

TARIFICATION DU CARBONE ET TRANSPORT

BPF-FPB WEBINAR

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Brussels, 30/10/2020

Climate Change Service
Federal Public Service Health,
Food chain safety and Environment



TOWARDS A
LOW CARBON SOCIETY

OUTLINE

- 1. Aiming for climate neutrality at all levels**
- 2. Transport sector perspectives**
- 3. Pricing carbon emissions**

A photograph of Xi Jinping, the President of China, sitting at a dark wooden table during a press conference. He is wearing a dark blue suit, a white shirt, and a blue patterned tie. His hands are clasped in front of him. Two microphones are positioned on the table in front of him. To his right, a nameplate displays the Chinese characters '中国' and the word 'CHINA'. The background features a large, traditional Chinese ink wash painting of a mountainous landscape. The text on the right side of the image is overlaid on the scene.

China will **scale up** its
Intended **Nationally**
Determined Contributions by
adopting more vigorous
policies and measures.

We aim to have CO₂ emissions
peak before 2030 and achieve
carbon neutrality before 2060

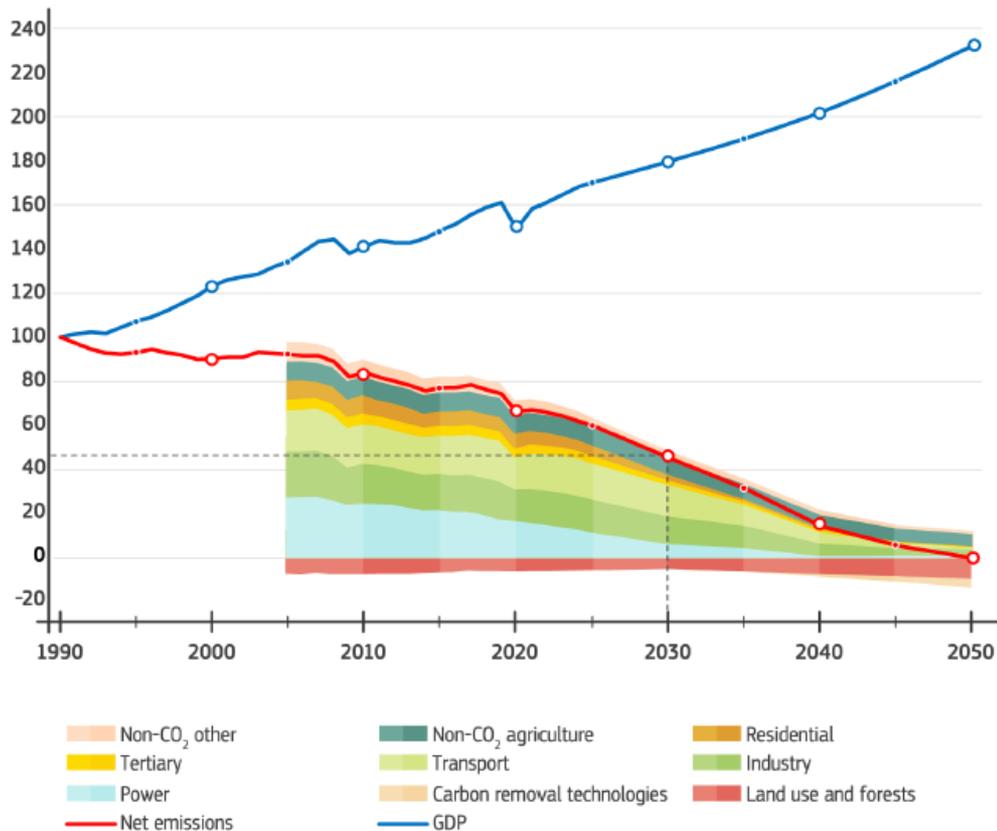
THE BIDEN PLAN FOR A CLEAN ENERGY REVOLUTION AND ENVIRONMENTAL JUSTICE

“ Ensure the U.S. achieves a **100% clean energy** economy and reaches **net-zero emissions no later than 2050.** ”



CLIMATE NEUTRALITY AT EU LEVEL

Trajectory towards climate neutrality in 2050 at EU level :
GHG emissions and GDP (1990 = 100)



- Green Deal
- Climate Law
- 2030 target plan
- Energy taxation directive
- ETS extension
- Etc.

