



Green Deal – Fit for 55

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Metrology for Regulation – Open Public Consultation, 23/10/2023, Online

Metrology can/should be an enabler for the Green Deal

Examples of Projects funded under the European Metrology Partnership (EPM):

- Project Title: Hybrid metrology for thin films in energy applications
(Application - Renewable energy e.g. Photovoltaics, Batteries)
New capabilities to assess thin film performance will aid deployment in novel energy applications
- Project Title: Metrology for the hydrogen supply chain
(Application – Alternative fuels infrastructure)
Creating a metrological framework to support growing demands for ‘green’ hydrogen as part of the EU’s climate strategy.
- Project Title: Metrology Support for Carbon Capture Utilisation and Storage
(Application – Reduction of CO₂ levels)
Creating metrology frameworks for carbon capture, utilisation and storage to help Europe reach carbon neutrality

The European Green Deal



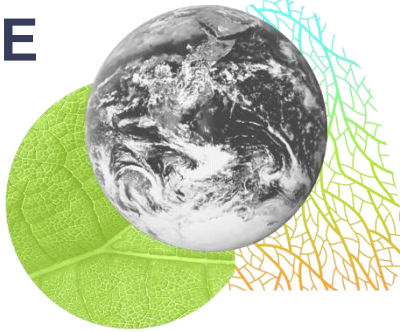
Delivering on the Green Deal (1)

- The European Climate Law Regulation of 30 June 2021
 - Union-wide climate-neutrality objective 2050
 - New 2030 target of at least 55% net greenhouse gas emissions reduction
 - Implementation through binding legislation across all Member States and sectors of the economy
 - Recognition of the need to enhance the EU's carbon sink
- The 2023 report from the Intergovernmental Panel on Climate Change (IPCC) points out that the goal of net-zero GHG emissions for industry is challenging but possible.
 - If temperatures are to be kept to 1.5 degrees Celsius above pre-industrial levels, deep, rapid, and sustained greenhouse gas emissions reductions will be needed in all sectors this decade. Emissions to be cut by almost half by 2030.

Delivering on the Green Deal (2)

“Fit for 55”

