

WPC Conference: “What should Climate Leadership look like for Europe?”

John Cooper, Director General



FuelsEurope represents 42 Member Companies ≈ 100% of EU Refining



AGENDA

- EU CLIMATE LEADERSHIP & FUELSEUROPE POSITION ON CLIMATE CHANGE
- EU REFINING COMPETITIVENESS IN A GLOBAL CONTEXT
- TRANSPORT DECARBONISATION
- CONCLUSIONS

01

EU's CLIMATE LEADERSHIP & FUELSEUROPE POSITION ON CLIMATE CHANGE

What should Climate Leadership look like for Europe?

In this presentation we will look at the two main areas of environmental regulation that affect the petroleum fuels refining industry in the short, and long term, not only in a European context, but also in a Global one.

These two areas are:

- Regulation of Refinery sites, ETS Reform, and Refining Competitiveness – short term impacts
- Transport CO₂ regulation, fuels and vehicles– medium and longer term impacts

As Europe aims for “climate leadership” in Paris at COP21, we consider what could be the most effective role for Europe with respect to petroleum refining and transport fuels

FuelsEurope's position on Climate Change

- FuelsEurope recognises that climate change is a global challenge requiring global action
- We have written to all Commissioners and many MEPs and Member State Representatives in the EU institutions calling for an effective and legally binding agreement at COP21

"[...] for COP21 to be successful, it should produce:¹

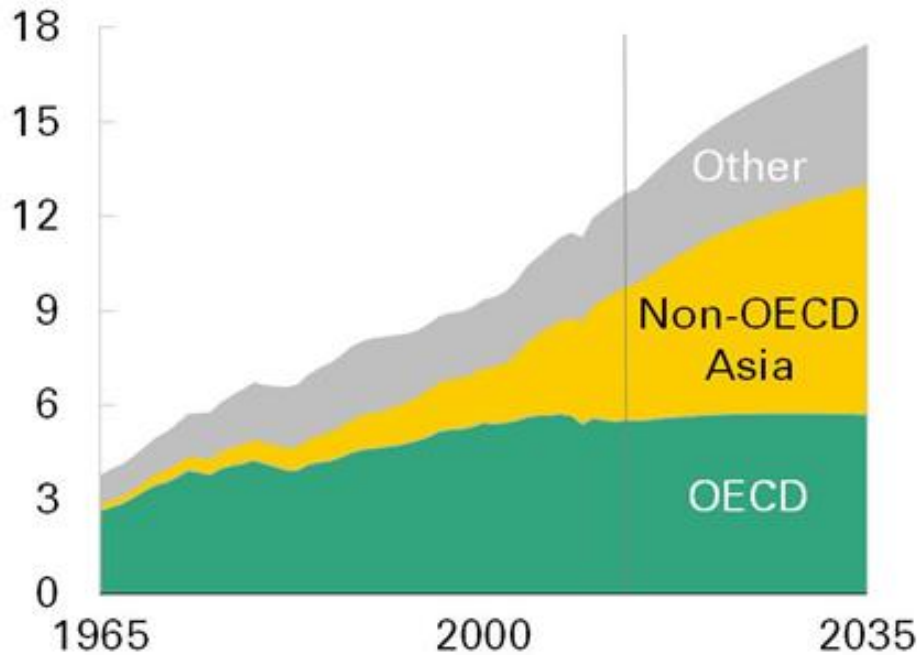
- *A legally binding agreement;*
- *Among all developed and developing countries;*
- *With equitable emission reduction targets;*
- *With strong Monitoring / Reporting / Verification rules;*
- *With a revenue-neutral market-based mechanisms, including carbon pricing under the right circumstances."*

¹ - FuelsEurope open letter on COP21, 26 Nov 2015

Global Energy Demand

Consumption by region

Billion toe



- OECD energy demand is flat going forwards
- Non-OECD Asia growth dominates
- Increased use of coal especially in India

Source: BP Energy Outlook 2035

What contribution can Europe make?

- Under a business-as-usual scenario, the world is on course for >4°C temperature rise by 2100.
- Europe is proposing to take its emissions to zero by 2100¹.
- “If Europe follows this path and reduces emissions (zero emissions by 2100) while other don’t follow, it cannot change a single 0.1°C in the global temperature increase”.

Fatih Birol, IEA, October 2015²

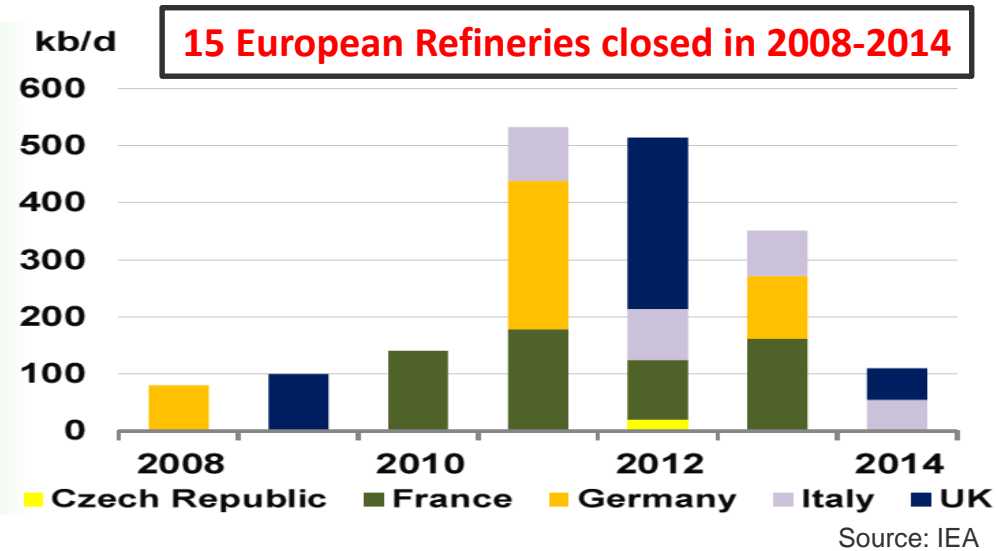
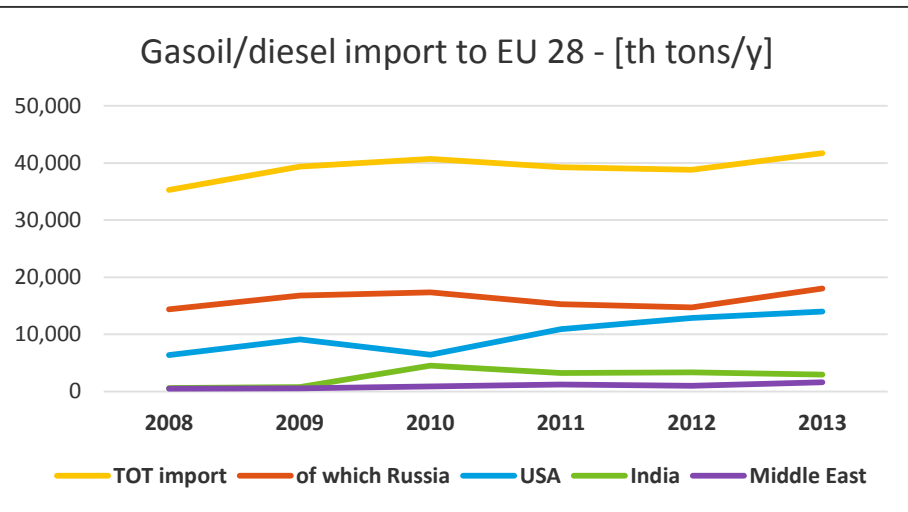
1 – Council of the European Union, Environment Council, 18/09/2015

