Intelligence
Briefing

IRU Green Compact

Net Zero Logistics Summit

IRU Green Compact project

Reaching net-zero for commercial road transport

Commitment to the sustainability of commercial road transport (social equity, economic development, environmental protection)

IRU Green Compact

Intelligence Briefing.

ECTA conference
14th November 2024

IRU Green Compact project

Reaching net-zero for commercial road transport

Evidence-based

Regional & national roadmaps

Monitoring tools

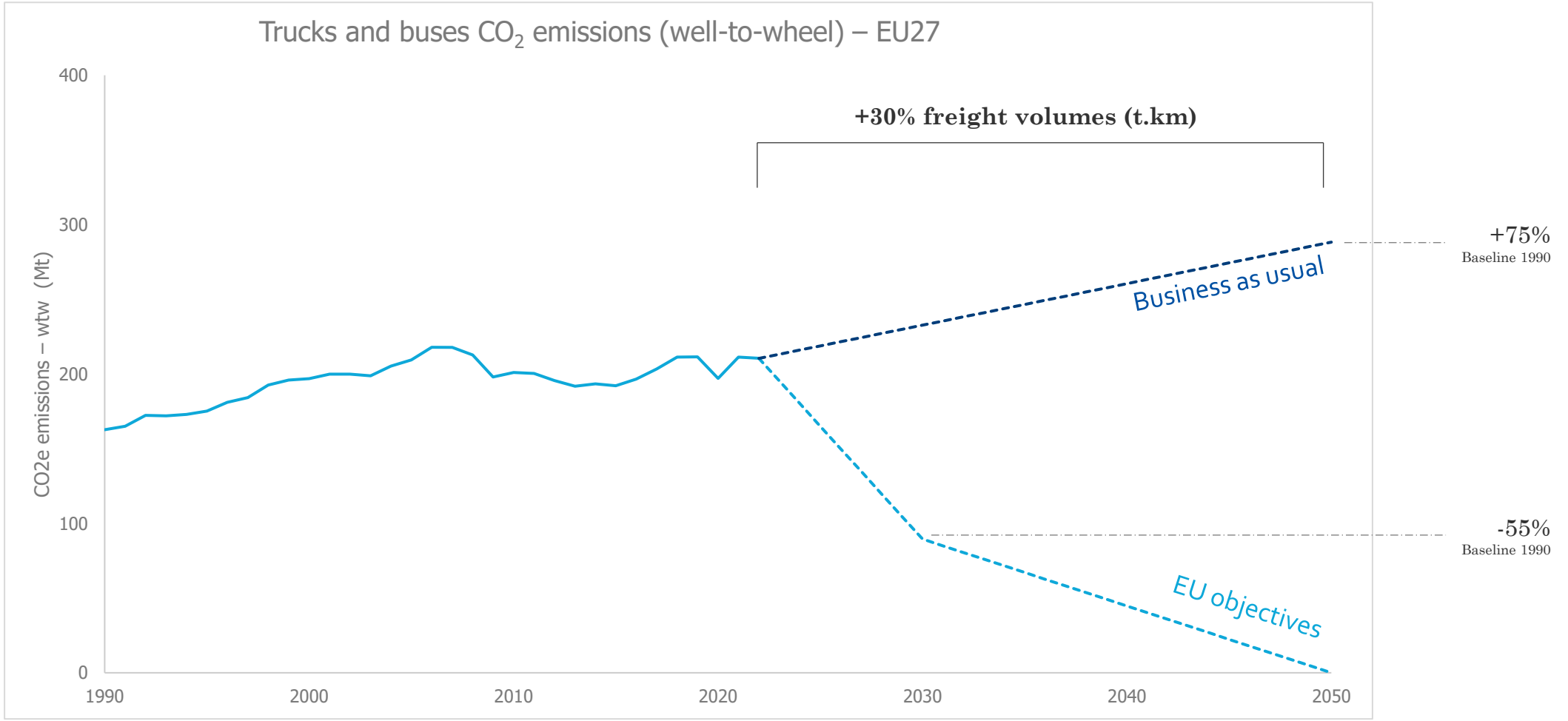
Modelling tools

Roundtables & technical workshops

Dissemination to international bodies

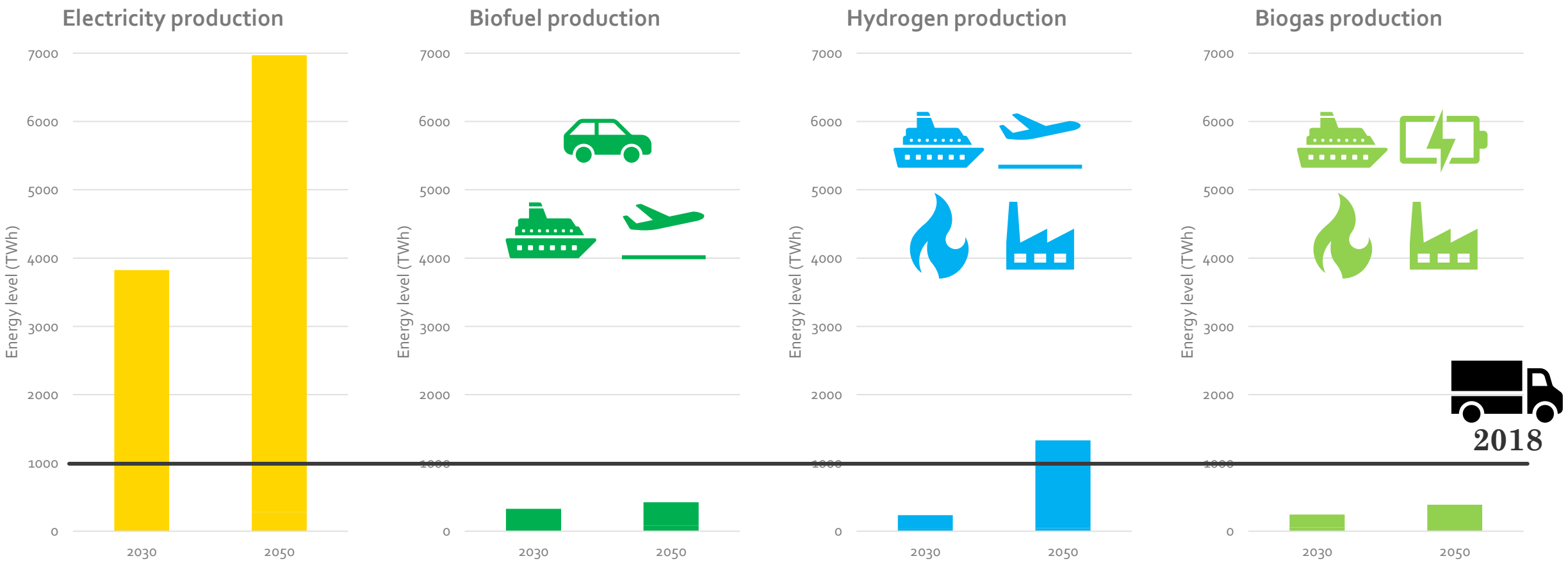
CO_2 emissions in the European Union

State of play and target net-zero by 2050



A clean energy challenge

Production levels and cross-industries competition



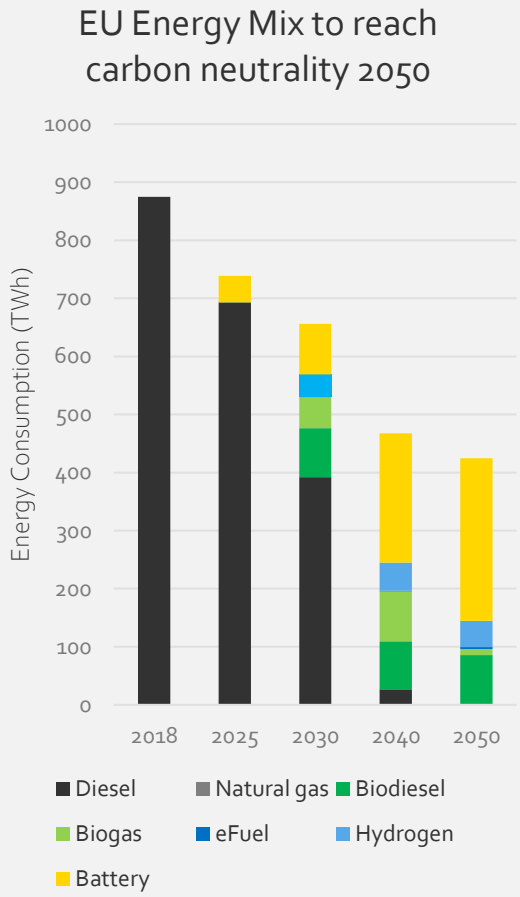
Intelligence Briefing.

IRU Green Compact

2050 carbon neutrality for road transport

- Objective:
  - Find a pragmatic and realistic roadmap to decarbonise road freight and passenger transport by 2050.

- Means:
  - Modeling: combine metrics describing road transport and regional energy system with vehicle dynamics to investigate decarbonisation roadmap with a cost perspective.
  - Monitoring: track industry progress and identify potential bottlenecks
  - Meeting: gather industry ecosystem to actively engage toward carbon emissions reduction.



