

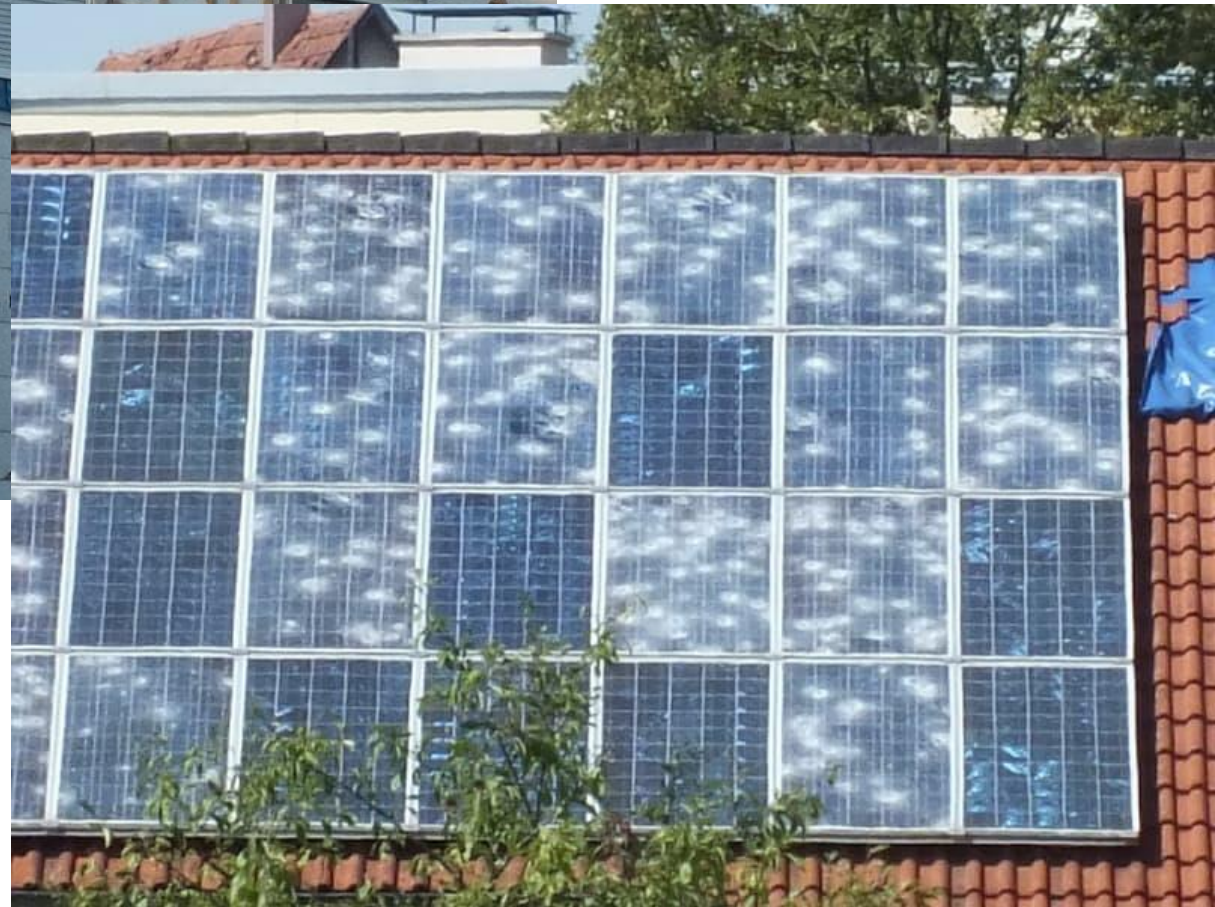
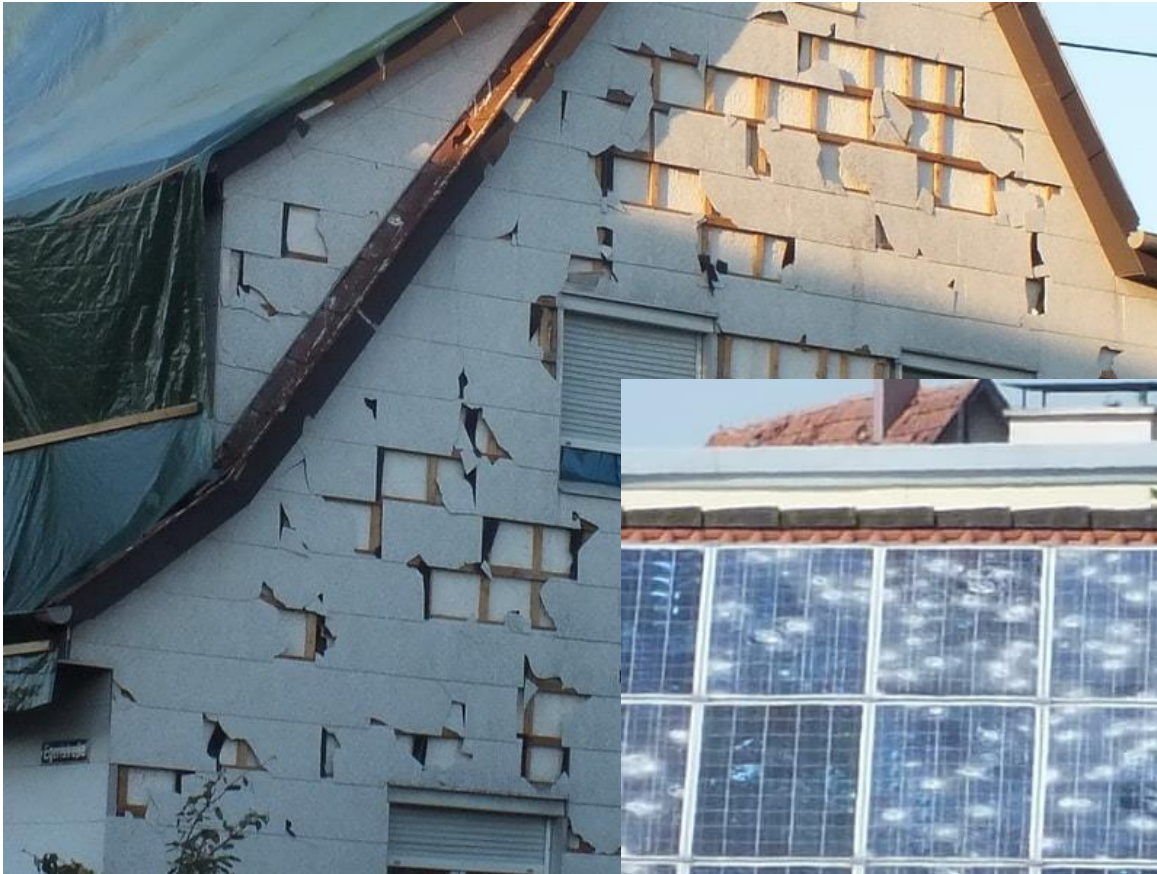
EU Policy on Climate Change: Buildings & Vehicles