Source: European Commission (2020)

www.climatechange.be/2050

BELGIAN LONG-TERM STRATEGY

RÉGION DE BRUXELLES-CAPITALE

Contribution de la Région de Bruxelles Capitale à la stratégie nationale 2050 de réduction des émissions de gaz à effet de serre

07/11/2019

Wallonia
environnement
Awac

Wallonia
énergie
SPW

VLAAMSE

2050
Carbonised Belgium by 2050
the Belgian long-term strategy

PPS Health, DG Environment, Climate Change Section

First version: 03/10/2019
This version: 11/01/2020*

Vlaamse
overheid

Transport GHG emissions in 2050: 0 tCO₂e

DOCUMENT APPROUVÉ PAR LE GOUVERNEMENT
WALLON LE 5 DÉCEMBRE 2019

Dans le cadre de l'article 15 du règlement (UE) 2018/1999 relatif à la gouvernance de l'Union de l'énergie et de l'action pour le climat, les États membres de l'Union européenne doivent soumettre pour le 1er janvier 2020 une stratégie de réduction de leurs émissions de gaz à effet de serre à long terme (2050). Le présent document vise à présenter la situation de la région en la matière. Il doit en outre permettre de contribuer à l'élaboration de la stratégie nationale à laquelle il sera annexé. Il constitue aussi une première brique pour la mise en œuvre de l'ambitieux programme climatique dont s'est doté le Gouvernement régional en juillet 2019.

Summarized in umbrella text
and reproduced in Annex

TRANSPORT PATHWAYS

Behavioural levers

- Reduction of **demand**
- Large **shift** towards public transport/ active modes
- Increased vehicle **occupancy** and vehicle **load**

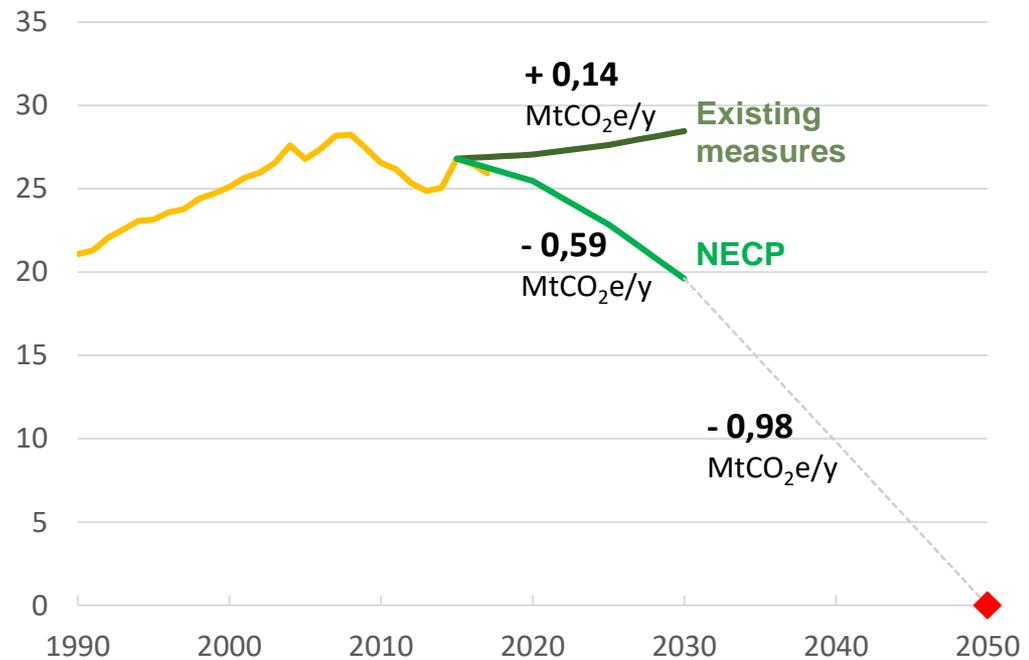
Technological levers

- **Electrification** of cars and vans
- **H2, e-fuels and biofuels** for HDV, boats, planes