What is the Green Compact methodology

Bridging road transport practices and decarbonisation

1

Collecting road transport industry metrics

- Data on transport operations
- Data on vehicles fleet
- Past freight dynamics
- Current and future regulations

2

Collecting energy usage and cost components

- Data on energy flows
- Data on carbon emission factors
- Data on cross-industries competition
- Data on pricing dynamics

3

Modelling and creation of decarbonisation roadmaps

- Forecasting transport demand
- CO_2 emissions reduction curve
- Minimizing costs and investments

What is the Green Compact methodology

The five pillars of the Green Compact toolbox

Reducing energy per t.km and p.km

Reducing v.km / t.km

Boosting p.km

Reducing v.km / p.km

Reducing energy carbon intensity

Efficient drivers

Eco driving
Telematics
Autonomous vehicles
ADAS ...

Efficient vehicles

Fleet renewal
Engine improvements
Lubricants
Tyres
Aerodynamics
PCC
Lightweighting...

Efficient logistics

Eco trucks
Consolidation
Co loading
V2X
Trailer swapping
Intermodal
Route optimisation
Packaging...

Collective mobility

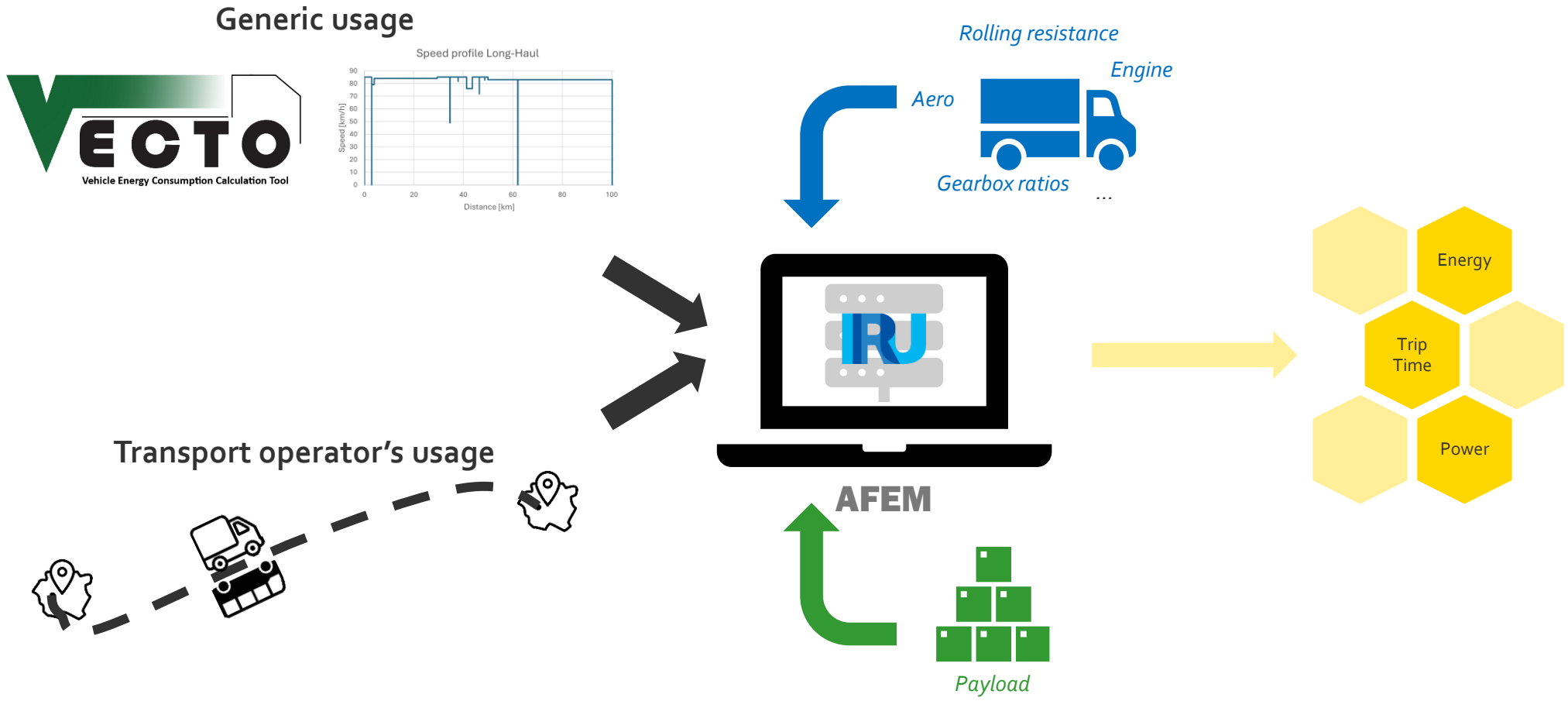
Push measures
Integrated ticketing
Service quality
Demand responsive
Marketing
Bus rapid transit...

Alternative fuels

Biofuels
Biogas
Battery electric
Fuel Cell electric
Hydrogen ICE
Synthetic fuels...

