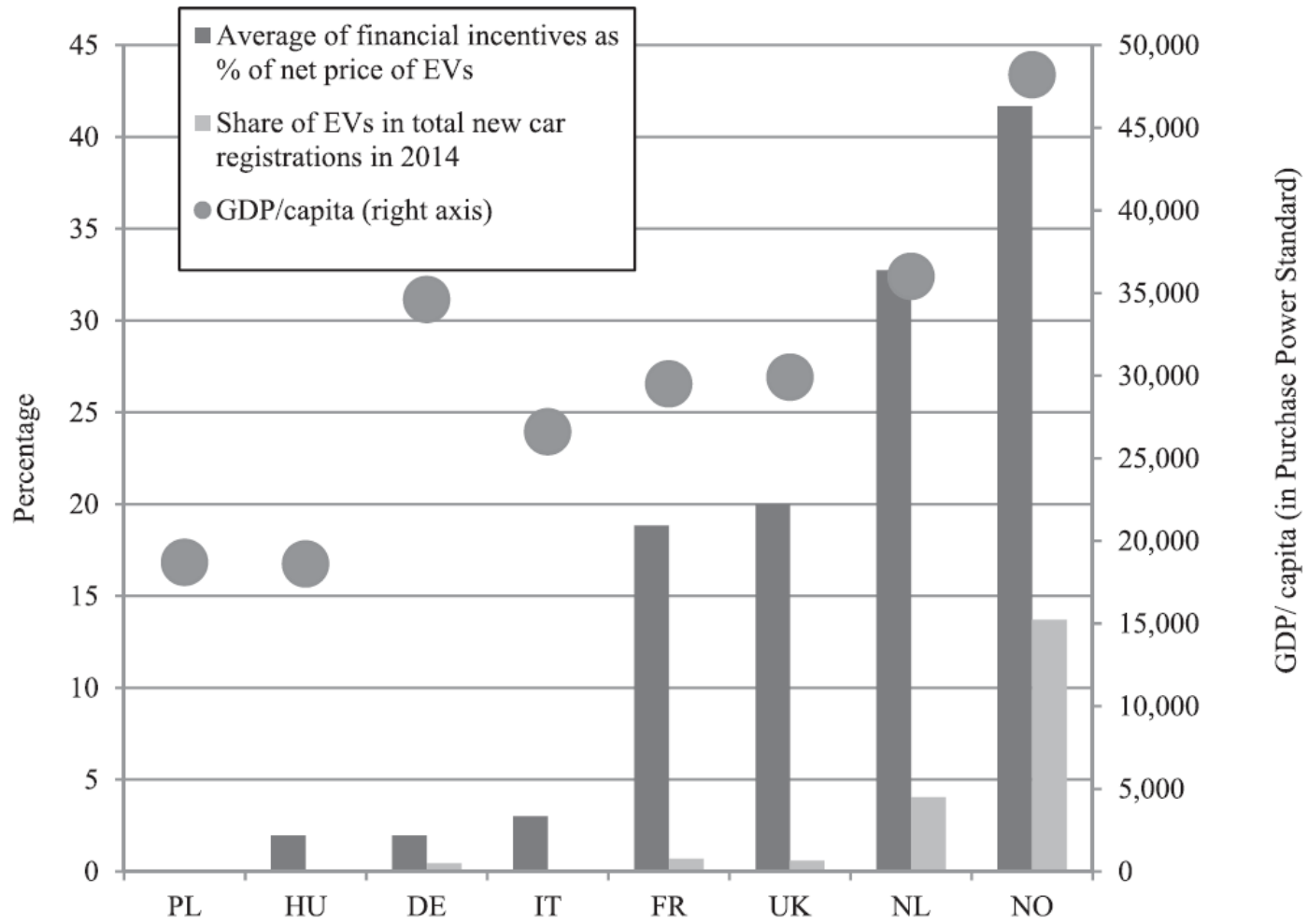
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Policies