Game-changers

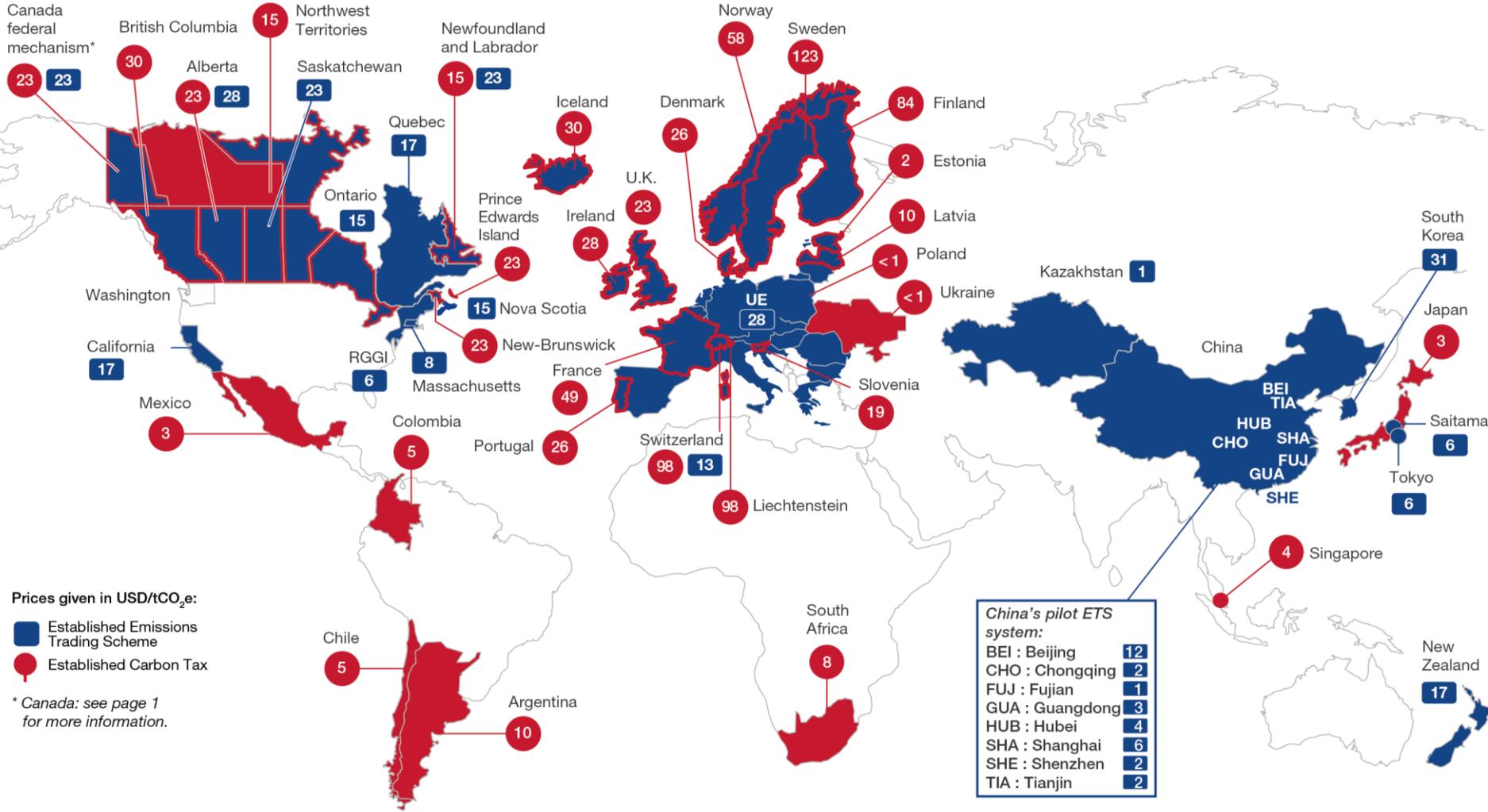
- Automation and MAAS, including sharing
- Logistics hubs, cargo bikes, inland waterways