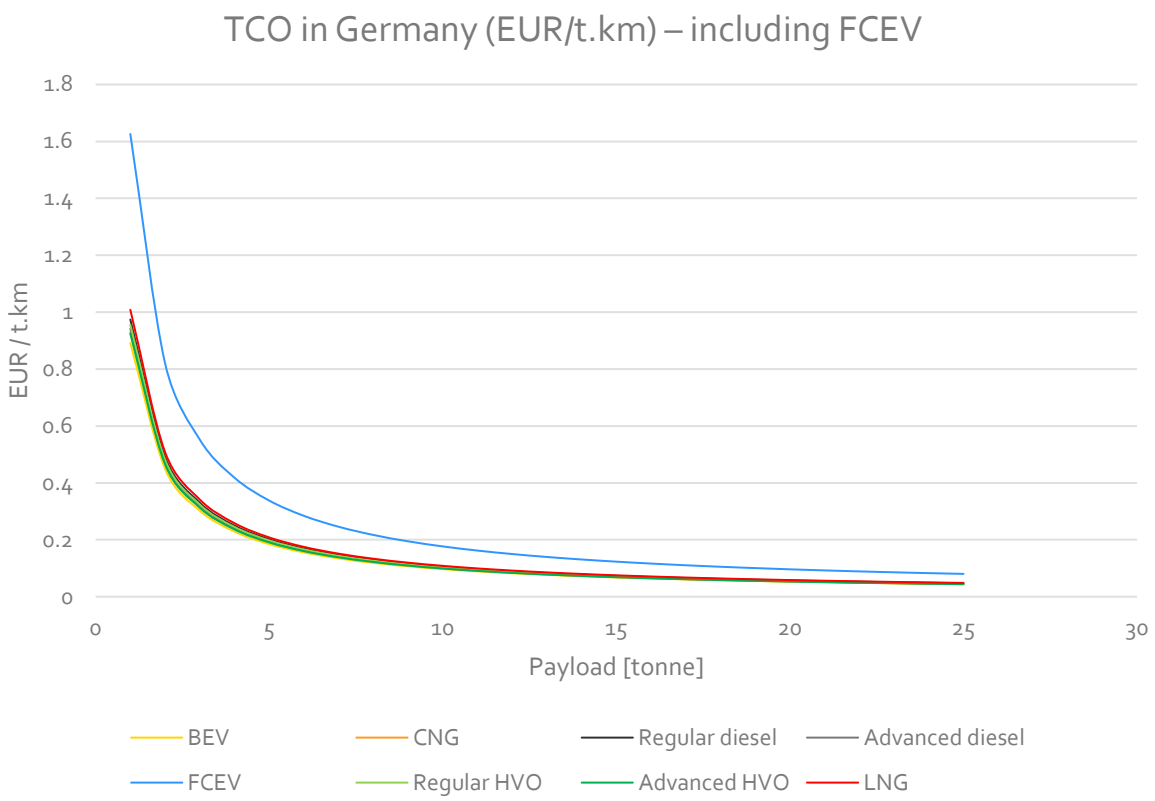
Green Compact tools

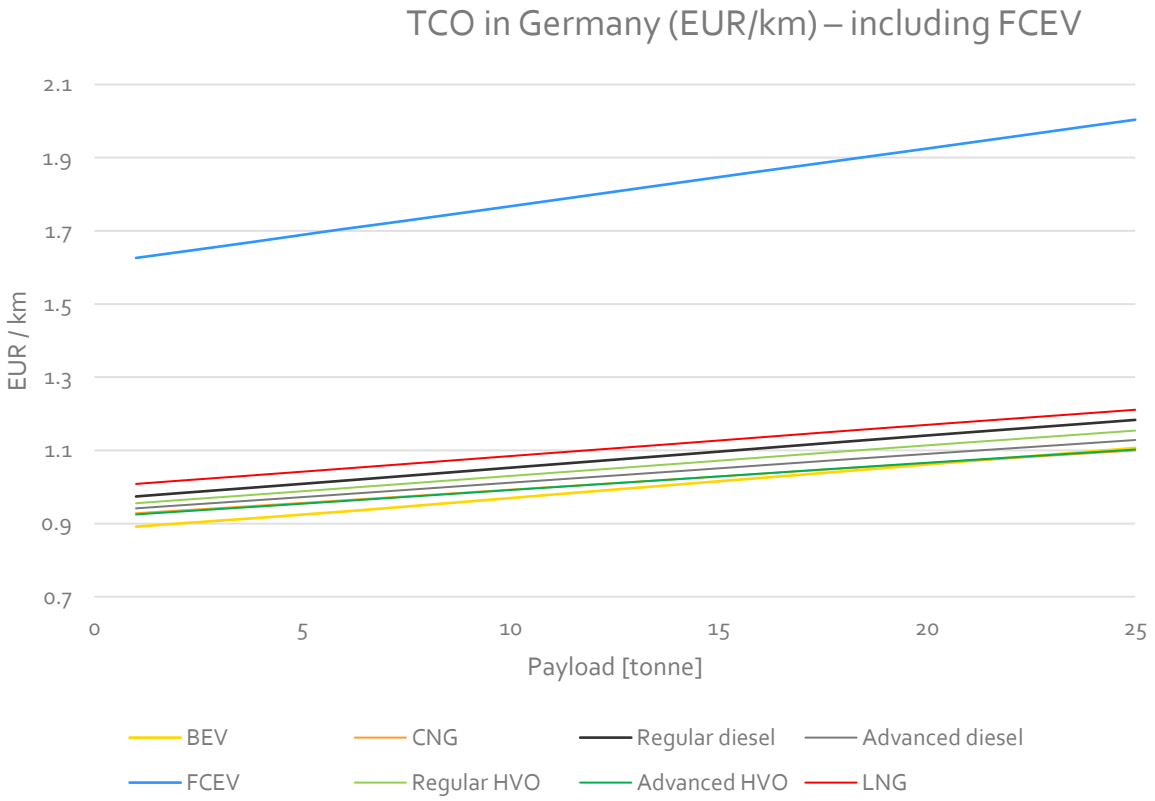
Two models bridging road transport practices and decarbonisation