2 - Politico, “The green oil man”, published 30/09/2015

02

EU REFINING COMPETITIVENESS IN A GLOBAL CONTEXT

Refinery shut downs in EU and import trend

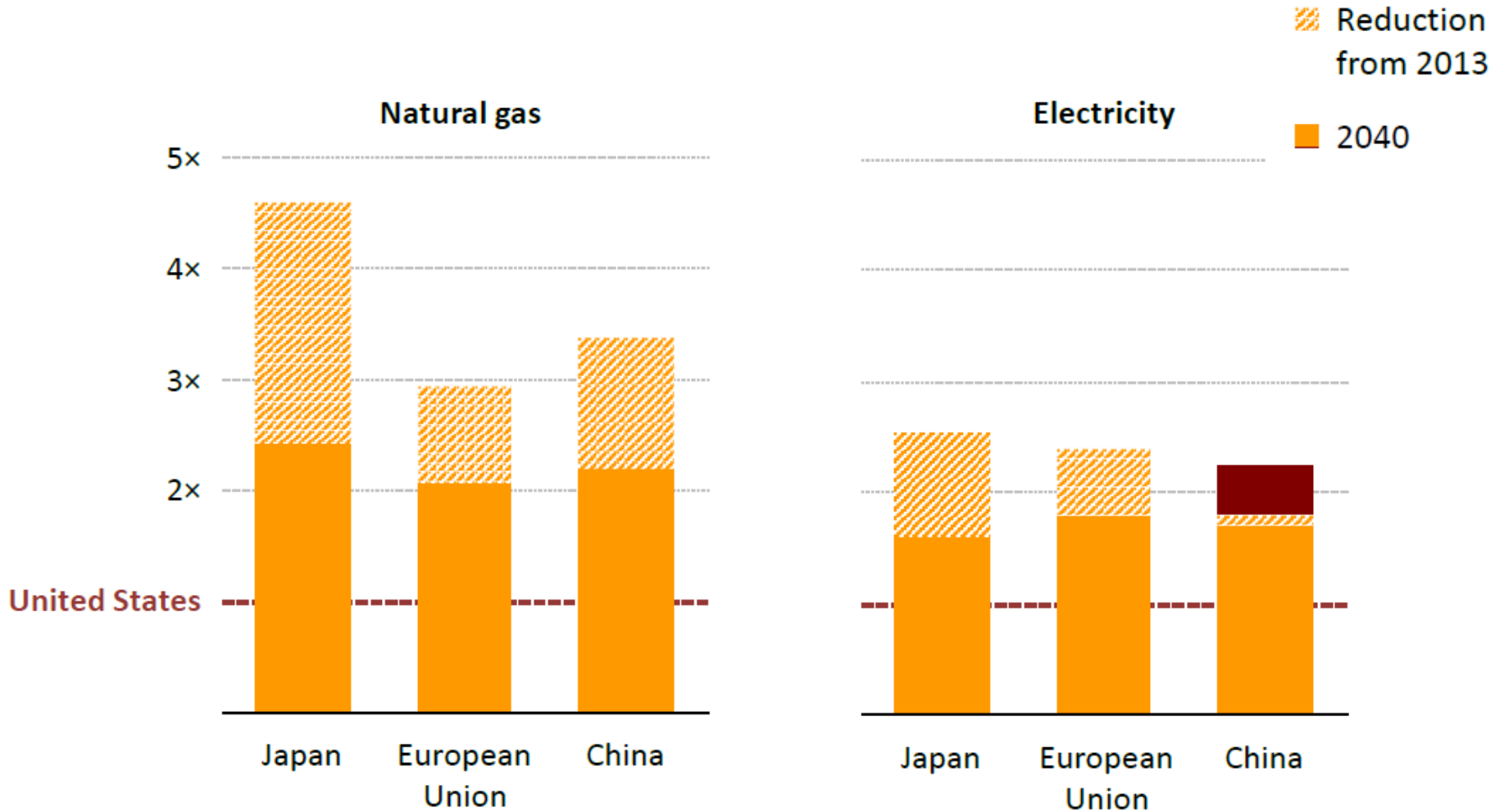


Jamnagar refinery, India

Expansion - for Export - underway from 1.3 Mbpd to 1.8 Mbpd (=13% of EU refining capacity)



Ratio of industrial energy prices relative to the United States

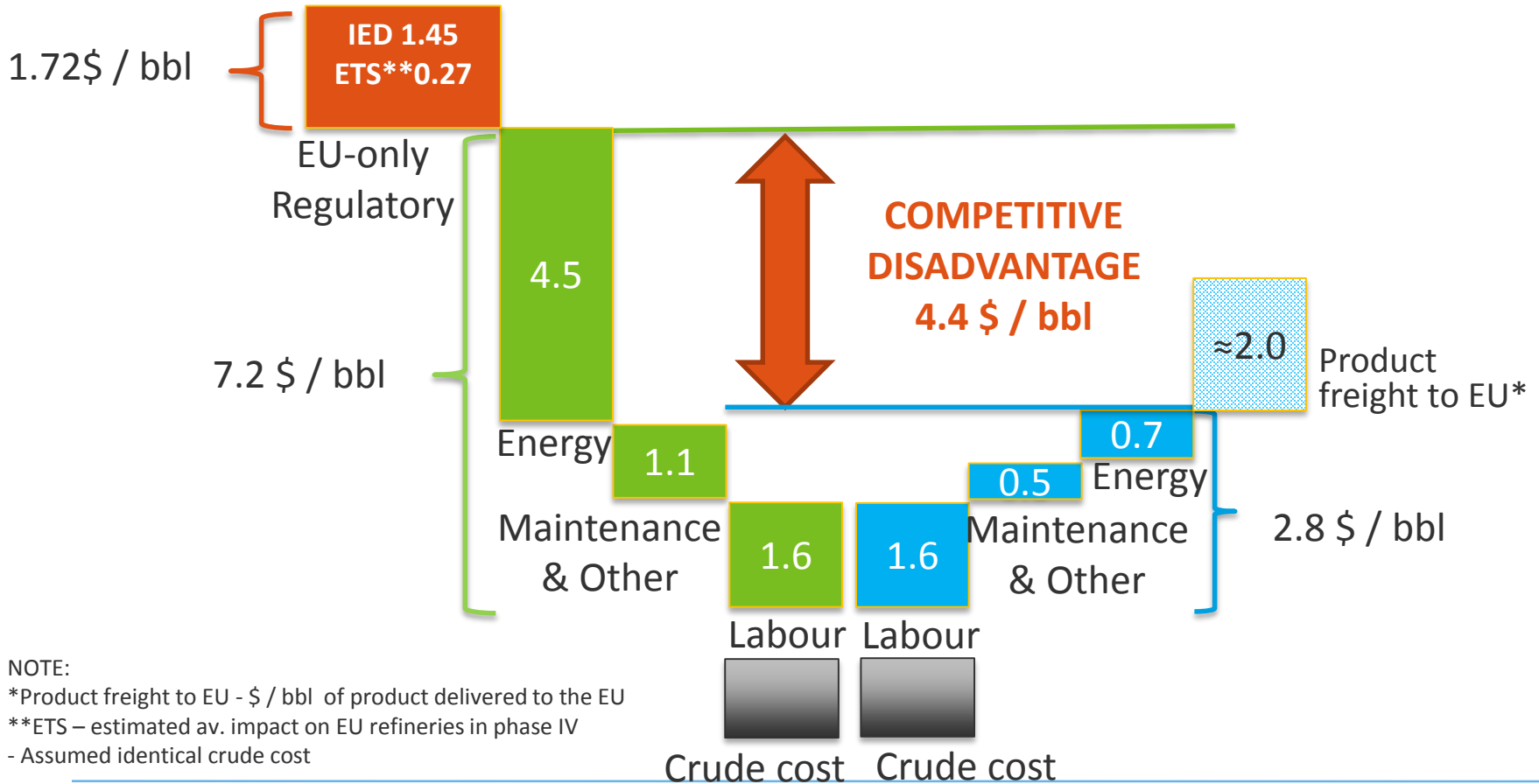


EU Policies create additional competitive pressure for EU Refining

- Policies that affect product demand:
 - Alternatives to oil either mandated or subsidised – bio fuels/electricity (*RED - Renewable Energy Directive, FQD - Fuel Quality Directive*)
 - Taxation has favoured diesel use over gasoline (*ETD - Energy Taxation Directive*)
- Policies that affect EU refining cost:
 - Carbon pricing: with partial protection from partial free allowances.
 - The EU ETS Reform will further reduce the competitiveness of EU energy intensive industries
- Policies that affect refiners investments:
 - Tough new Industrial Emissions standards. (*Industrial Emissions Directive*)
 - Marine fuel sulphur limits go beyond IMO standards. (*Sulphur Content of Marine Fuels Directive*)
- Policies to control access to raw materials:
 - Attempts to stop access by EU refiners to competitive energy & feedstocks (*TTIP/FQD*).