GHG emissions domestic transport in Belgium (MtCO₂e)



Source: NIR (2019); NECP (2020) 50

CARBON PRICING IS DEVELOPING WORLDWIDE



Source: I4CE, 2020



3 principles for a successful implementation in n-ETS sectors

1. Long-term orientation

- Long-term signal for investment decision
- Increasing price, trajectory

2. Package of policies

- Carbon pricing alone does not suffice
- Substitution possibilities needed

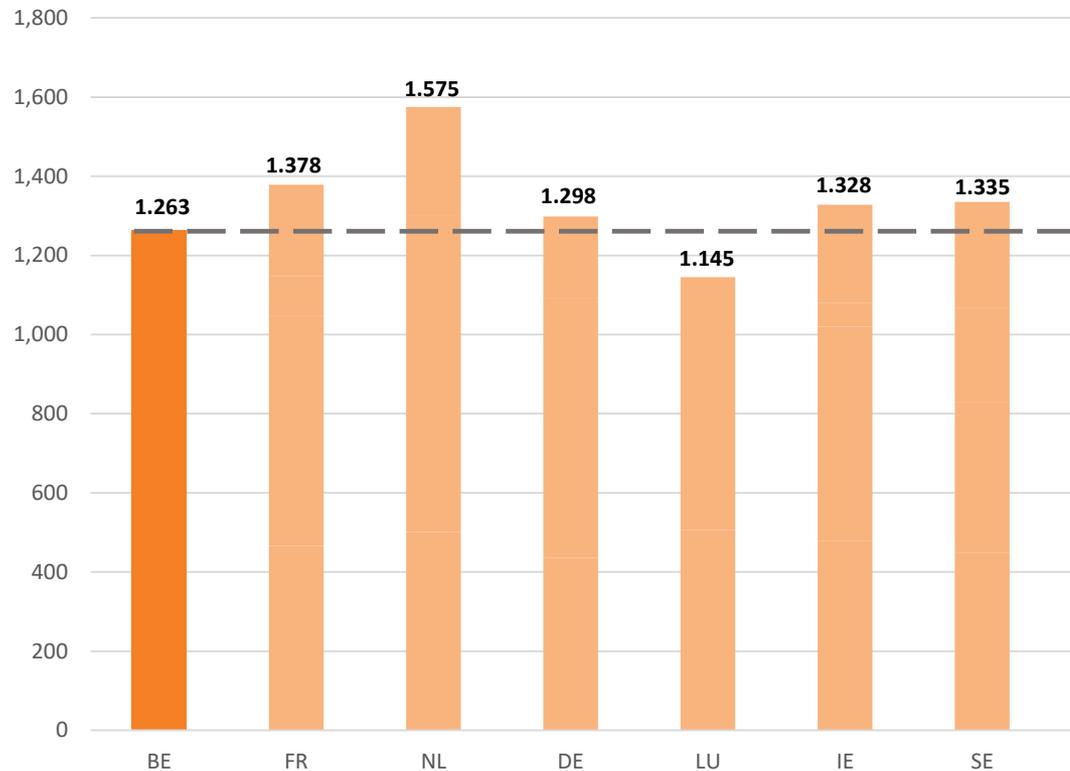