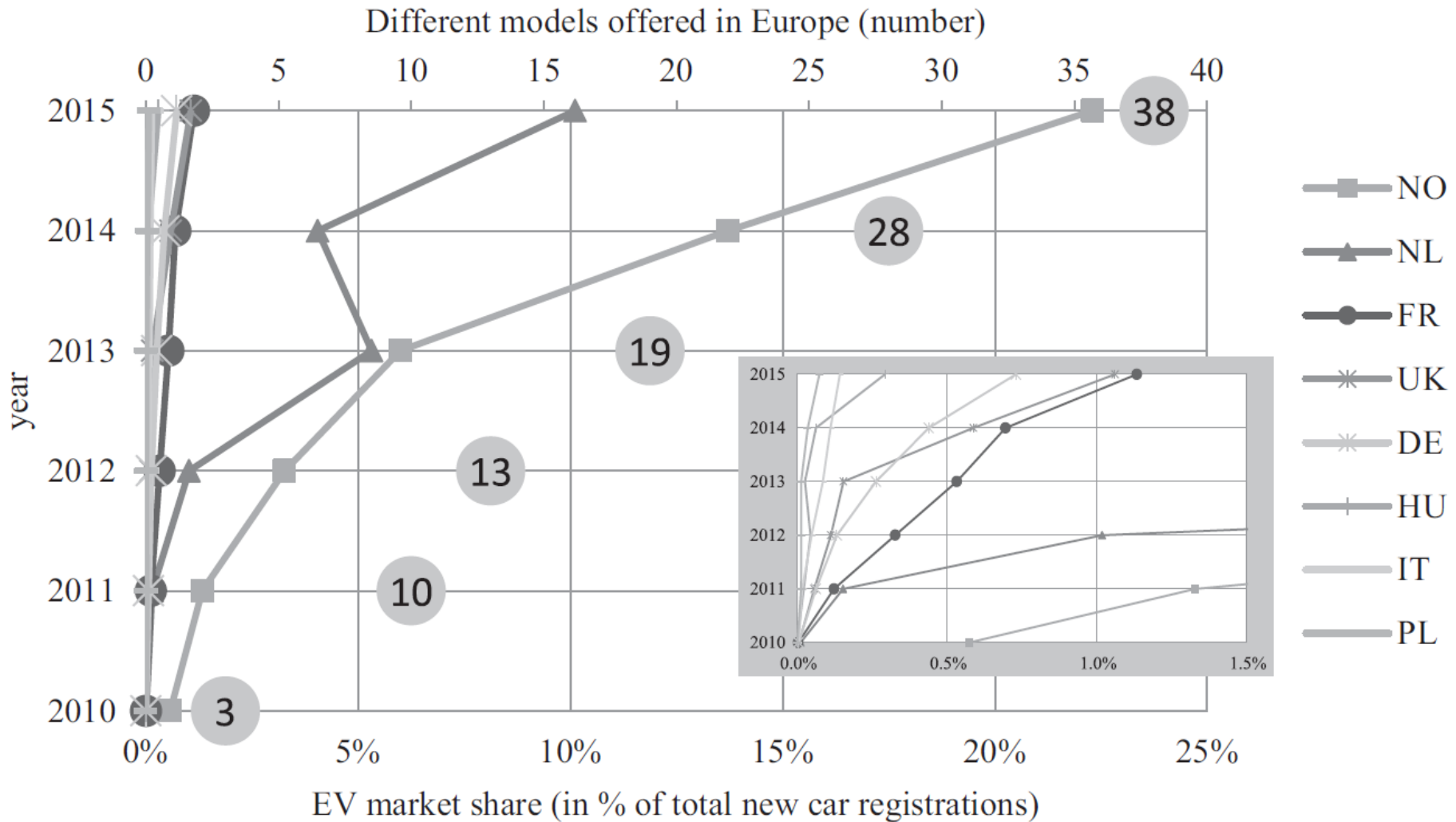
- **EU CO2 regulation for cars and vans**
-> **EV models offered by manufacturers**
- **EU Alternative fuels infrastructure directive**
-> **publicly accessible recharging points**
- **EU Energy performance of buildings directive**
-> **recharging points not accessible to public**
- **EU European battery initiative**
-> **battery development & manufacturing in EU**
- **MS taxes/incentives**
-> **improve EV value proposition for consumers**

Financial incentives for EVs



Source : Levay P; Drossinos I; Thiel C. The effect of fiscal incentives on market penetration of electric vehicles: A pairwise comparison of total cost of ownership. Energy Policy105; 2017. p. 524-533.

