



# The indispensable role of carbon pricing for a green transition – lessons from EU experiences

*Dr. Jan Nill, European Commission, DG Climate Action  
SHARED PERSPECTIVES 2023, 6 October*

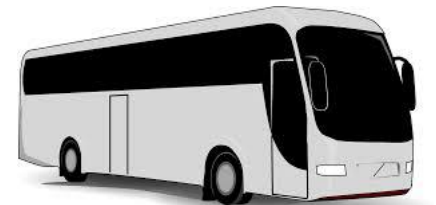
# EU ETS, the EU approach to carbon pricing

- EU Emissions Trading System (EU ETS) started in 2005, oldest & largest ETS in the world
- Applies to emissions from the electricity and centralized heat generation, industrial manufacturing + aviation since 2012
- Covers ~40% of the EU's GHG emissions
- 30 countries (all 27 EU countries, Iceland, Liechtenstein and Norway), and Northern Ireland
- Since 2019 Market Stability Reserve, withdraws or releases allowances if market liquidity above or below pre-defined thresholds

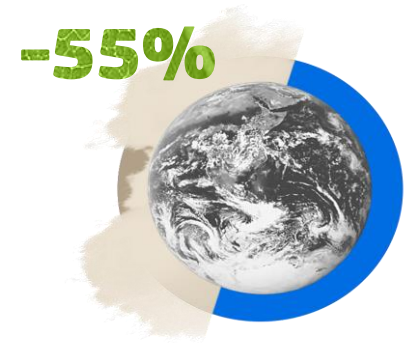


# Rationale for extending EU carbon pricing

- Most effective and efficient climate policy mixes include carbon pricing (e.g. review of van den Bergh et al. 2021)
- Mix of complementary policies has several strong points compared to strengthening only regulatory policies or focus on carbon pricing only (Commission Imp. As. 2020)
- Existing EU ETS is effective in reducing emissions
  - ETS stationary installations: -37% 2022 cf 2005
  - EU net GHG emissions excl. ETS: -10% 2021 cf 2005
- EU policies in buildings and road transport sectors have focused on regulatory approaches, limited economic incentives to achieve necessary emission reduction



# An extended role of carbon pricing in the EU climate policy mix



- Achieving climate neutrality by 2050 and -55% emission reduction by 2030 requires transformational change across EU economy
- Strong contribution of buildings, road transport and non-ETS industry needed: -42% CO<sub>2</sub> emissions in 2030 compared to 2005
- “Fit for 55” legislative package adopted 2023
  - ✓ EU ETS strengthened and extended to maritime and to buildings, road transport and non-ETS industry through new emissions trading system (ETS2), in total around 75% of emissions
  - ✓ Strengthening of supporting policies, e.g. Innovation Fund and new Social Climate Fund
  - ✓ Strengthening of regulatory policies

# Economic impacts of achieving -55% with strengthened and extended carbon pricing

-55%



EU GDP vs. baseline, 2030 (range of impacts due to increased EU GHG ambition to -55% across scenarios of different models with diversified policy setups)

Mitigation effort, rest of the world	<u>Fragmented action</u>	<u>Global action</u>
<b>JRC-GEM-E3</b>		
Real GDP	-0.39   -0.25	-0.70   -0.47
Investment	0.52   0.57	0.41   0.48
Exports	-0.96   -0.28	1.21   2.11
<b>E3ME</b>		
Real GDP	0.18   0.50	0.22   0.55
Investment	0.18   0.25	0.25   0.31
Exports	0.01   0.06	-0.08   -0.05
<b>QUEST</b>		
Real GDP	-0.29   0.13	n.a.
Investment	-0.55   0.62	n.a.
Exports	-1.36   -0.55	n.a.

Sources: SWD (2020) 126 based on JRC-GEM-E3, Cambridge Econometrics, DG ECFIN and JRC-POLES



# EU ETS: revenues for the green transition



- Economically most advantageous revenue uses: reduce distortive taxes, in some models also support of green investments (Cion SWD (2020)176)
- EU lesson: importance of ETS revenue use to address distributional impacts of carbon pricing
  - Since 2013: solidarity contribution to lower income Member States (10%)
  - Since 2021 Modernisation Fund, recently increased to 4.5%
  - From 2026 Social Climate Fund to address the social impacts from the new ETS on vulnerable groups in the EU (EUR 65 billion, estimated >20% of ETS2 revenues)
- Innovation Fund financed by ETS allowances (estimated EUR 40 billion)
- New: obligation for Member States to use their revenues for a list of defined climate related or social purposes

# Thank you



[https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en)

© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