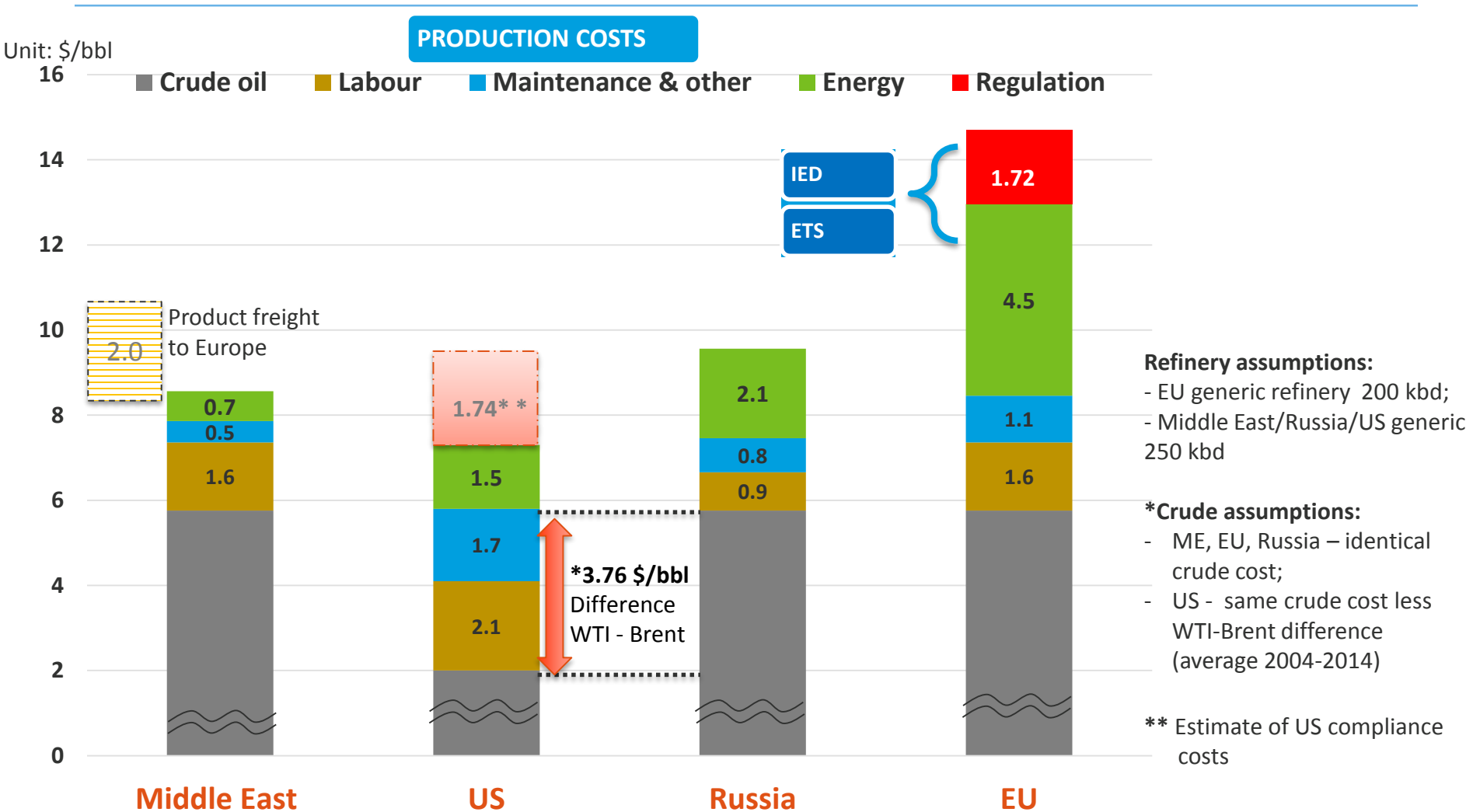
EU refineries at competitive disadvantage vs non-EU export oriented refineries

- Generic EU refinery, 200 kbd
- Generic Middle-East refinery, 250 kbd
- \$ / bbl of crude