3. Budget neutrality

- Various options available
- Compensation for vulnerable households



PETROL PRICES ARE LOWER THAN IN NEIGHBOURING COUNTRIES

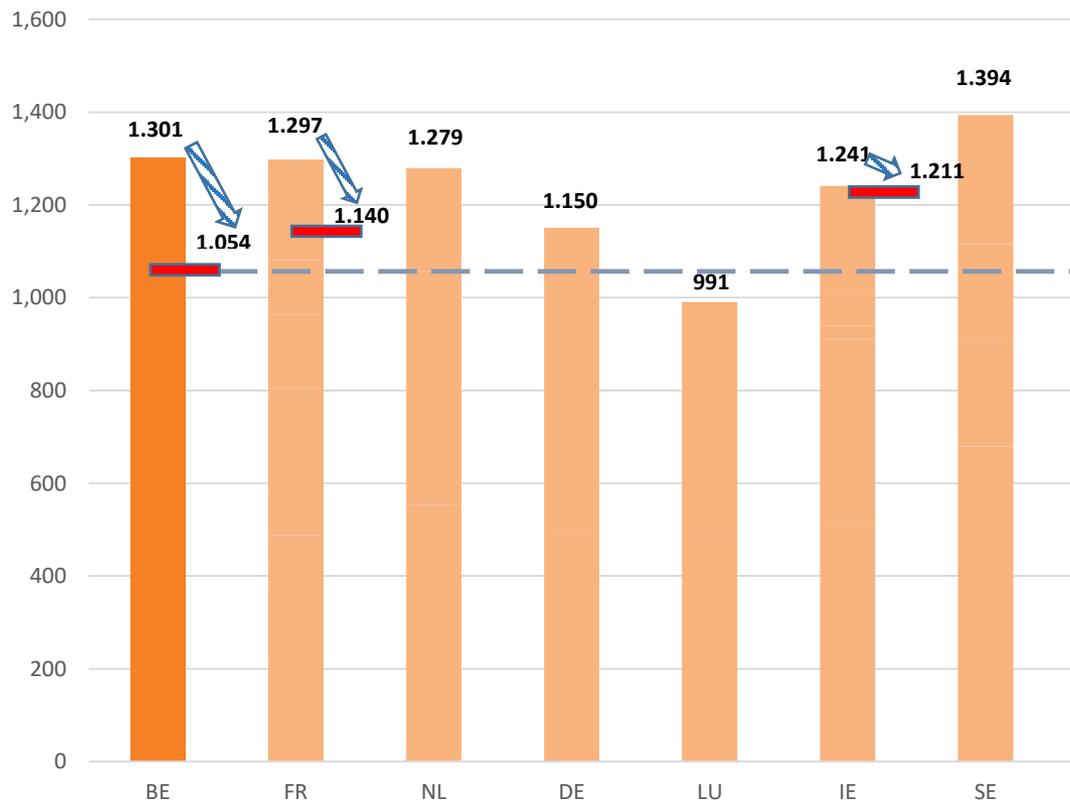
Petrol - 1st semester 2020 (€ per 1000 L)



Source: Weekly Oil Bulletin

DIESEL PRICES ARE SLIGHTLY HIGHER THAN IN NEIGHBOURING COUNTRIES BUT PROFESSIONAL DIESEL IS SIGNIFICANTLY LOWER

(Professional) diesel - 1st semester 2020 (€ per 1000 L)