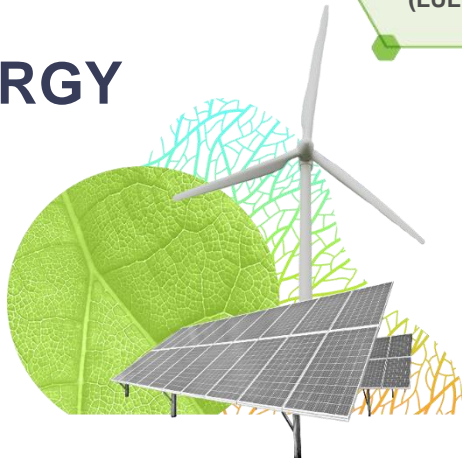
CLIMATE



TRANSPORT



ENERGY



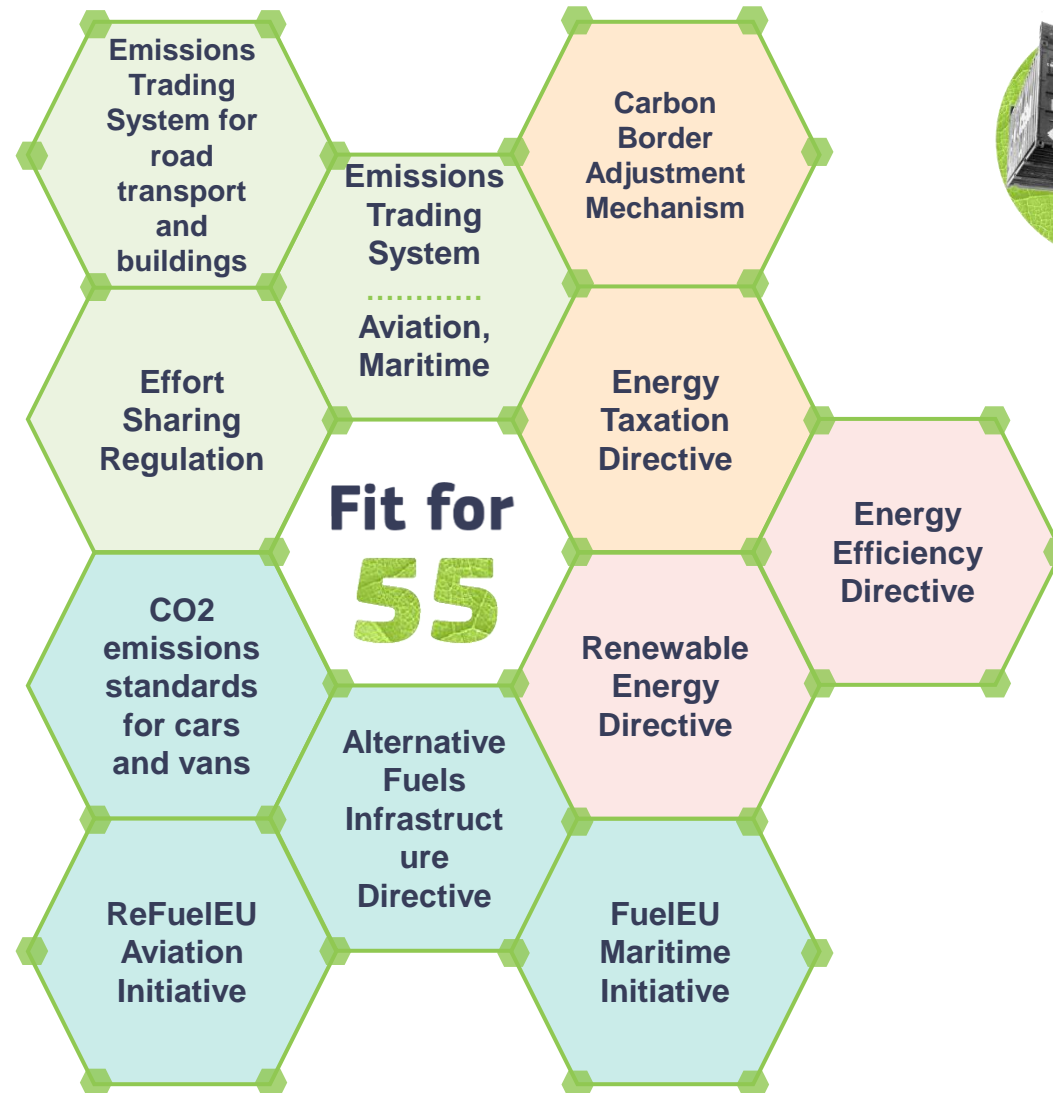
TAXATION AND TRADE



Delivering on the Green Deal (3): A competitive transition

- **Industrial transformation and carbon pricing**
- Revision of Emissions Trading System (ETS) target
- Gradually extend current ETS to maritime sector (2023-2025)
- Greater efforts from aviation operators
- Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) implemented through ETS

Increasing overall binding targets in the Energy sector



- **Cleaner mobility and transport fuels**
- Revision CO2 standards for new cars and vans
- Alternative fuels infrastructure Regulation
- Promote uptake of sustainable fuels for aviation and maritime

R&I in the Green Deal



- At least **35% of Horizon Europe funding** for climate solutions, including metrology
- Four '**Green Deal missions**' (climate adaptation, oceans, cities and soil)
- **European Partnerships** with industry and Member States
- **European Institute of Innovation and Technology** support to young researchers and innovators
- **European Innovation Council** focused on radically new, breakthrough products, services and processes
- **Data and digital infrastructure** in support of the ecological transition

The Twin Green and Digital Transition

- Both green and digital transitions are at the top of the EU's political agenda and their interaction will have massive consequences for the future.
- There are strong synergies between the green and digital transition:
 - Digital technologies could play a key role in achieving climate neutrality, reducing pollution, and restoring biodiversity. Data is fundamental for Circularity.
 - Pursuing the green transition will transform the digital sector. (e.g. energy efficiency and utilization of natural resources for energy).
- Metrology important for the Twin Transition:
 - Strengthening resilience and open strategic autonomy in sectors critical for the twin transitions.
 - Stepping up a global approach to standard-setting to benefit from the EU's first mover advantage in competitive sustainability.

Net Zero Industry Act



- Part of the Green Deal Industrial Plan
- Goals:
 - Green Transition and Energy Security for EU industry
 - Development, manufacturing and installation of net-zero products and energy supply.
 - Less use of resources, more circularity, and more sustainable life cycles
- List of strategic net-zero technologies:
 - Solar photovoltaic and solar thermal technologies
 - Onshore wind and offshore renewable technologies
 - Battery/Storage technologies
 - Heat pumps and geothermal energy technologies
 - Electrolysers and fuel cells
 - Sustainable biogas/biomethane technologies
 - Carbon Capture and storage (CCS) technologies
 - Grid Technologies

Critical Raw Materials Act



- Reduce EU dependence on imported Critical Raw Materials needed for the Green Deal; facilitate permitting
- List of critical raw materials : 34 CRM (economic importance, supply risk)
- List of strategic raw materials: 16 Strategic raw materials (strategic technologies, global demand – for example rare earth)
- The Act sets benchmarks along so-called strategic raw materials value chain and for the diversification of the EU supplies. Commission proposal March (agreement by Council/EP expected for Nov).

Objectives

- at least 10% of the EU's annual consumption for extraction
- at least 40% of the EU's annual consumption for processing
- at least 15% of the EU's annual consumption for recycling
- no more than 65% of the EU's annual consumption from a single third country

The European Partnership on Metrology (EPM)

- EPM **brings together the measurement science community and stakeholders** to deliver on global challenges including health and climate, **support the European Green Deal**, and underpin innovation in industry through collaborative research.
- EPM **aims to support accelerating the transition towards a green, climate neutral and digital Europe**, as well as strengthening the resilience, competitiveness, and economic growth of the European industry.



What's next?

- **Metrology important for**
 - **Implementing the new Fit For 55 rules reducing GHG emissions**
 - **Keeping on track the twin green and digital transition for industry**
 - **promoting innovative clean technologies (for instance forthcoming Net Zero Industry Act)**
 - **improving energy and resources efficiency (for instance forthcoming Critical Raw Materials Act)**



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