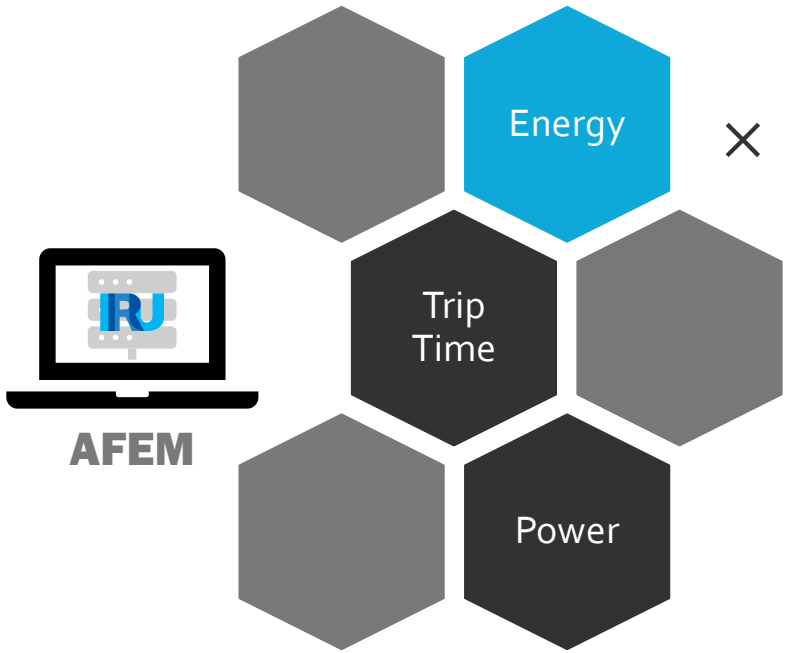
TCO evolution versus payload

TCO per t.km and per km



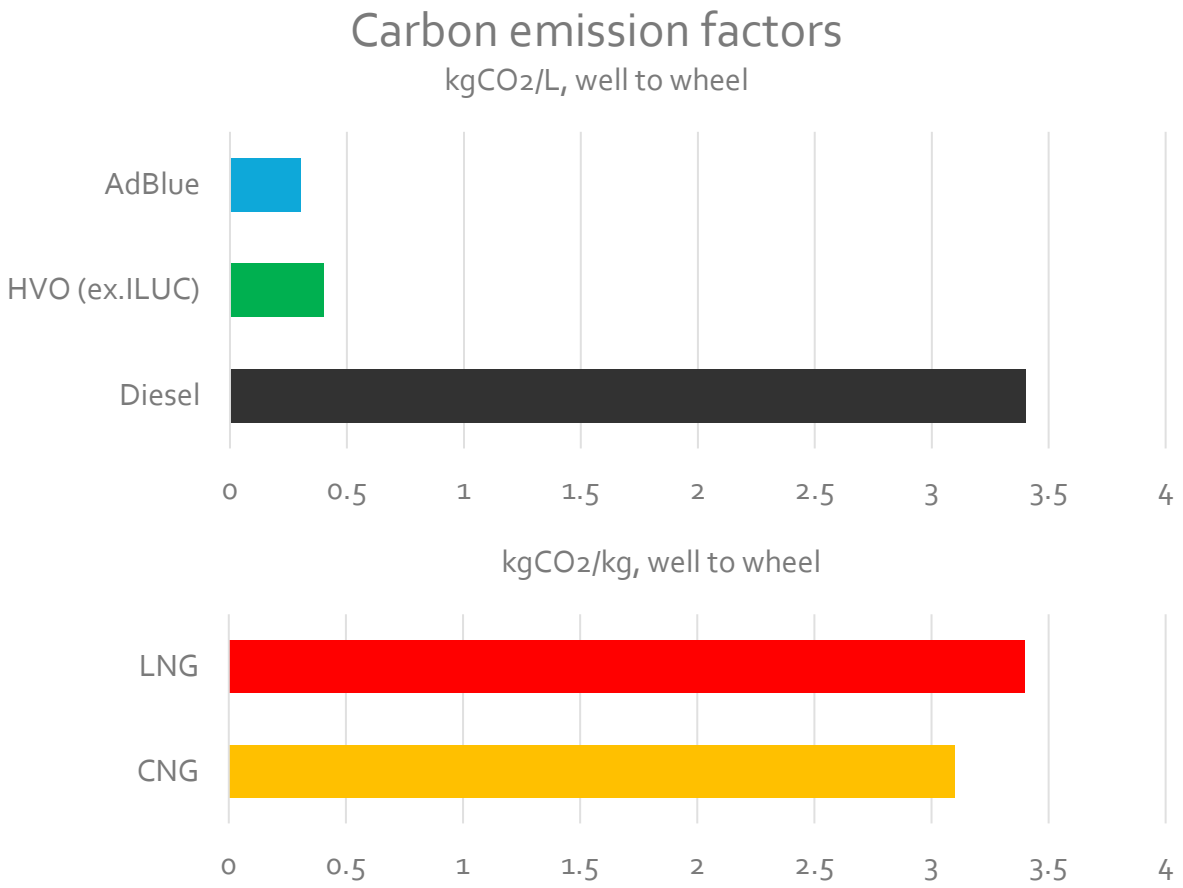


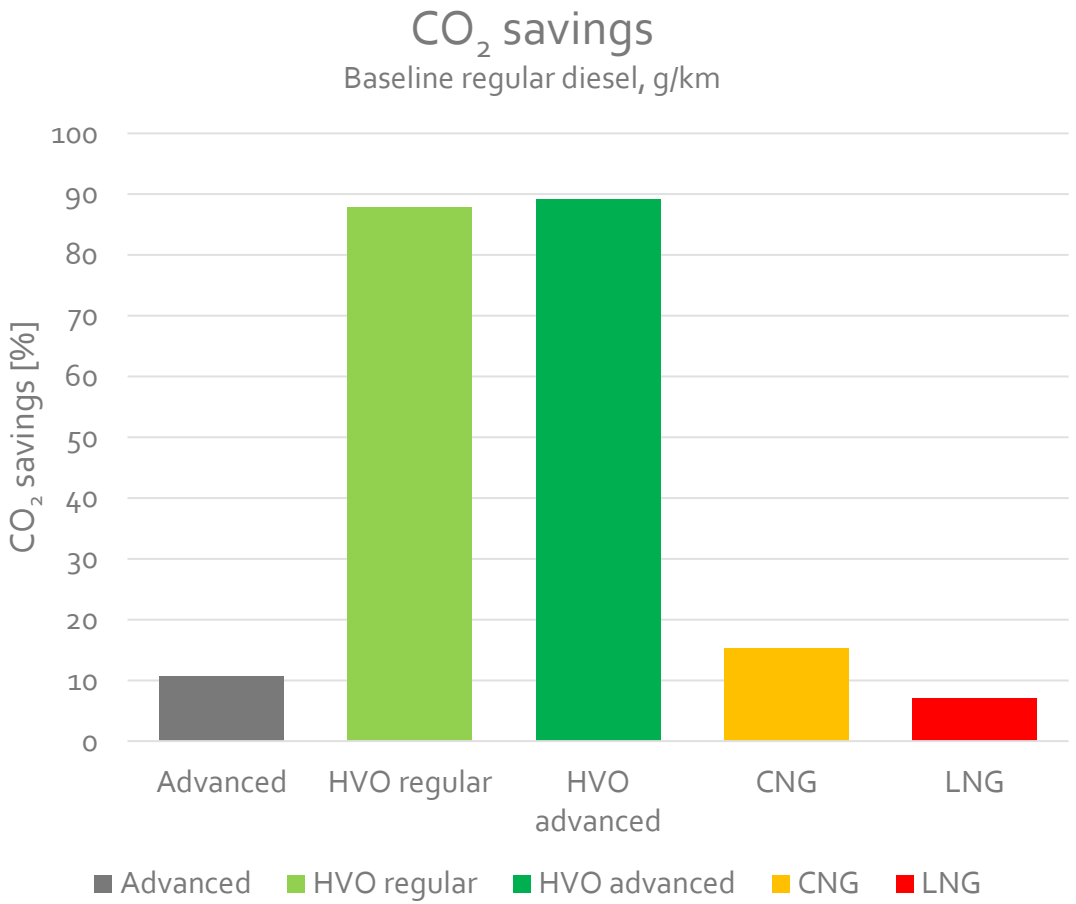
CO_2 estimations
Main principle



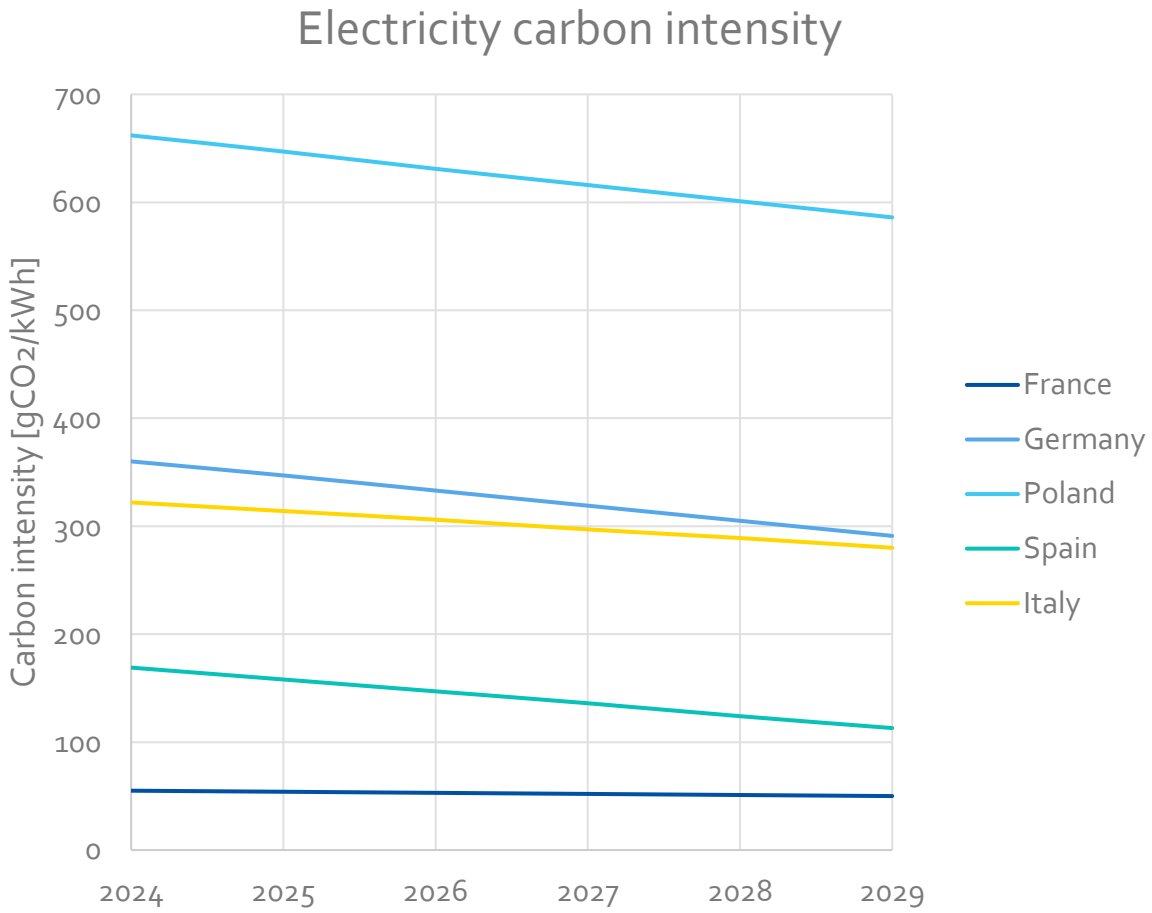