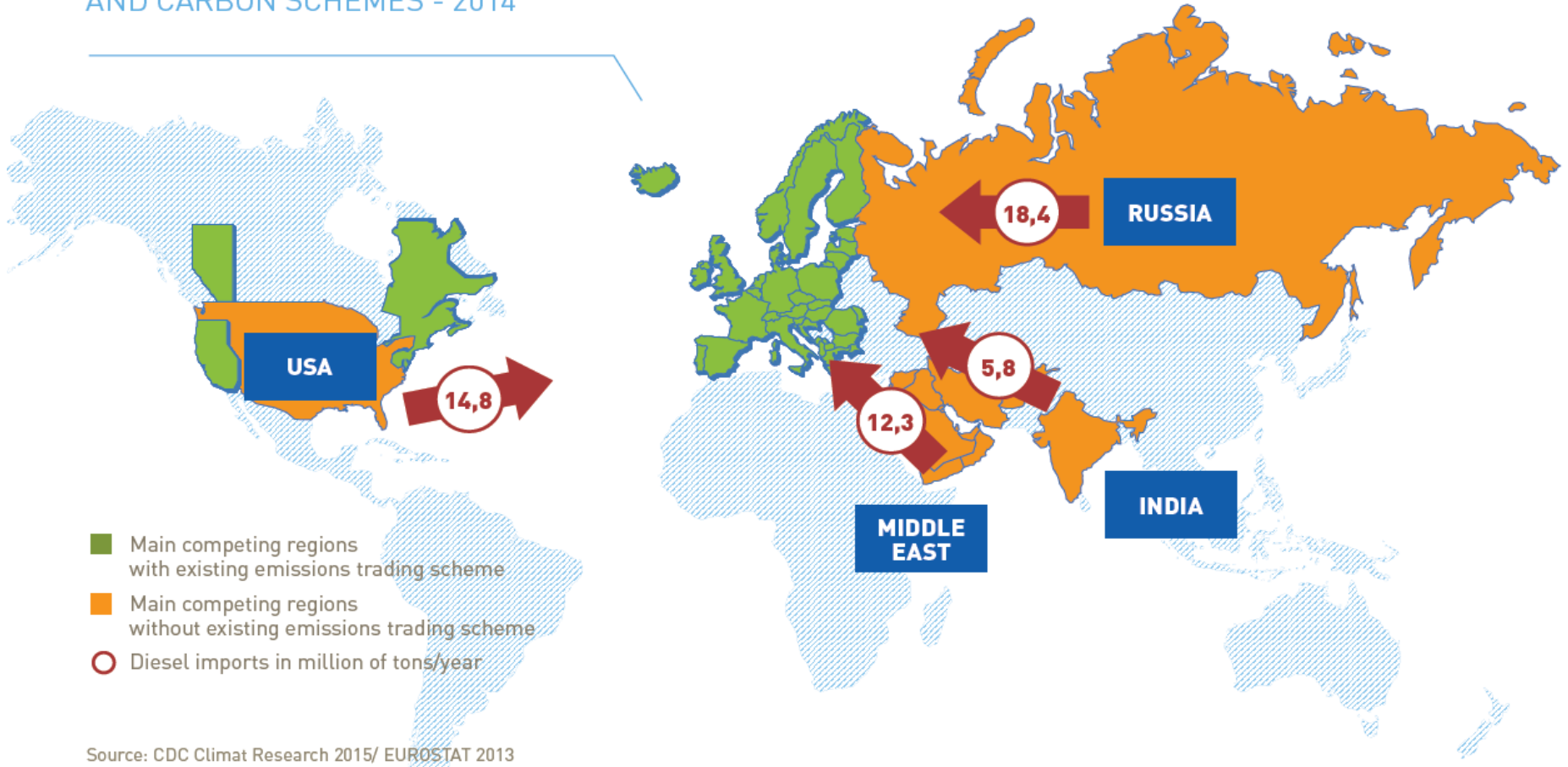
Source: Solomon Associates, Concawe

EU refineries at competitive disadvantage vs non-EU export oriented refineries



Fuel Imports to Europe, and Regions with Carbon Trading Scheme

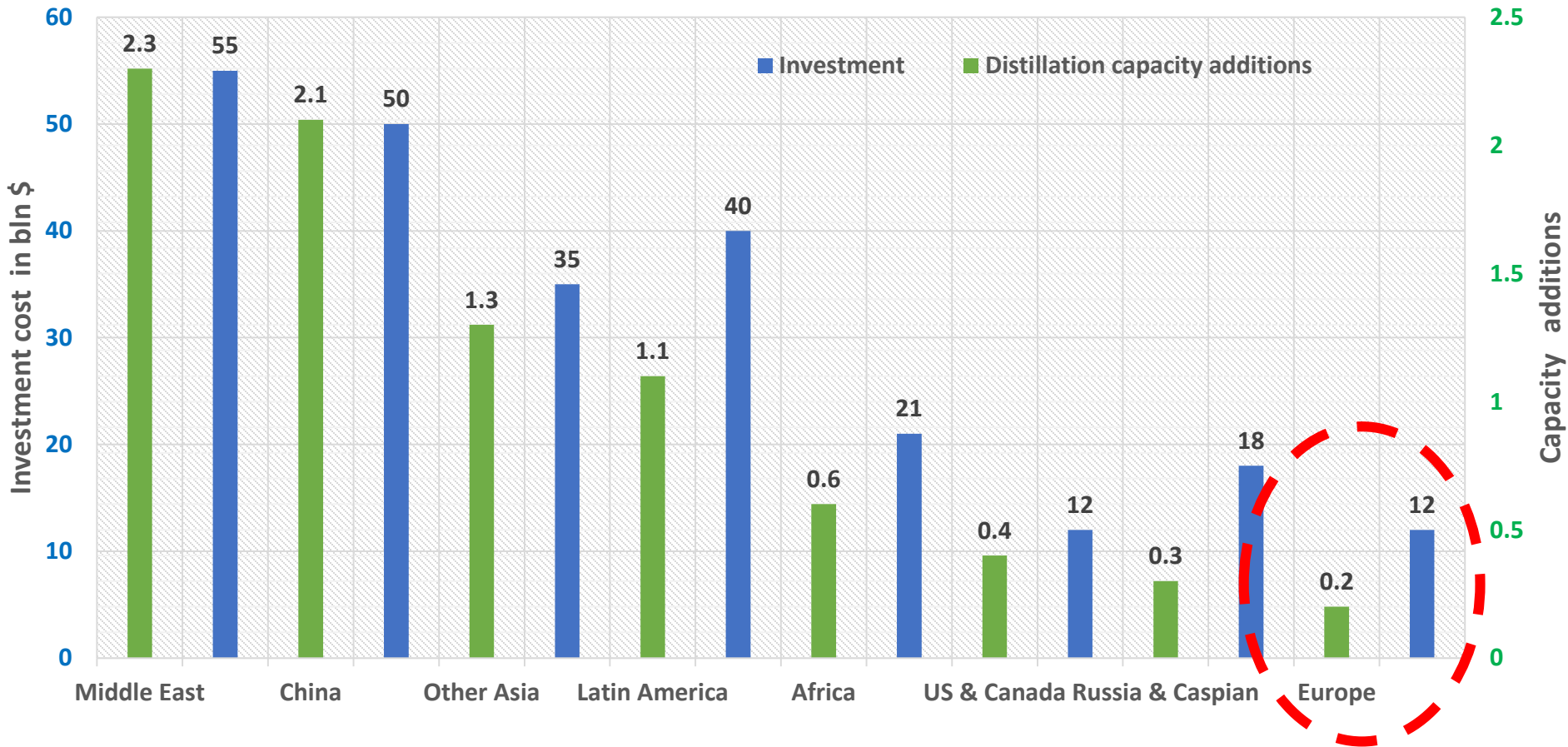
MAJOR DIESEL IMPORT TO THE EU
AND CARBON SCHEMES - 2014



Source: CDC Climat Research 2015/ EUROSTAT 2013

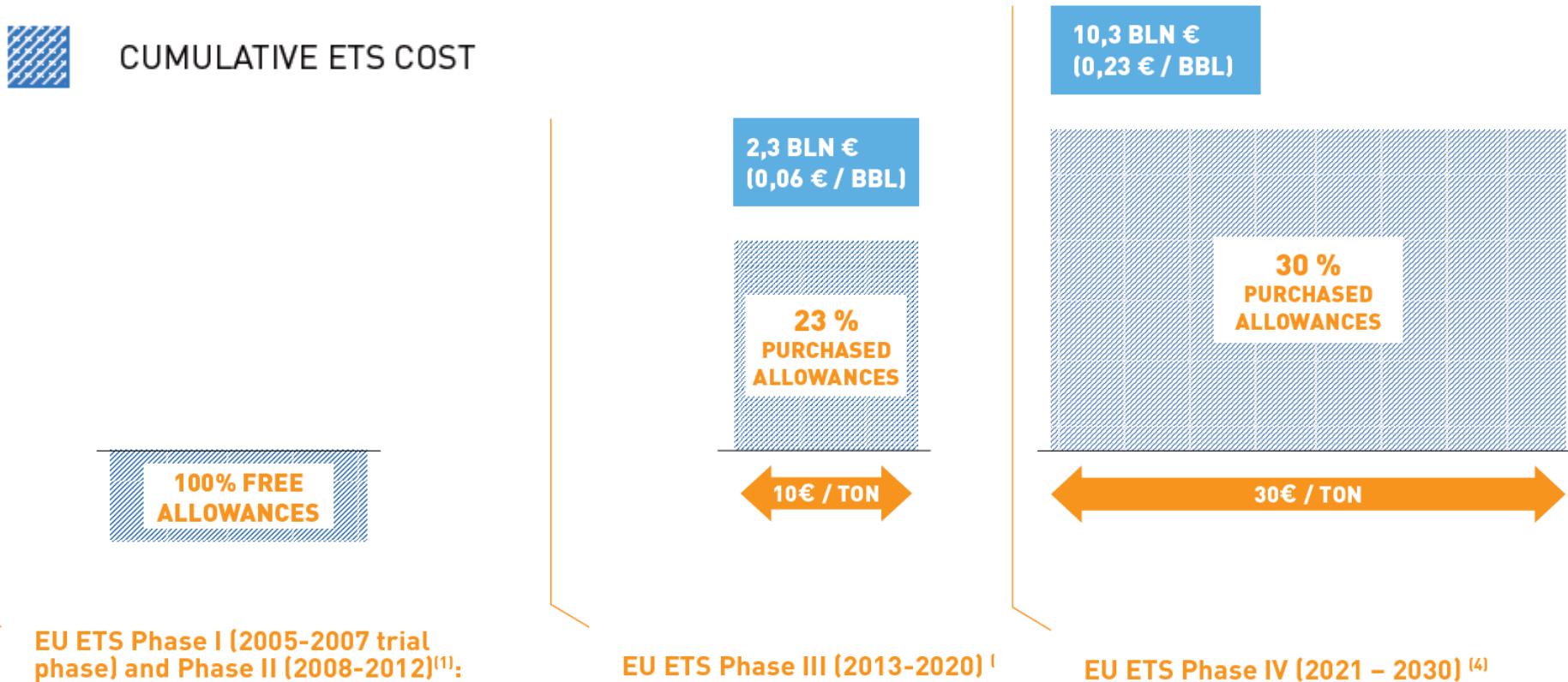
Investments in global refining industry: jobs and growth are going elsewhere