Impact of incentives



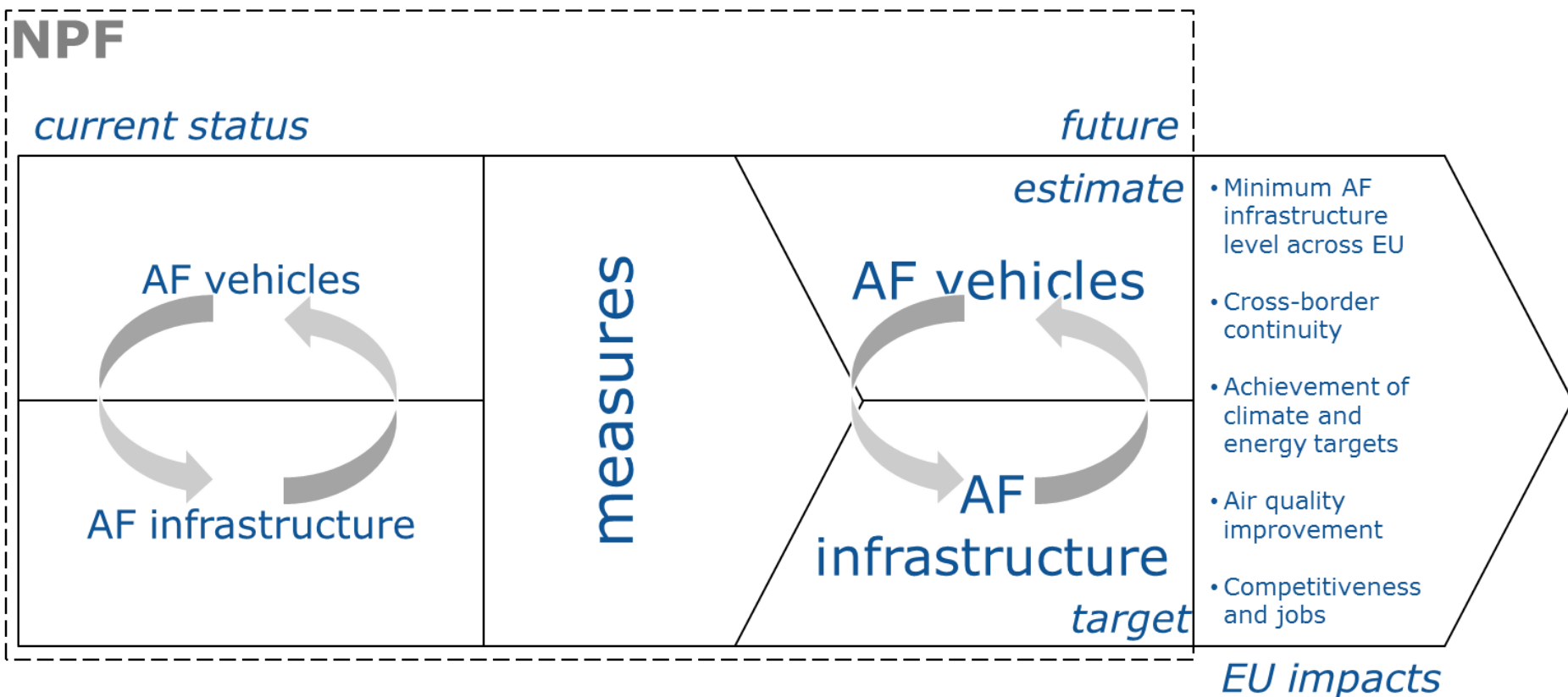
Source : Levay P; Drossinos I; Thiel C. The effect of fiscal incentives on market penetration of electric vehicles: A pairwise comparison of total cost of ownership. Energy Policy105; 2017. p. 524-533.