Elena Višnar Malinovská
Head of Unit, Adaptation Unit,
DG Climate Action, European Commission

Bratislava, 19 November 2019



Hail damage in Germany, July 2013

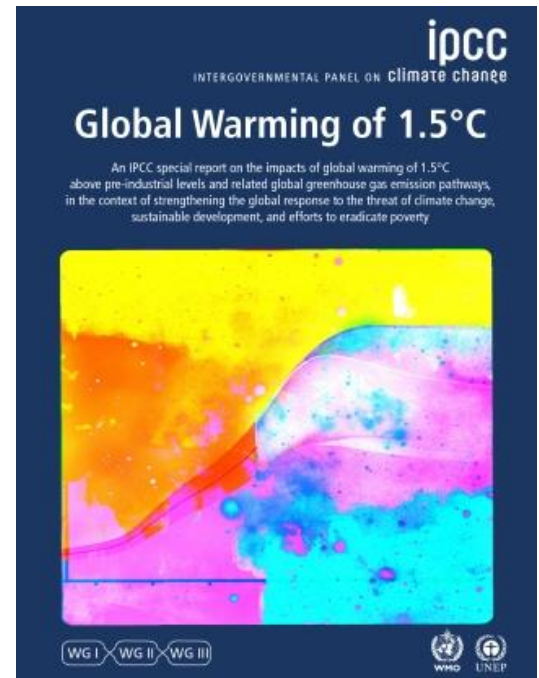
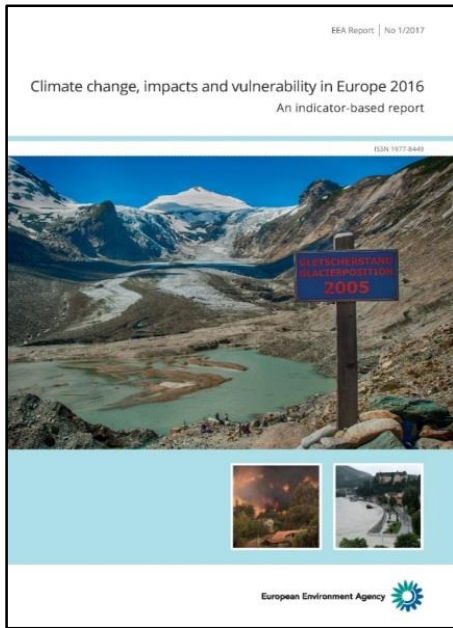


Three hailstorms within two months caused € 4,2 billion euros damage in buildings, vehicles, infrastructure and agriculture.