Global, announced capacity additions & investment cost 2014-2019



Source: OPEC, World Oil Outlook 2014

Expected evolution of ETS cost for EU refineries from phase II to phase IV



- (1) Source: Concawe, based on Linear Reduction Factor 1.74% per year & impact of CSCF, assuming total EU refining throughput at 650Mt/y
- (2) Source: Concawe, based on the 15th July 2015 COM proposal for ETS revision Linear Factor 2.2% per year & estimated impact of CSCF, assuming EU refining throughput at 600 Mt/y, 0.5% yearly improvement in carbon efficiency and cost of ETS certificate at 30€/ton
- (3) Note that in Phase II surplus allowances to the estimated value of 750 M€ were allocated (source: JRC draft refining fitness check report)

Source: Concawe & WoodMackenzie

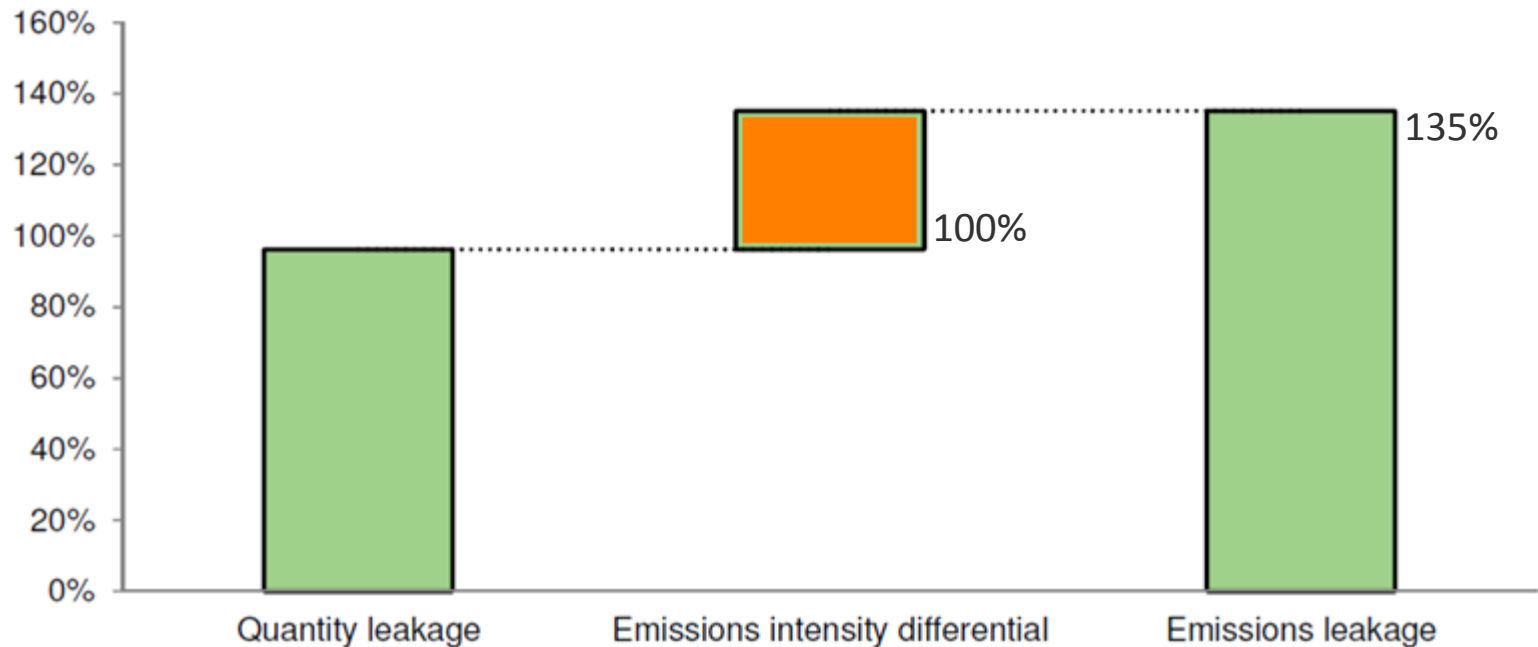
Europe's refineries are the most efficient in the world, with lowest CO2 emissions

EU refining on average less emissions-intensive (**0.21 tCO₂** per tonne of product) than non-EU firms (**0.29 tCO₂** per tonne of product)



carbon leakage exceeds output leakage:

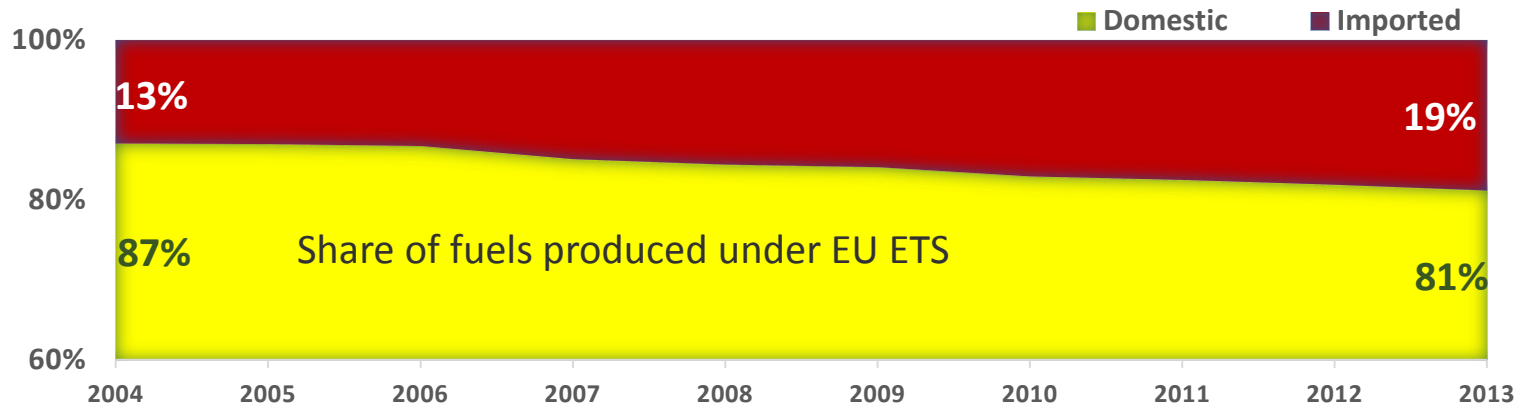
every **100 units of CO₂** emissions reduced in the EU are replaced by **135 units outside** the EU



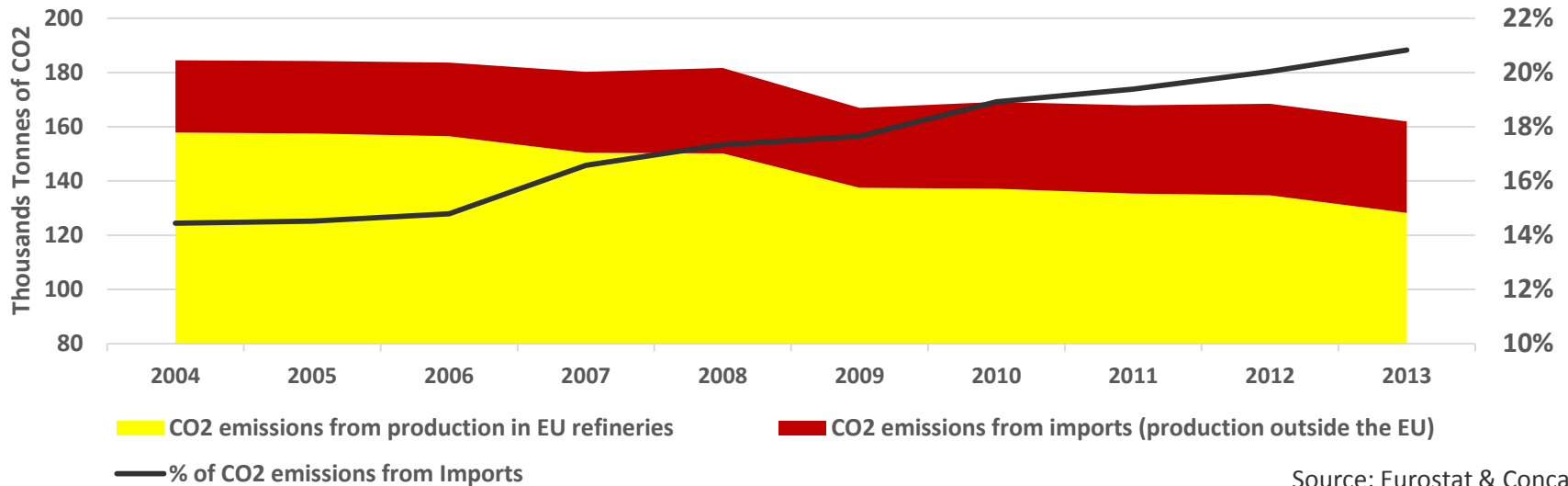
Source: Vivid Economics for UK DECC – Case study on Refining - Carbon leakage prospects under Phase III of the EU ETS and beyond