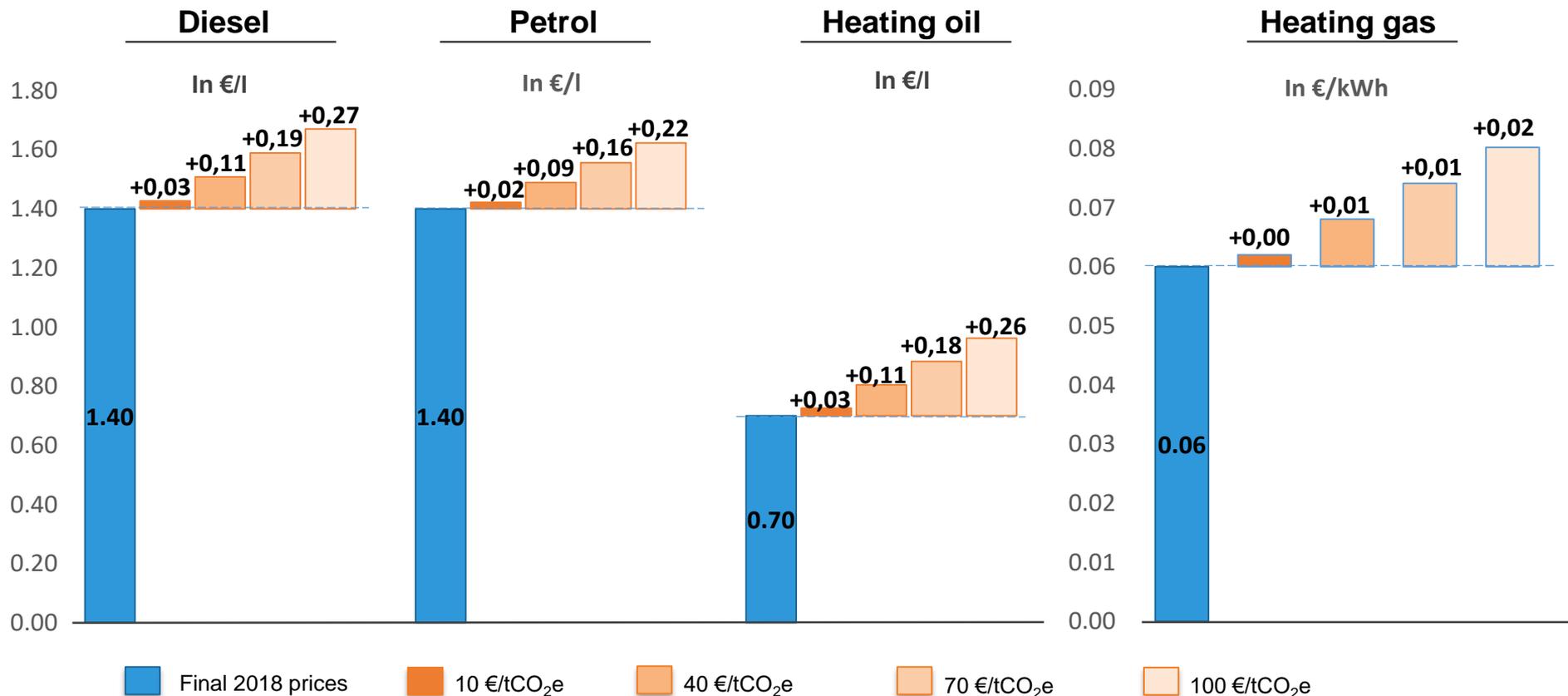


Carbon price :

- On all fossil fuels
- Through excise duties with special treatment for professional diesel
- Road pricing

INDICATIVE IMPACT ON FOSSIL FUEL PRICES

- In the short-term (2020), price changes by 2 to 4%
- In the mid-term (2030), price changes by about 10 to 25% (trajectory B, 70€/tCO₂e)



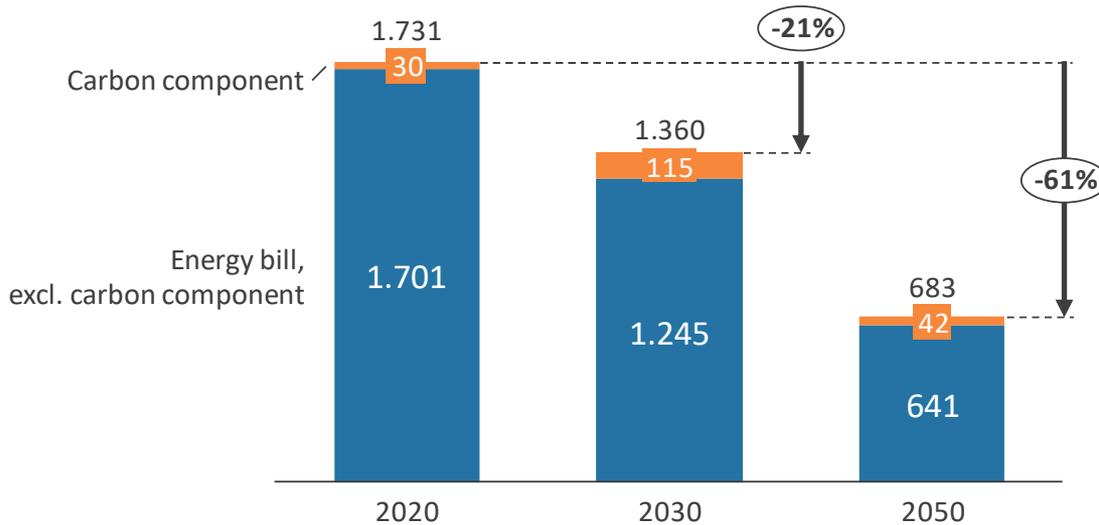
Source: Own calculations on the basis of IPCC emission factors and Weekly Oil Bulletin