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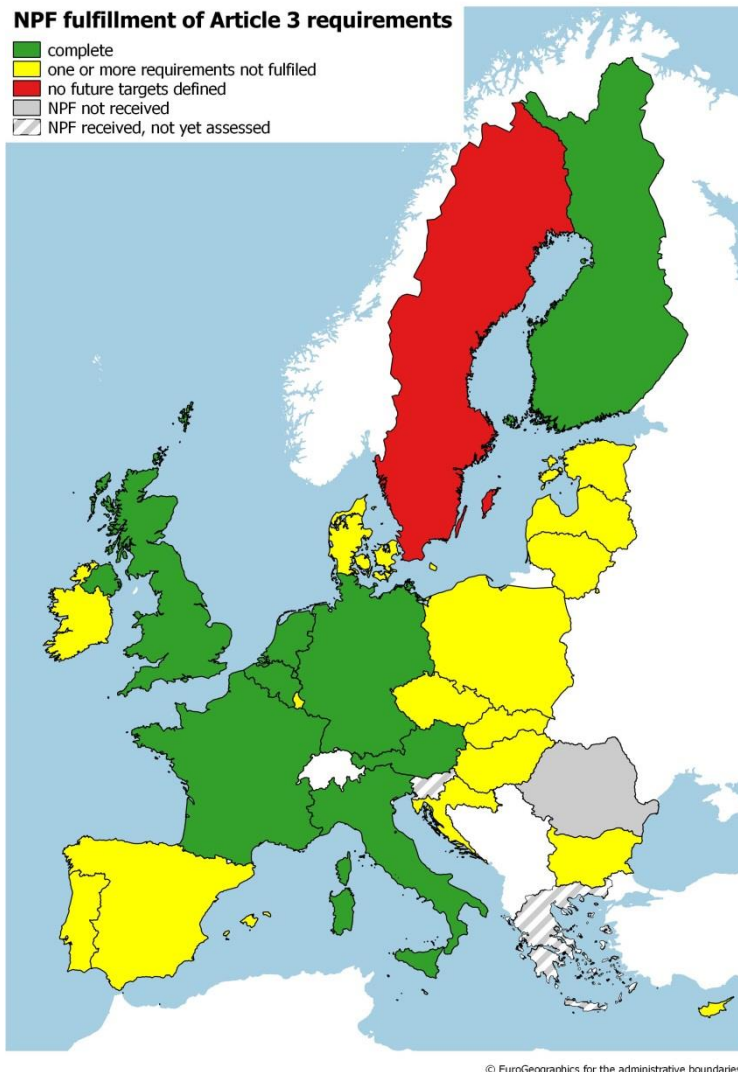


Alternative Fuels Infrastructure Deployment Directive (2014/94/EU)



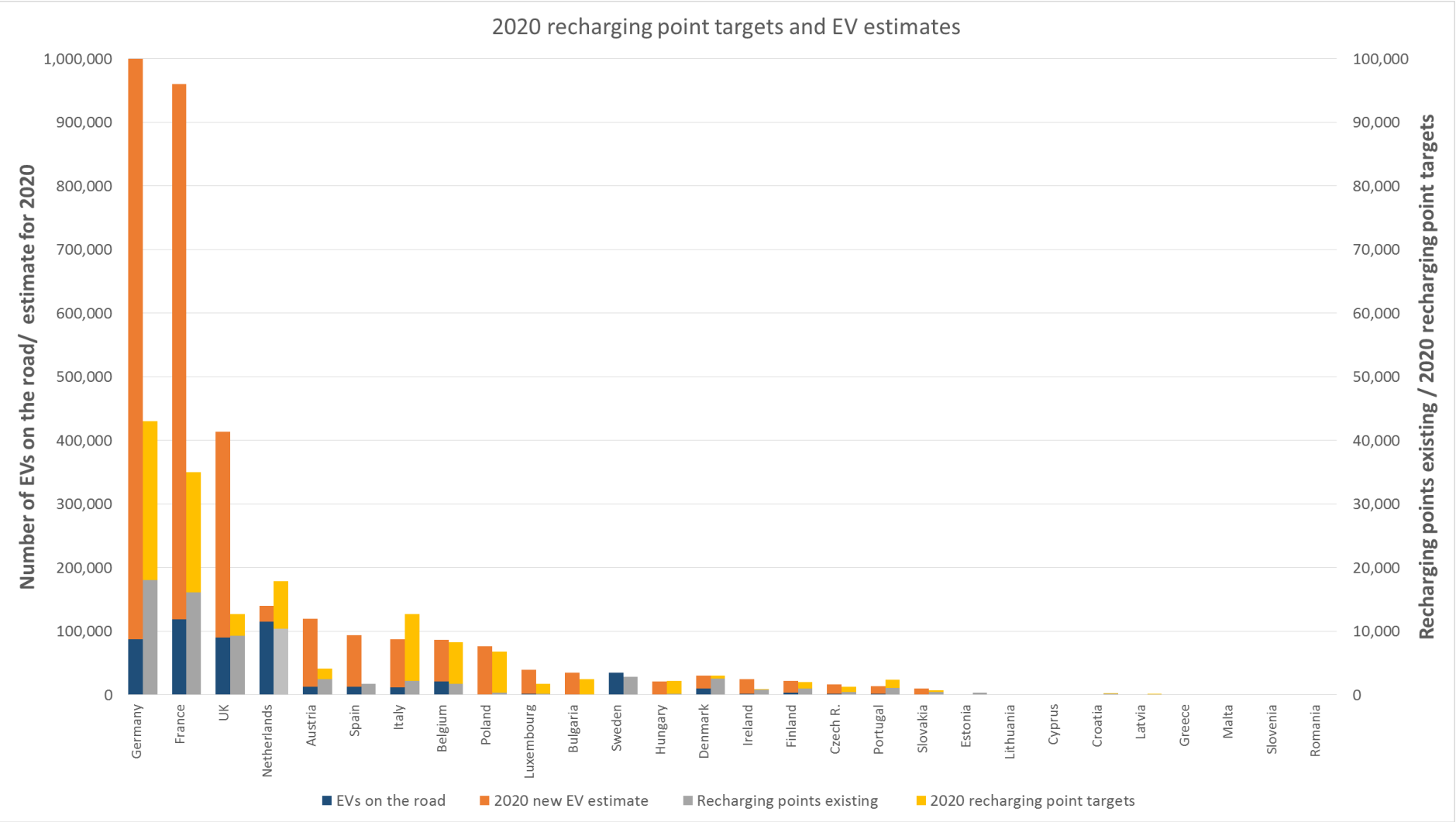
Source: Commission Staff Working Document- Detailed Assessment of the National Policy Frameworks. SWD(2017) 365 final