Trend in Fuel Imports and impact on global GHG emissions

INCREASING RELIANCE ON IMPORTED FUELS TO SATISFY EU DEMAND...



...RESULTS IN INCREASING GLOBAL GHG EMISSIONS



Source: Eurostat & Concawe

Refinery Site Regulation and Competitiveness – Conclusions

- Europe’s refineries face very strong competition from areas outside of EU with much lower energy costs and in most cases, lower costs of energy and regulation
- Several regions may also have lower crude oil feedstock costs
- High energy costs have caused EU Refiners to invest in energy efficiency, with the most efficient refinery fleet in the world
- It is not clear that increased costs of climate regulation from higher ETS costs will reduce global CO₂ emissions
- Further refinery closures will lead to higher imports and higher global CO₂ emissions
- A bigger opportunity for Europe could be to encourage other world regions to “level the playing field” by adopting equivalent regulation
- “Europe can export its policy solutions and also its technology solutions”

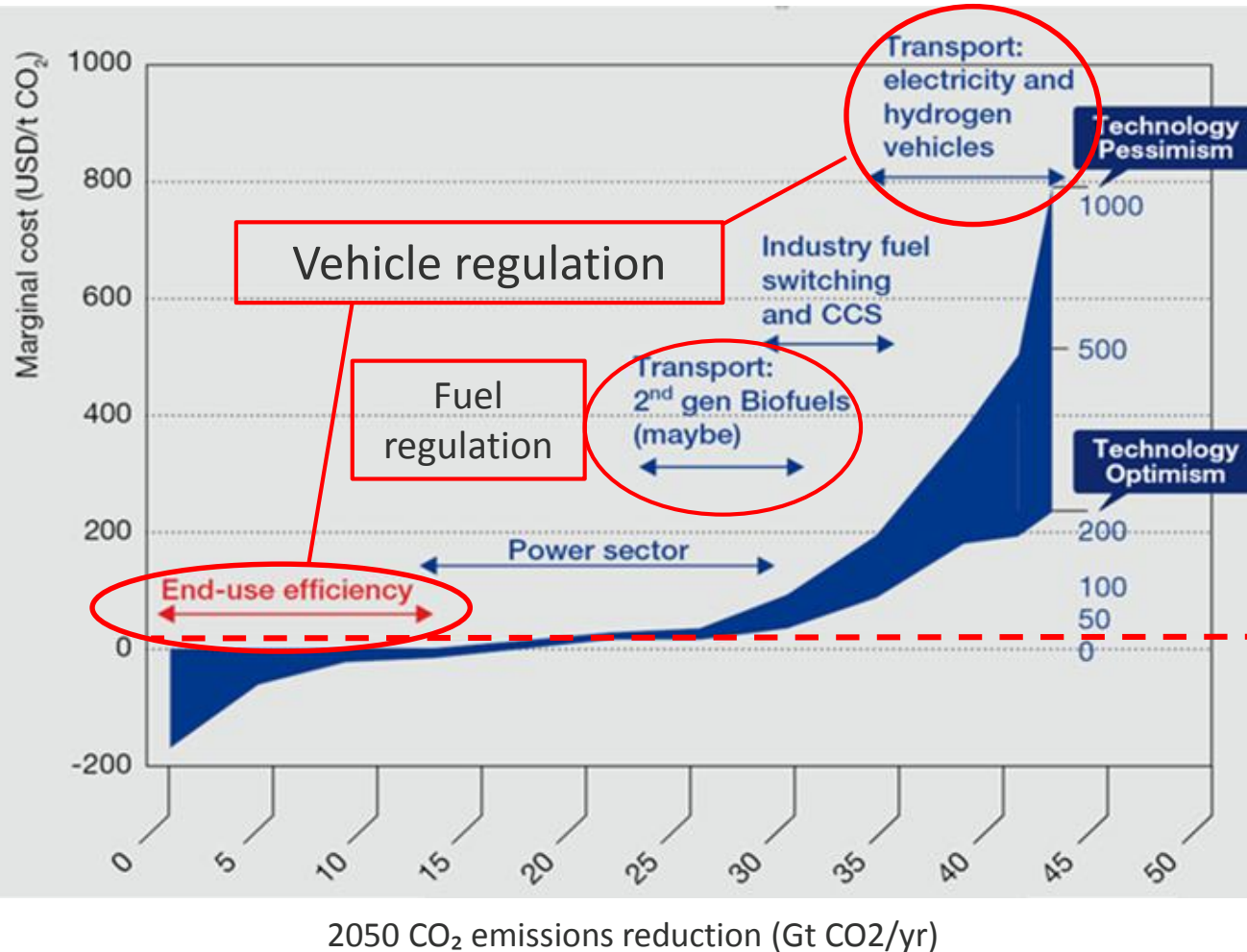
03

TRANSPORT DECARBONISATION

Carbon costs, and Carbon Price

- Key experts and leaders have called for a price on carbon, globally, across the economy;
- In Europe we have this within the ETS Sector, but not in Transport;
- We should consider what is the cost of carbon reductions in transport, and what effect the imposition of a single carbon price, as the primary regulatory measure, would have;
- We can see what the effects of an ambitious “sectoral target” can be on costs;
- This will also enable us to see how we get the best value and lowest costs for the money spent by society on decarbonisation in transport;

IEA CO₂ abatement cost curve



The IEA decarbonisation cost curve should continue to be a clear guide to decarbonisation strategy