$\times$ carbon emission factors $= CO_2$ emissions

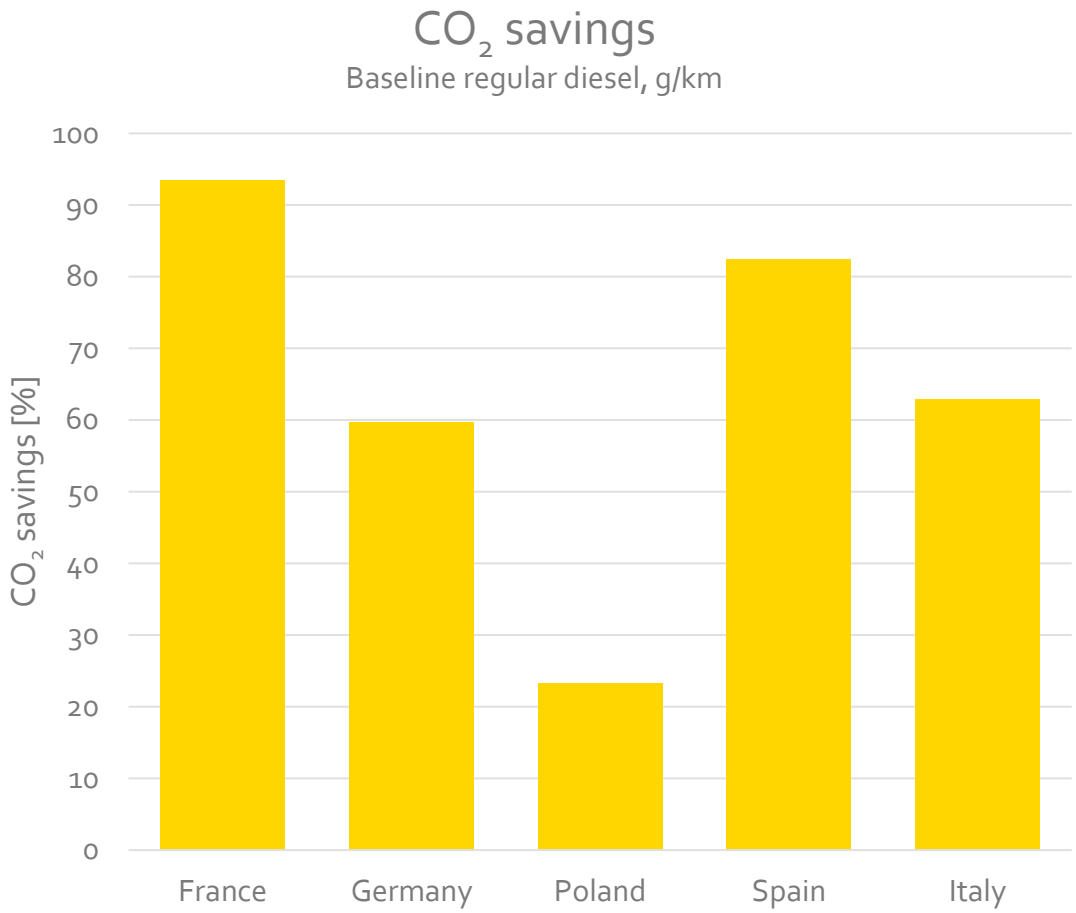
CO_2 estimations
Fossil and carbon neutral fuels





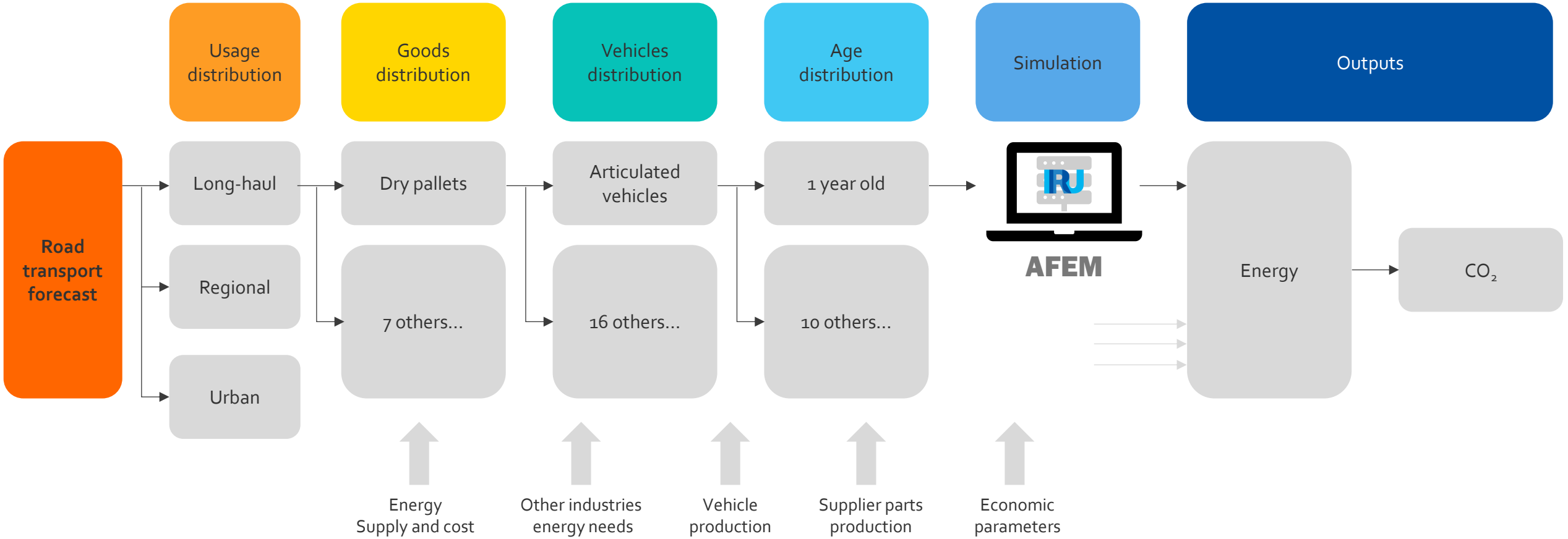
CO_2 estimations
Electricity carbon intensity