Alternative Fuels Infrastructure Deployment Directive (2014/94/EU)



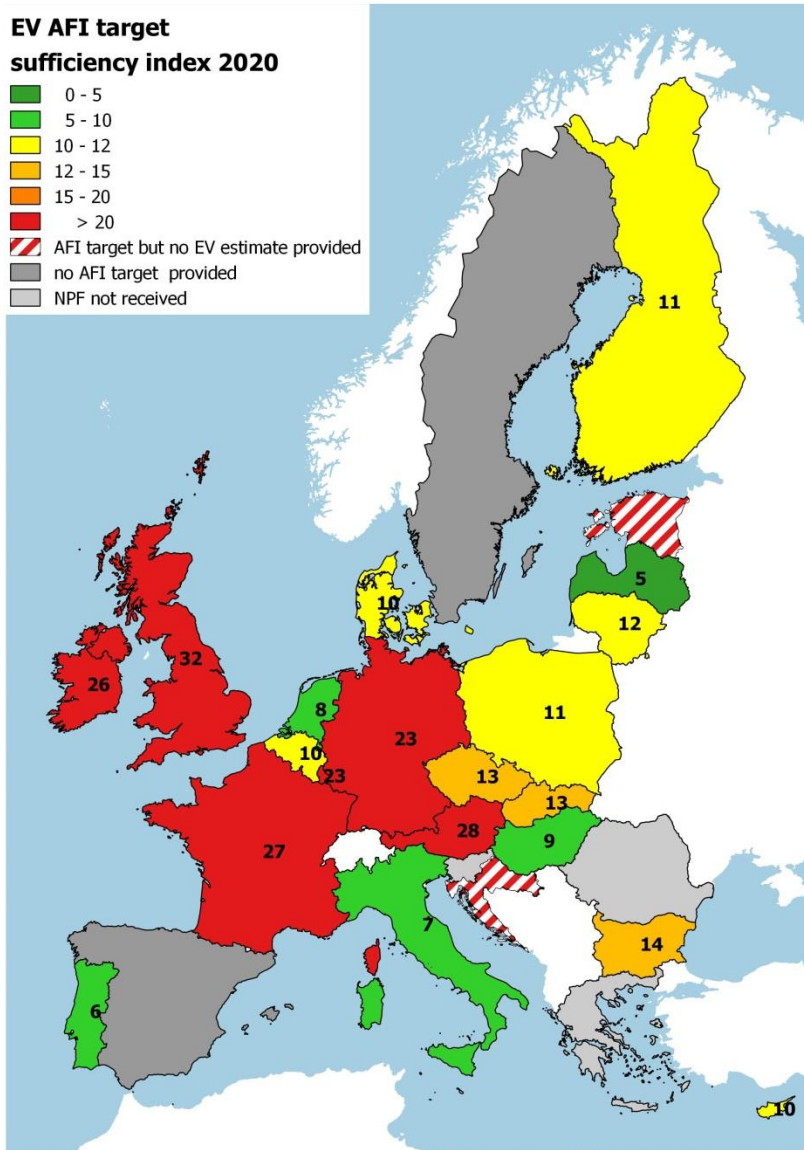
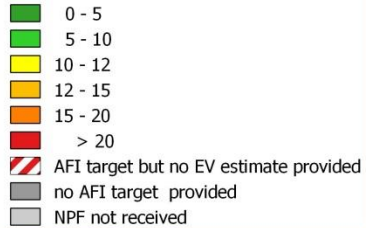
EVs and recharging points