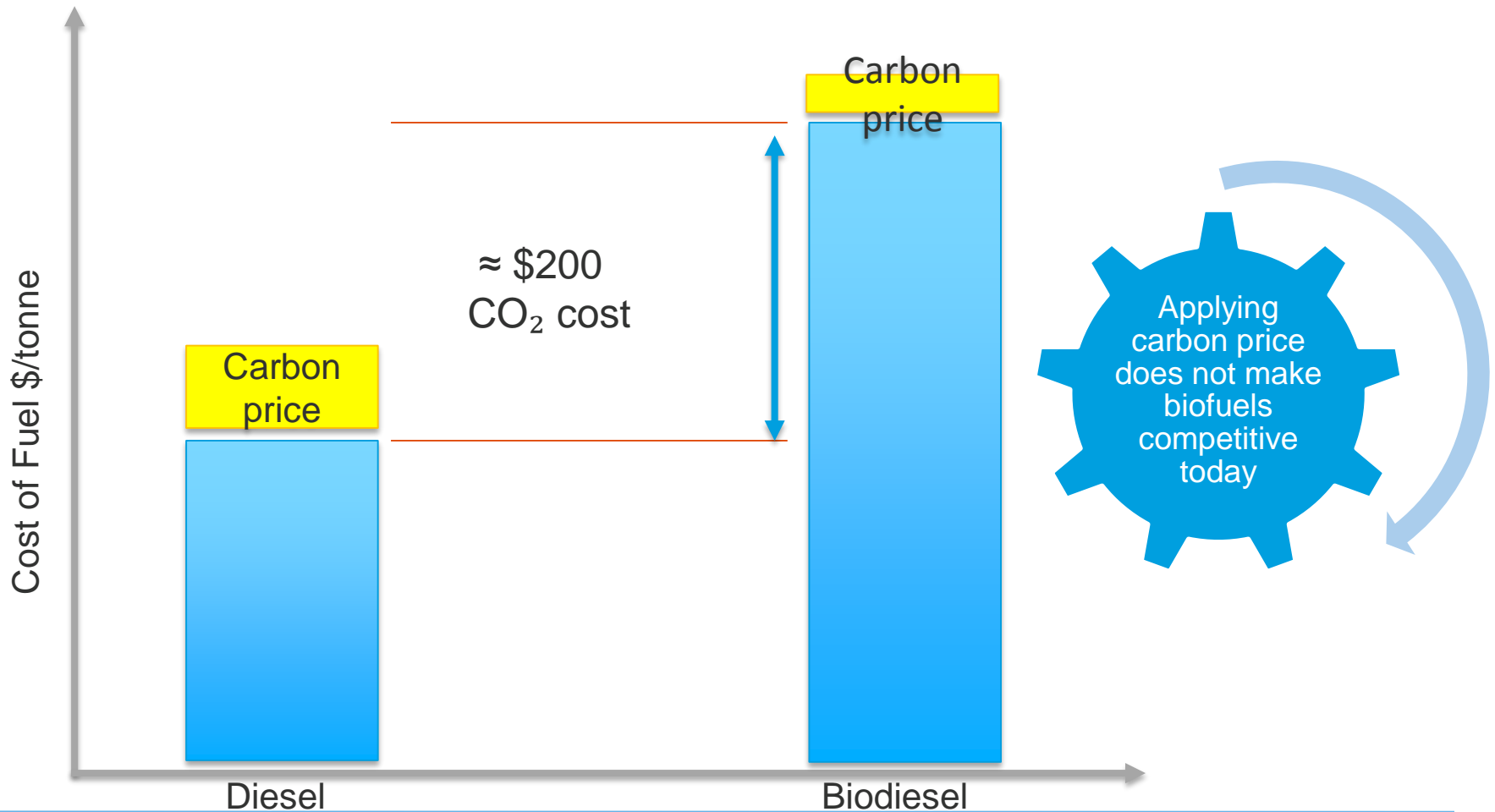
EU ETS Price

A single, global economy wide carbon price, as proposed by the UN FCCC will guide a global strategy of decarbonisation

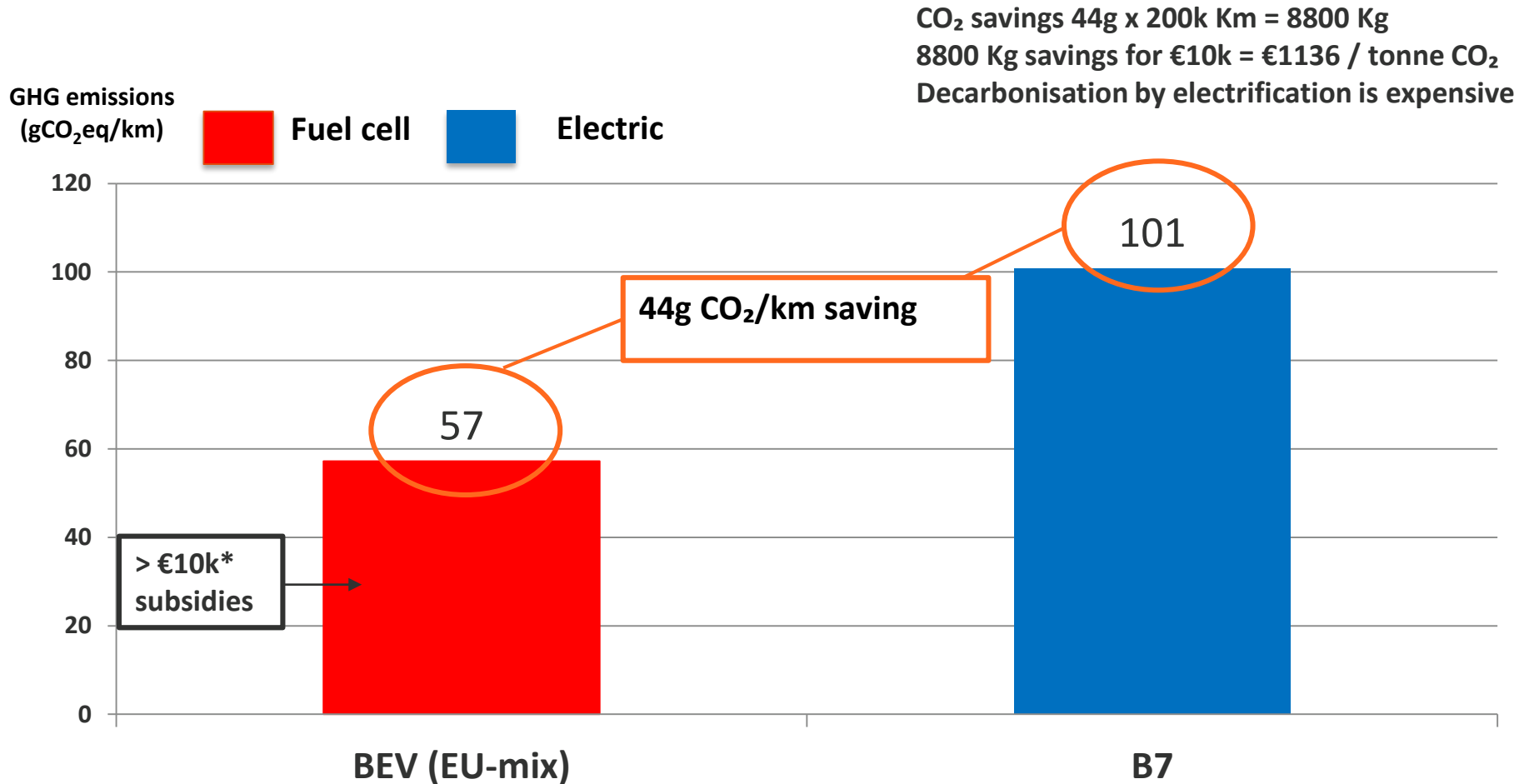
Source: IEA

Carbon Costs in Transport (1)