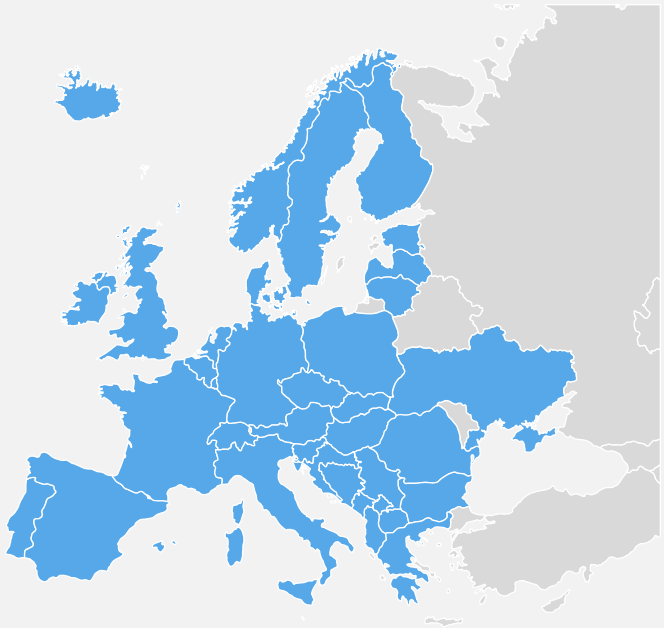
What is the Green Compact methodology

Main roadmap maker tool



IRU Green Compact
The European roadmap

Scope

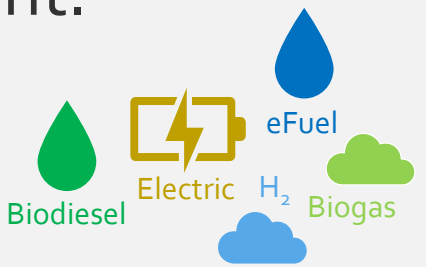


Medium and heavy-duty (GVW >3.5t)

1. Multiple pathways for reaching the 2050 objective > one better.
2. To minimize costs, a dual approach is needed, leveraging energy efficiencies and alternative fuels deployment.

Energy savings

> 50% of carbon reduction potential



Alternative Fuels

Costs and availability oriented

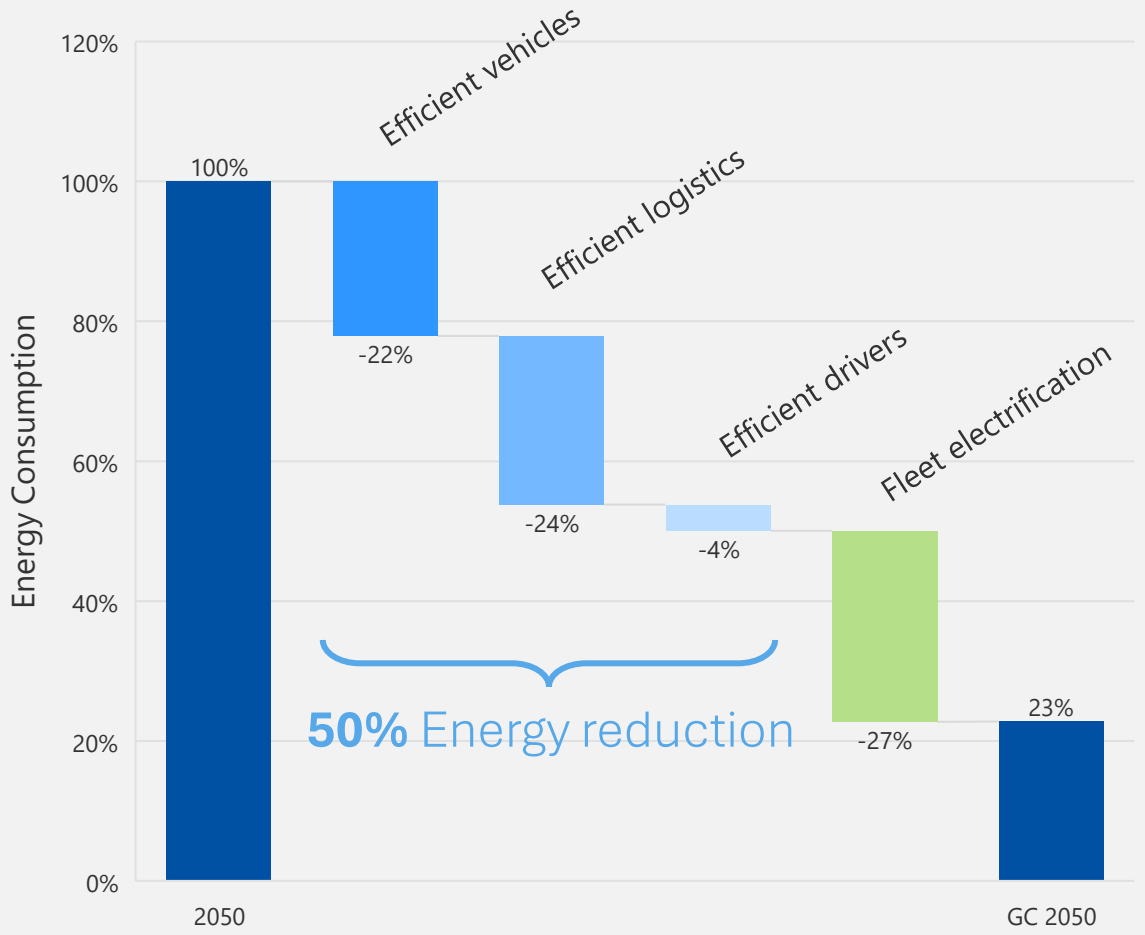
Efficiencies: keys for a pragmatic decarbonization