www.climatechange.be/2050



THE DECREASE IN ENERGY DEMAND RESULTS IN A TOTAL AVERAGE ENERGY BILL DECREASE

Evolution of the average annual energy bill for passenger transport in low-carbon scenarios [€/vehicle/year]



Assumptions include:

- 10, 70 and 190 €/tCO₂ in 2020, 2030 and 2050
- 2016 energy prices (constant)

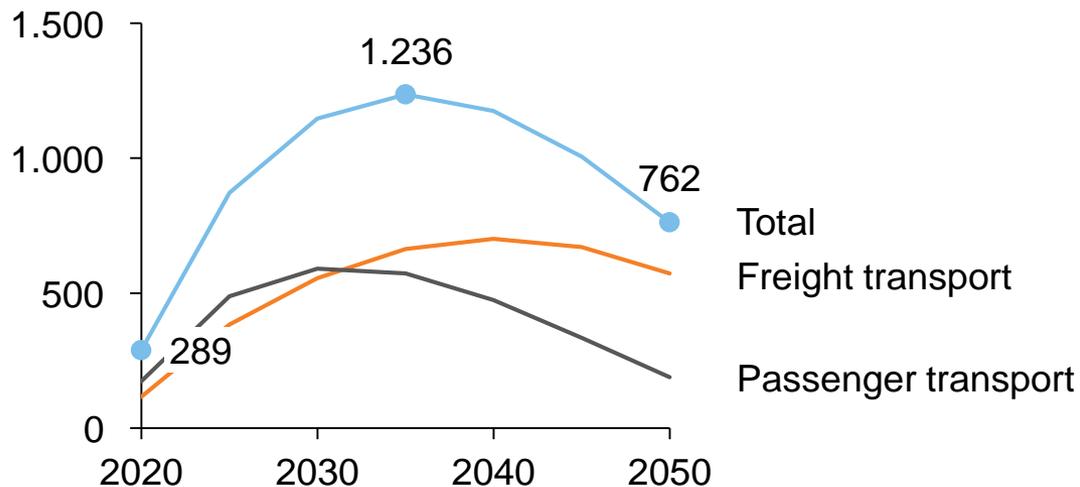
Impact of:

- Energy efficiency
- Occupation rate
- Electrification (higher prices, lower demand)
- Increasing carbon price

REVENUES CAN BE USED IN DIFFERENT WAYS



Annual carbon revenues
for the domestic transport sector *
(in M€/year)



- General uses
 - Labour tax shift
 - Electricity tax shift
- Passengers & Freight
 - Lump-sum
 - Low carbon alternatives
 - Infrastructures
 - Innovation