*Indicative costs



Current vehicle regulation can drive solutions that have extreme societal cost

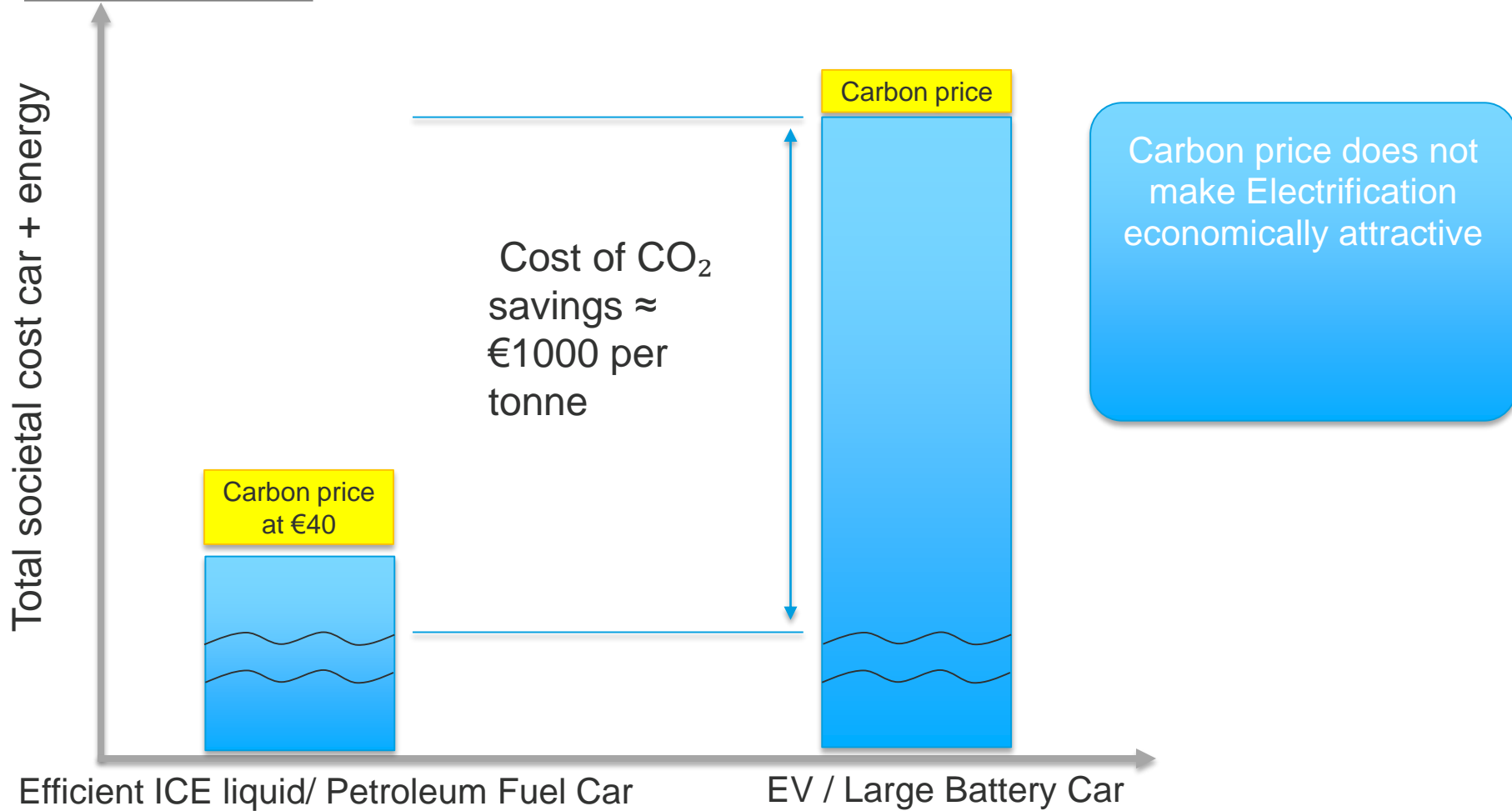


* Manufacturer cross-subsidy, government purchase grant, loss of fuel excise taxes – adjusted for fuel savings

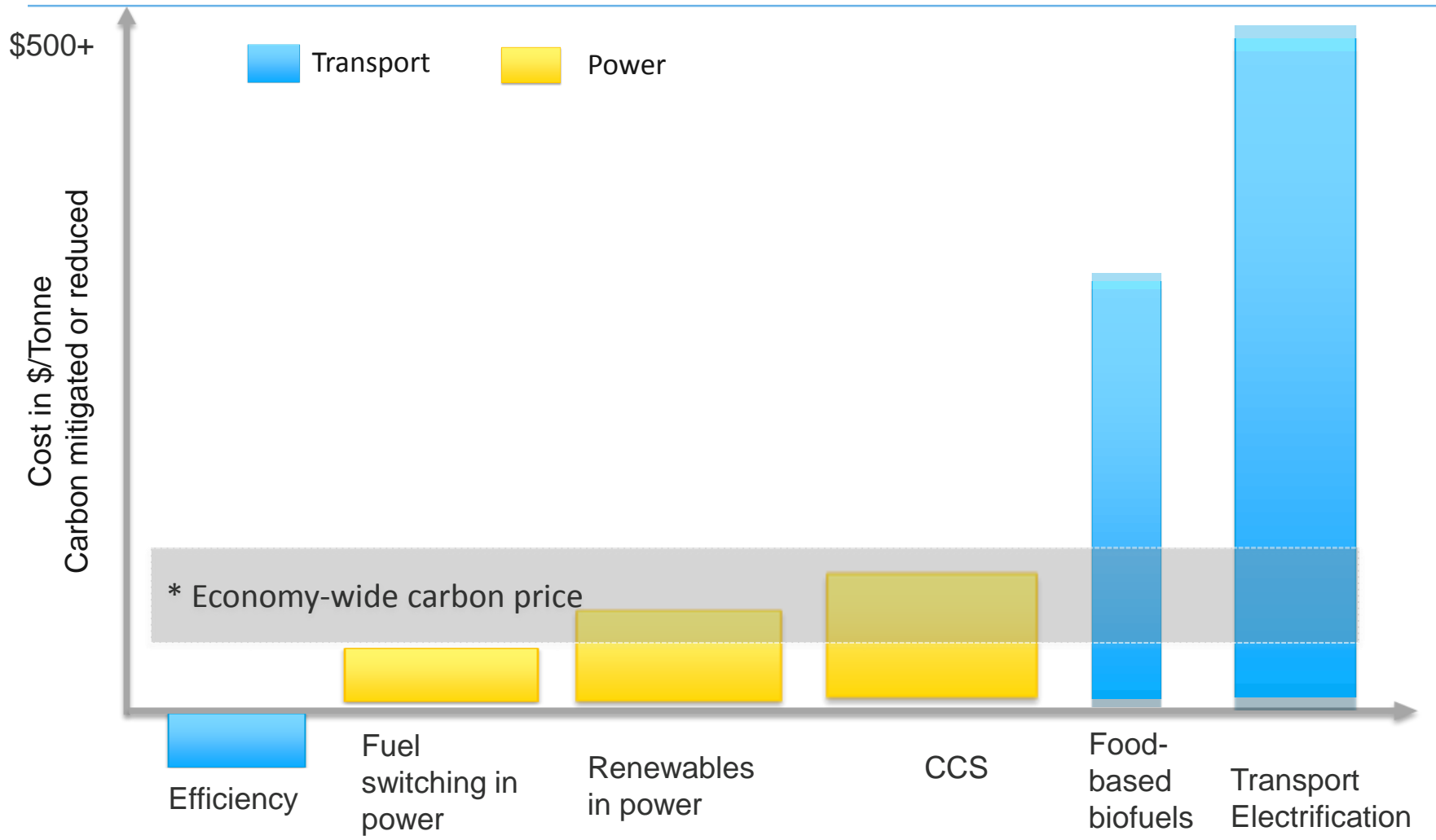
Source: JEC

Carbon Costs in Transport (2)

*Indicative costs



Indicative Carbon Costs in Transport & Power Sector



Transport regulation fuels and vehicles - Recommendations

- Focus on cost to the citizens, value for the planet;
- Avoid extreme cost solutions imposed on drivers and businesses;
- Pursue further efficiency gains;
- Make the most responsible use of petroleum;
- Support new technologies needed for the longer term (e.g. advanced biofuels, lower cost electrification);
- Be more flexible with the “sectoral approach”;
- At the margin of compliance with an ambitious target, allow transport to pay another sector to make carbon savings;
- Also, aim to export our efficient transport products, technologies, and policies; to drive a global level playing field, and to maximise the opportunities for carbon emission reductions globally.

04 | CONCLUSIONS

What should Climate Leadership look like for Europe?: Conclusions

- Europe has done much already, with world-leading regulations on carbon emissions, carbon pricing (ETS) and vehicle regulation for efficiency;
- Further unilateral action by Europe risks making our economy and industries less competitive, losing jobs and know-how to outside of Europe;
- We also risk “carbon leakage” as jobs and industries outside of Europe are typically under less regulation and are less efficient;
- We can export our technologies, our products, and our policy solutions to the world;
- We can use our leadership position to influence countries to follow;
- We can use our expertise & influence to set up carbon pricing schemes like ETS around the world;
- We can then participate in global projects to reduce carbon emissions so that we get the best value and lowest costs;
- This will be Climate Leadership, with the lowest costs for citizens, and the best value for the planet.

THANK YOU
FOR YOUR
ATTENTION

This document was presented by
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