How to mitigate transport cost inflation

1. Efficient logistics, leveraging market best practices, offers the greatest CO2 reduction potential.

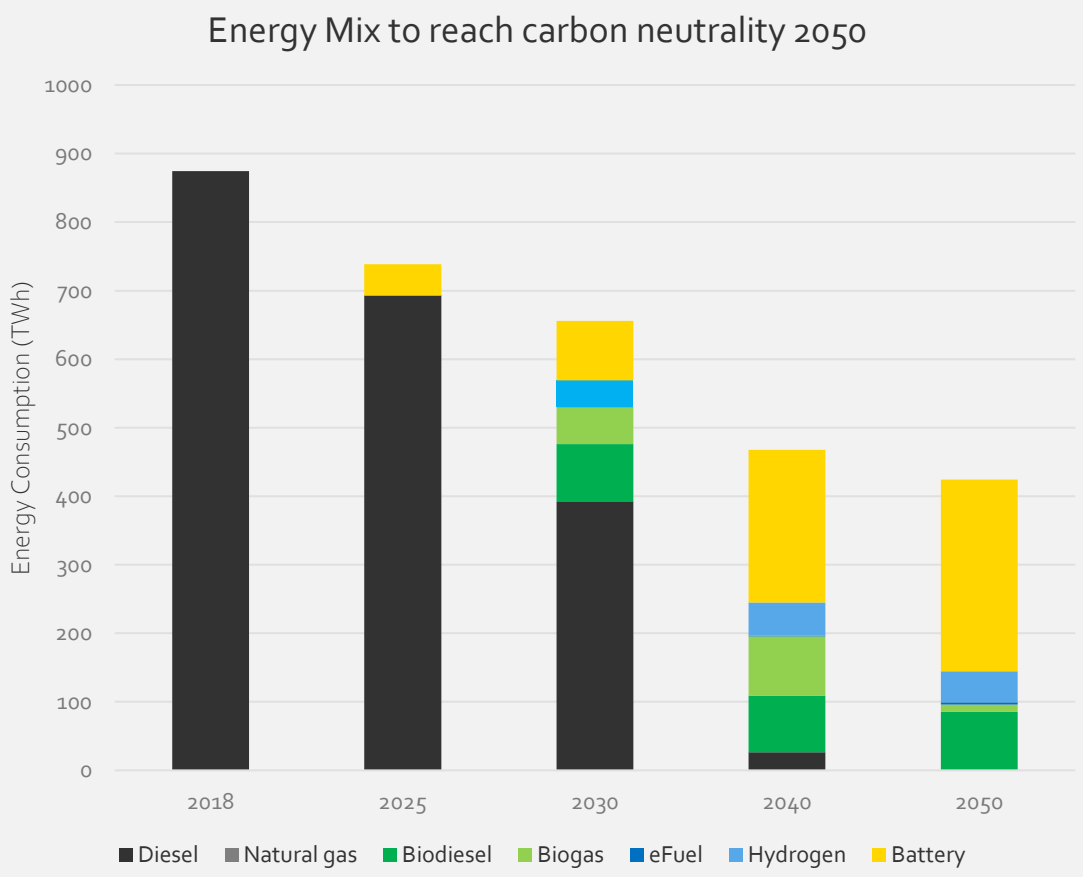
2. Efficient vehicles followed, updating the fleet with current modern technology.

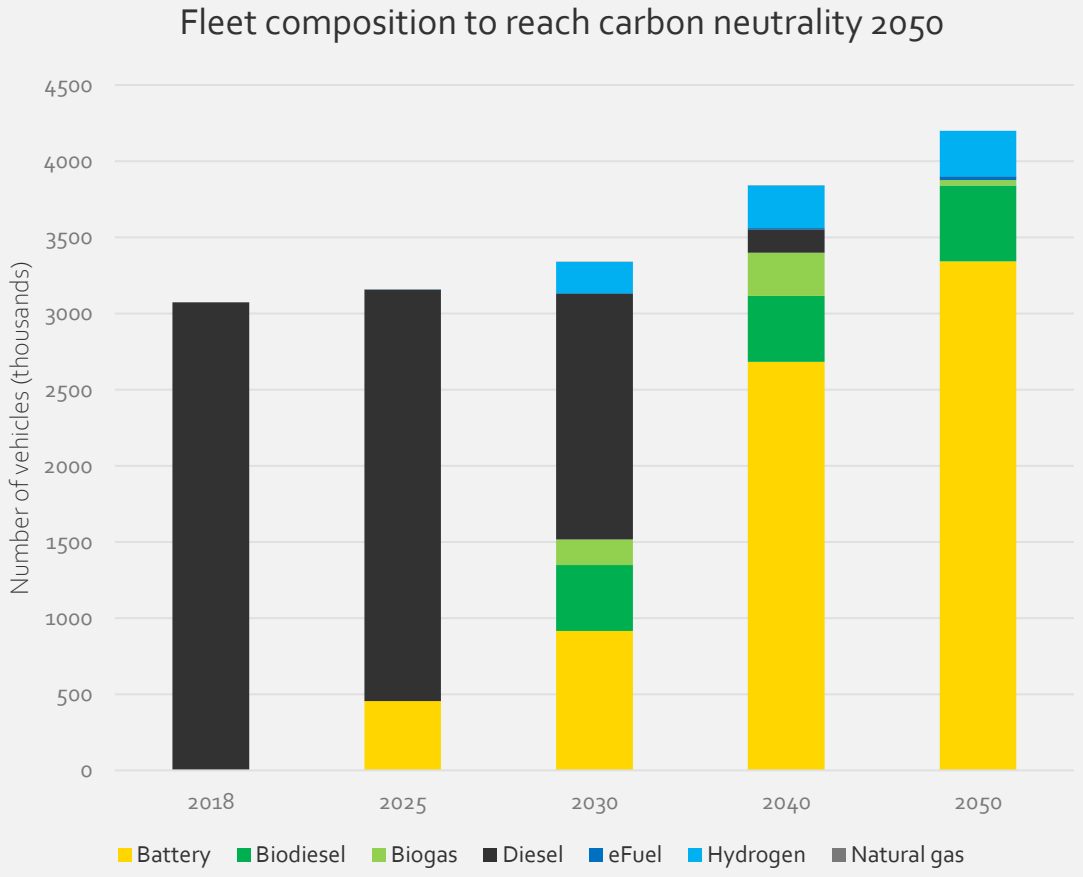
3. Efficient drivers are the natural and important first step toward carbon neutrality for road transport.