European Commission

Impacts of climate change



Atlantic region

- Increase in heavy precipitation events
- Increase in river flow
- Increasing risk of river and coastal flooding
- Increasing damage risk from winter storms
- Decrease in energy demand for heating
- Increase in multiple climatic hazards

Mountain regions

- Temperature rise larger than European average
- Decrease in glacier extent and volume
- Upward shift of plant and animal species
- High risk of species extinctions
- Increasing risk of forest pests
- Increasing risk from rock falls and landslides
- Changes in hydropower potential
- Decrease in ski tourism

Boreal region

- Increase in heavy precipitation events
- Decrease in snow, lake and river ice cover
- Increase in precipitation and river flows
- Increasing potential for forest growth and increasing risk of forest pests
- Increasing damage risk from winter storms
- Increase in crop yields
- Increase in energy demand for heating
- Increase in hydropower potential
- Increase in summer tourism

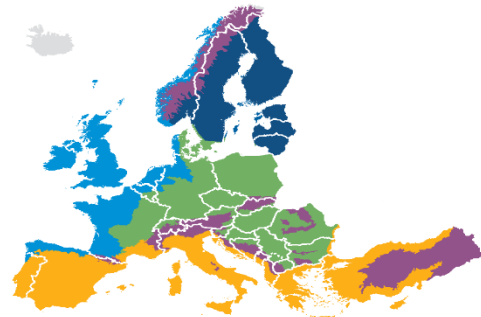
Continental region

- Increase in heat extremes
- Increase in summer precipitation
- Increasing risk of river floods
- Increasing risk of forest fires
- Decrease in economic value of forests
- Increase in energy demand for cooling

- Increase in sea surface temperatures
- Increase in ocean acidity
- Northward migration of marine species
- Risks and some opportunities for fisheries
- Changes in phytoplankton communities
- Increasing number of marine dead zones
- Increasing risk of water-borne diseases

Mediterranean region

- Large increase in heat extremes
- Decrease in precipitation and river flow
- Increasing risk of droughts
- Increasing risk of biodiversity loss
- Increasing risk of forest fires
- Increased competition between different water users
- Increasing water demand for agriculture
- Decrease in crop yields
- Increasing risks for livestock production
- Increase in mortality from heat waves
- Expansion of habitats for southern disease vectors
- Decreasing potential for energy production
- Increase in energy demand for cooling
- Decrease in summer tourism and potential increase in other seasons
- Increase in multiple climatic hazards
- Most economic sectors negatively affected
- High vulnerability to spillover effects of climate change from outside Europe



Dual challenge

1. We must sharply **cut greenhouse gas emissions** to prevent unmanageable impacts ('**mitigation**')
2. We must also **adapt to climate change** to increase society's resilience and manage unavoidable impacts ('**adaptation**')



2030 Climate and Energy Package



European Adaptation Strategy (2013)

Complementary and can be mutually reinforcing!

Context: the Clean Energy for All Europeans Package

THE RIGHT REGULATORY FRAMEWORK FOR POST – 2020



Energy Union Governance



Energy Efficiency Directive

- Binding 30% energy efficiency target for 2030;



Energy Efficiency (Energy Efficiency Directive, European Performance of Buildings Directive)



Renewables (Revised Renewable Energy Directive)



Ecodesign Working Plan 2016-2019

- List of new product groups;
- Contribution to circular economy objectives;



New Electricity Market Design (including Risk Preparedness)



Energy prices and costs report



Energy Performance of Buildings

- Supportive of renovation;
- Smarter – ICT, smart buildings;
- Simpler;