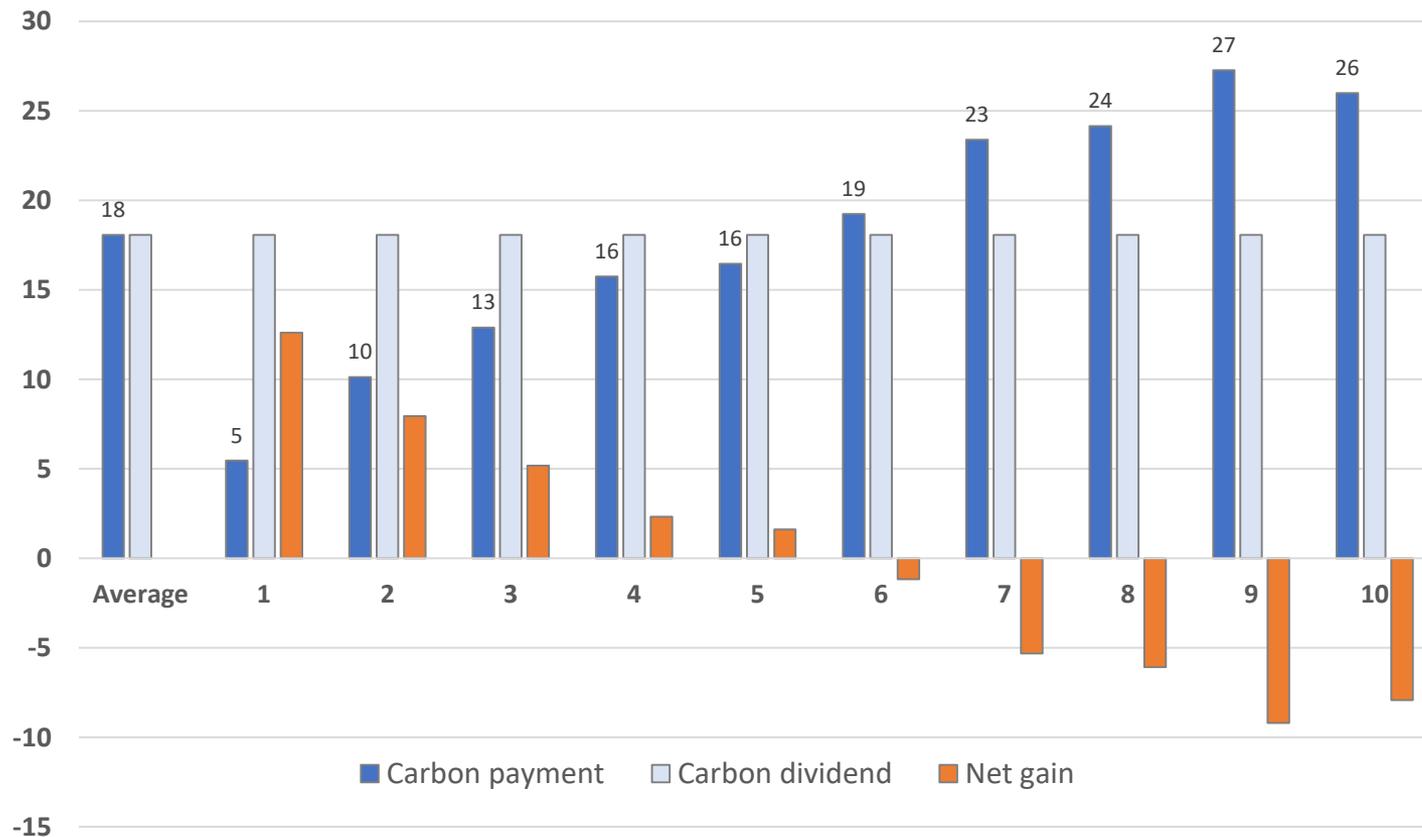
* Assumptions on carbon price level: 10, 70 and 190 €/tCO₂ in 2020, 2030 and 2050

Source: Low carbon scenarios, own calculations

www.climatechange.be/2050

REDISTRIBUTION IS POSSIBLE

Average carbon contribution for transport by decile of income with a 10€/tCO₂ carbon price and illustration of the impact of an equal redistribution of the dividend - Belgium (in EUR per year)



Source: Households budget survey (2016); own calculations

CONCLUSIONS

- The direction is clearly set: **climate neutrality** at all levels
- Transport GHG emissions in Belgium: **0 tCO₂e** in 2050
- All that is not **driven by prices** will have to be driven by other instruments
- **Options for pricing** carbon emissions in the transport sector have been identified
- System will need to be coherent with potential future carbon pricing measures at **EU level**
- **Use of revenues** from carbon pricing and transparency on that use are key for a successful system

THANK YOU!

www.climat.be/prixcarbone
www.klimaat.be/koolstofprijs

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