Second lever: switching to alternative fuels

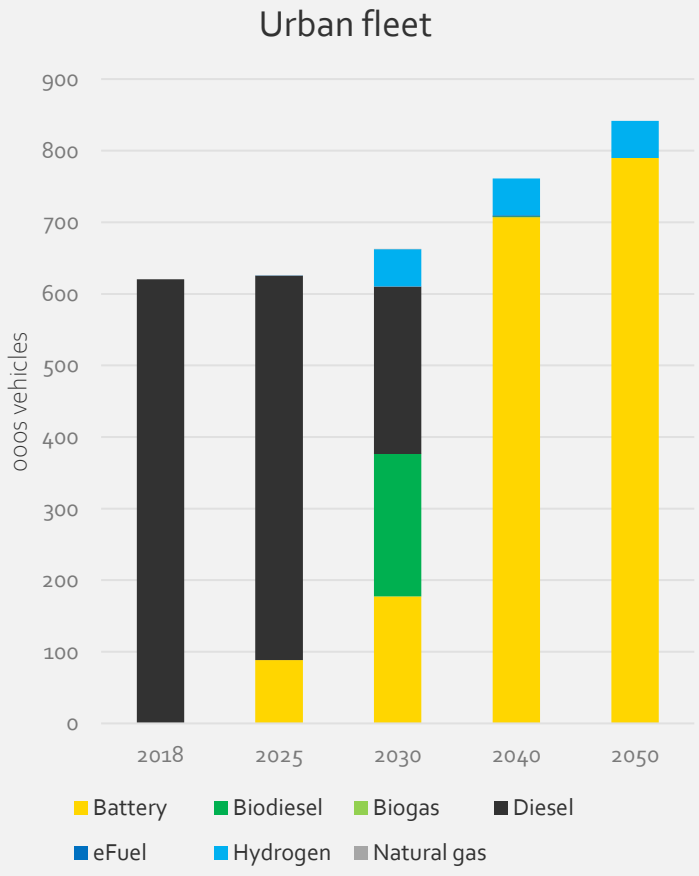
Energy mix and trucks and buses fleet

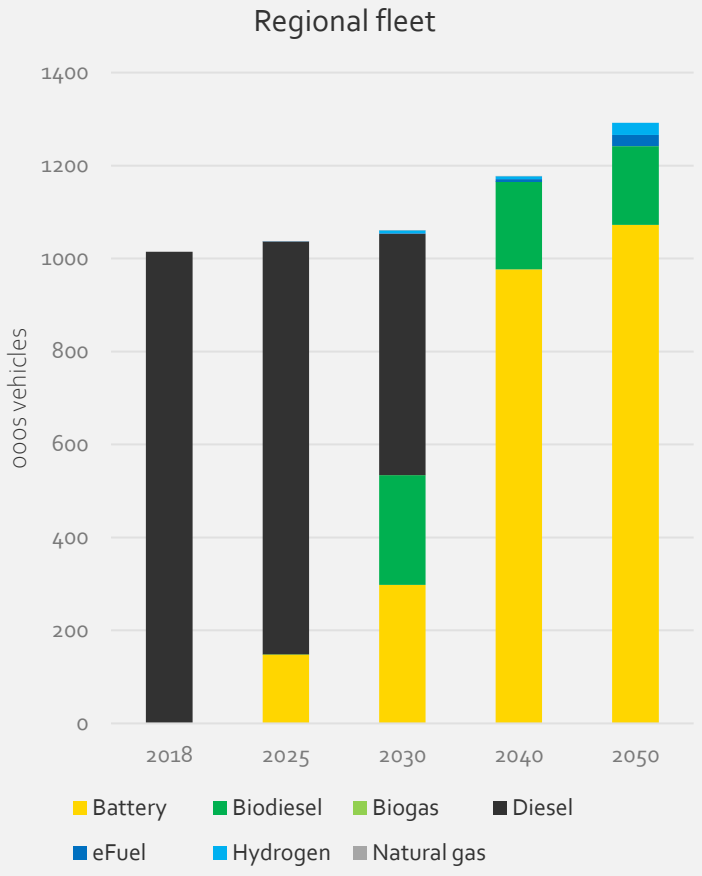


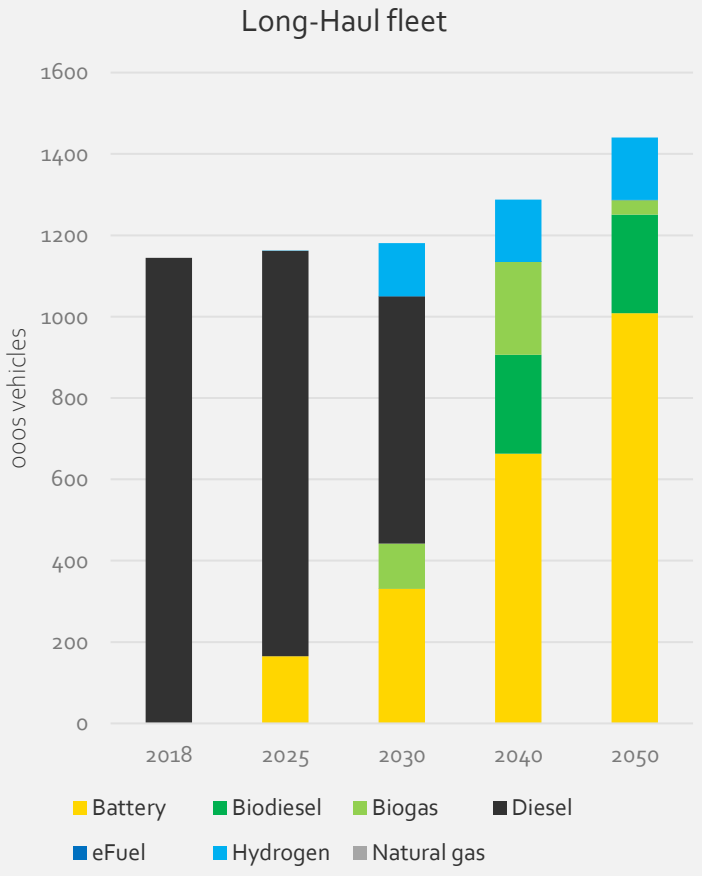


Second lever: switching to alternative fuels

Focus on road freight transport by usage

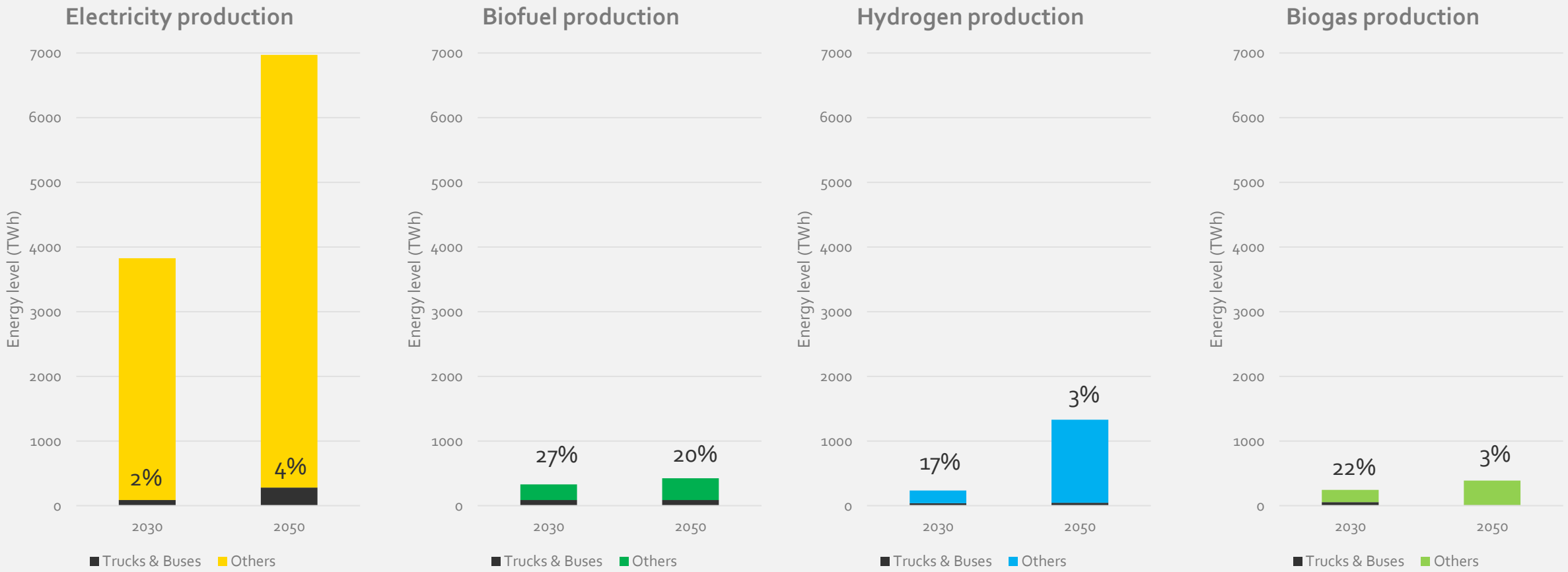






Second lever: switching to alternative fuels

Focus on share of truck & buses in overall energy production



Decarbonization bottleneck

71 billions litres of diesel → 450 TWh of electricity

≈ 20% of EU consumption

244 $MtCO_2$ → 94 $MtCO_2$

≈ 60% carbon savings

Green Compact roundtable

IRU offers a **platform** for corporates to **gather, exchange and coordinate efforts** for road transport **decarbonization** in a safe and **confidential** space.

- 4 roundtables per year, hosted by IRU member
- informal, "exclusive club" with open discussions
- 1 day, side visit + talks
- physical - by invitation only

Q&A

BECOME A MEMBER

Interested in joining a network of over 170 members to shape the future of road transport?

BECOME A PARTNER

Looking for a tailored partnership to boost your company's footprint in the industry?

GET INTELLIGENCE

Need advice to better understand logistics market trends to support your decision-making and better address regulatory, business and operational opportunities or issues?

information@iru.org