2020 recharging point targets and EV estimates

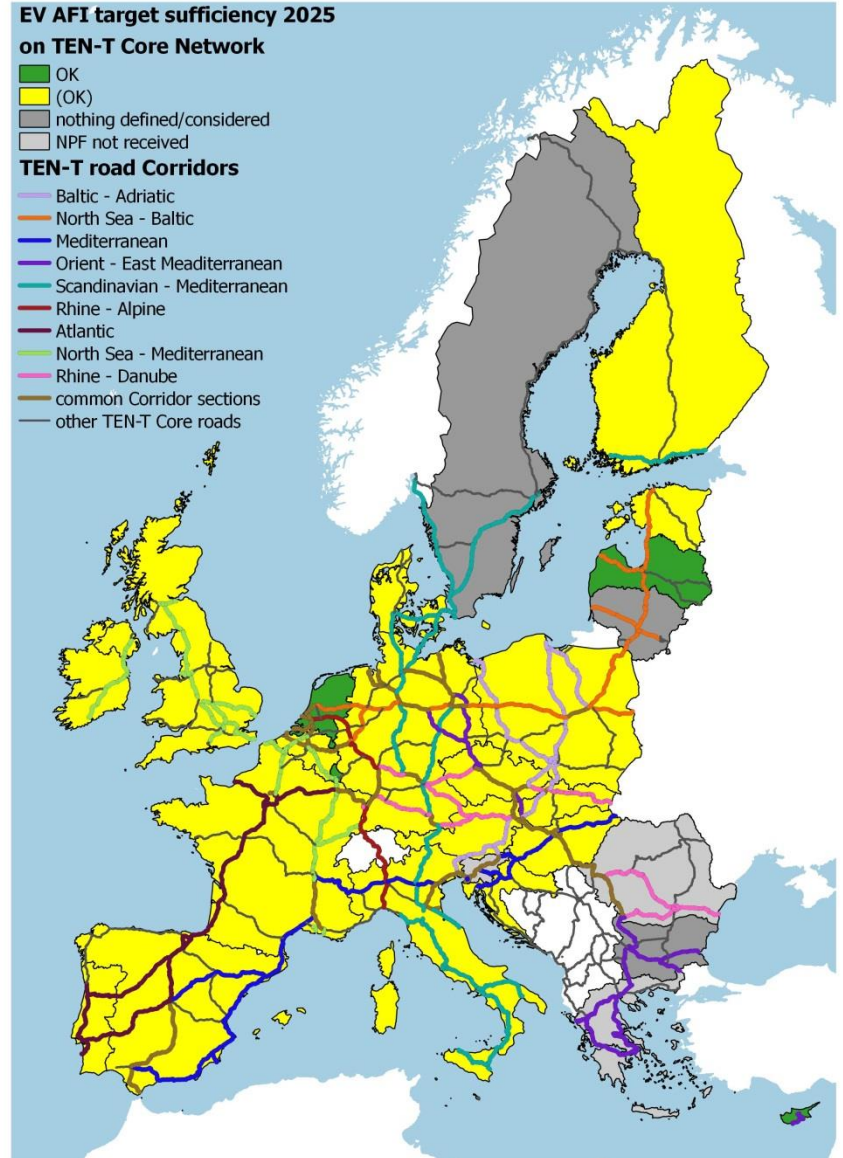


Publicly accessible recharging points

EV AFI target sufficiency index 2020



EV AFI target sufficiency 2025 on TEN-T Core Network

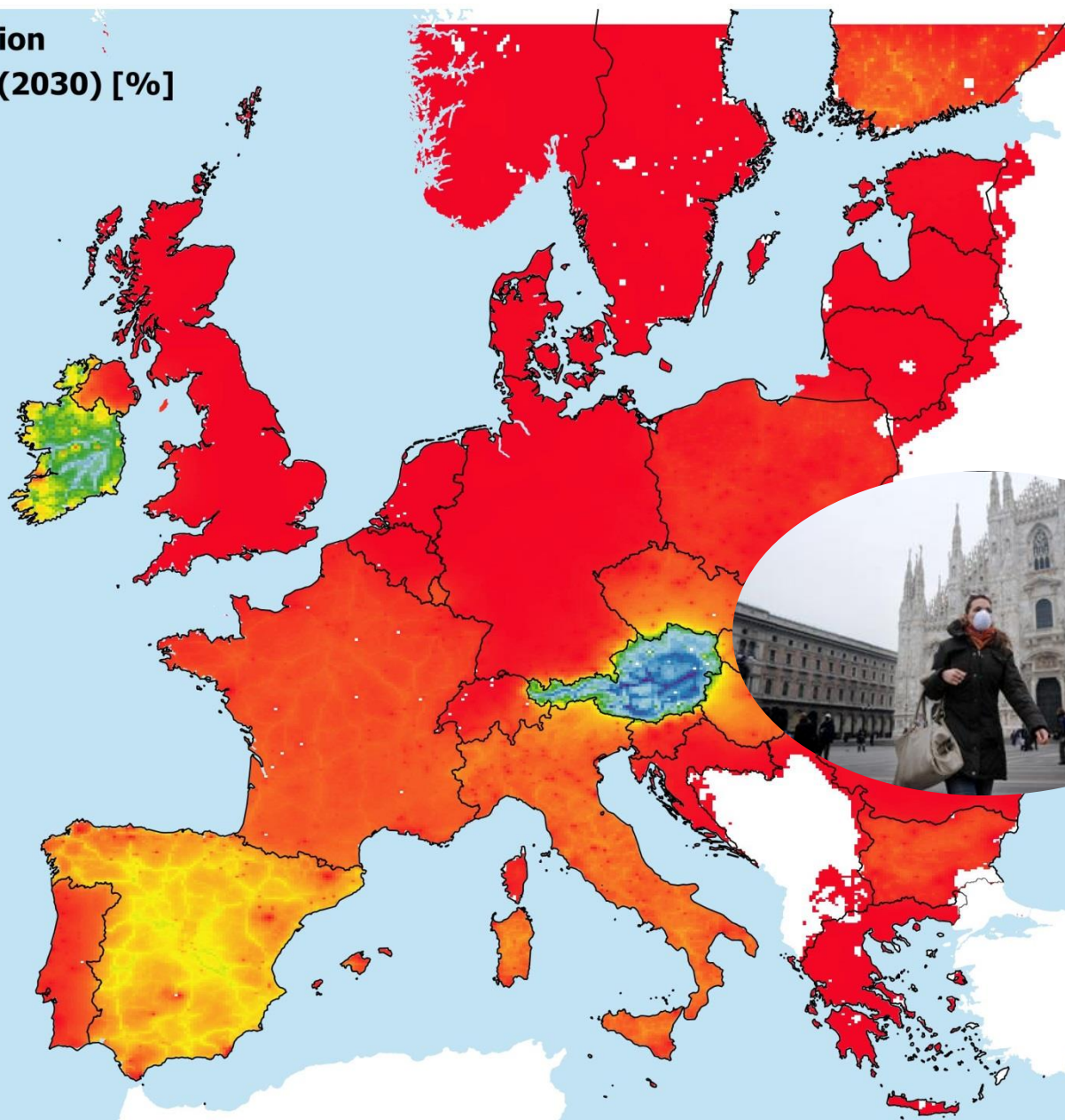


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Air quality impacts

**NO2 concentration reduction
vs scenario without NPFs (2030) [%]**



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Conclusions



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JRC SCIENTIFIC AND POLICY REPORTS

Paving the way to electrified road transport

Publicly funded research, development and demonstration projects on electric and plug-in vehicles in Europe

Alyona Zubanyeva, Christian Thiel
2013