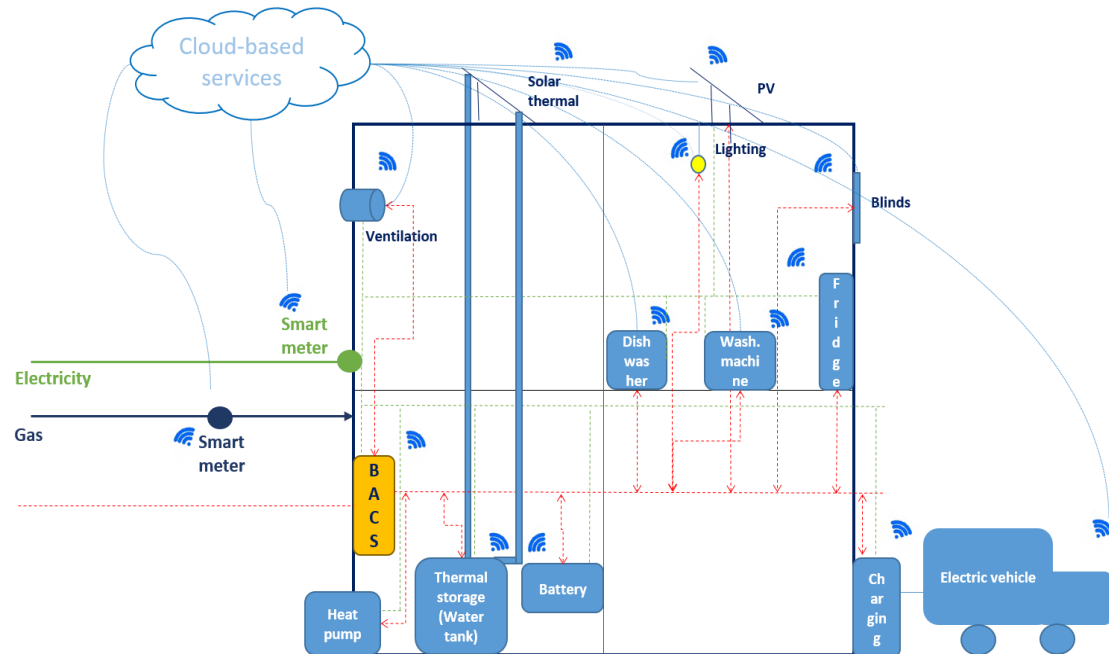
Smartness in buildings - a strategy for digitalisation

VISION

Smartness in buildings is an essential element in a decarbonised, renewable-intensive and more dynamic energy system in Europe with the aim of reaching the 2030 EU targets on energy efficiency and renewable energy, and of achieving a decarbonized EU building stock by 2050.

Objectives:

1. Achieve high energy efficiency by optimal operation;
2. Strengthen the role of demand side flexibility;
3. Ensure that the building user's needs are covered.



Main outcomes of the revision

A STRENGTHENED DIRECTIVE

Smart -

supporting ICT,
smart building
technologies and e-
mobility

- Stronger long term renovation strategies for Member States, aiming at decarbonisation by 2050 and with a solid financial component.
- A Smart Readiness Indicator for buildings.
- Targeted support to e-mobility infrastructure deployment in buildings' car parks
- Reinforcement of building automation: additional requirements on room temperature level controls, building automation and controls and enhanced consideration of typical operating conditions.
- Inspections on heating & air-conditioning systems are updated
- Stronger link between financial measures in the Member States and energy efficiency improvements in the renovation of buildings

Supportive
of building
renovation

Action 5: Climate-ADAPT

ABOUT ▾

EU POLICY ▾

COUNTRIES, TRANSNATIONAL REGIONS, CITIES ▾

KNOWLEDGE ▾

NETWORKS

Home ▸ [EU adaptation policy](#) ▸ [EU sector policies](#) ▸ **Buildings**

Buildings



Image credits: 贝莉儿 NG on [Unsplash](#)

Buildings can be vulnerable to climate change. In the future there may be an increase in the risk of collapse, declining state and significant loss of value as a result of more storms, snow or subsidence damage, water encroachment, deteriorating indoor climate and reduced building lifetime. The European Commission aims to increase the climate resilience of infrastructure, including buildings. New and existing buildings need to be assessed for resilience to current risks and future climate changes, and planned or upgraded accordingly. A key policy used to support the resilience of buildings is the Cohesion Policy (also referred to as Regional Policy). In addition, the European Commission's [EU strategy on adaptation to climate change](#) includes a [Staff Working](#)

Content in Climate-ADAPT database

- » Publications and reports (131)
- » Information portals (37)
- » Indicators (3)
- » Guidance (15)
- » Tools (8)
- » Research and knowledge projects (97)
- » Adaptation options (10)
- » Case studies (14)
- » Organisations (19)



Share your
information

Action 7: Ensuring more resilient infrastructure

Mainstreaming adaptation into European standardisation

Execution of Mandate M/526 to revise infrastructure standards (energy, transport, buildings/construction, ICT)

- CEN Guide 32 + tailored guidance for infrastructure standards
- 2nd phase: adapting the 13 standards identified in 1st phase
 - Among them: building standards on
 - Thermal performance EN 15927
 - Ventilation EN 16798
 - Sustainability of Construction Works EN 16309
 - Energy Performance EN 52000
- Possible extension to other standards (e.g. green roofs)

Climate Change and Major Projects in the 2014-2020 programming period



European
Commission



Climate Change and Major Projects

Outline of the climate change related requirements and guidance for major projects in the 2014-2020 programming period

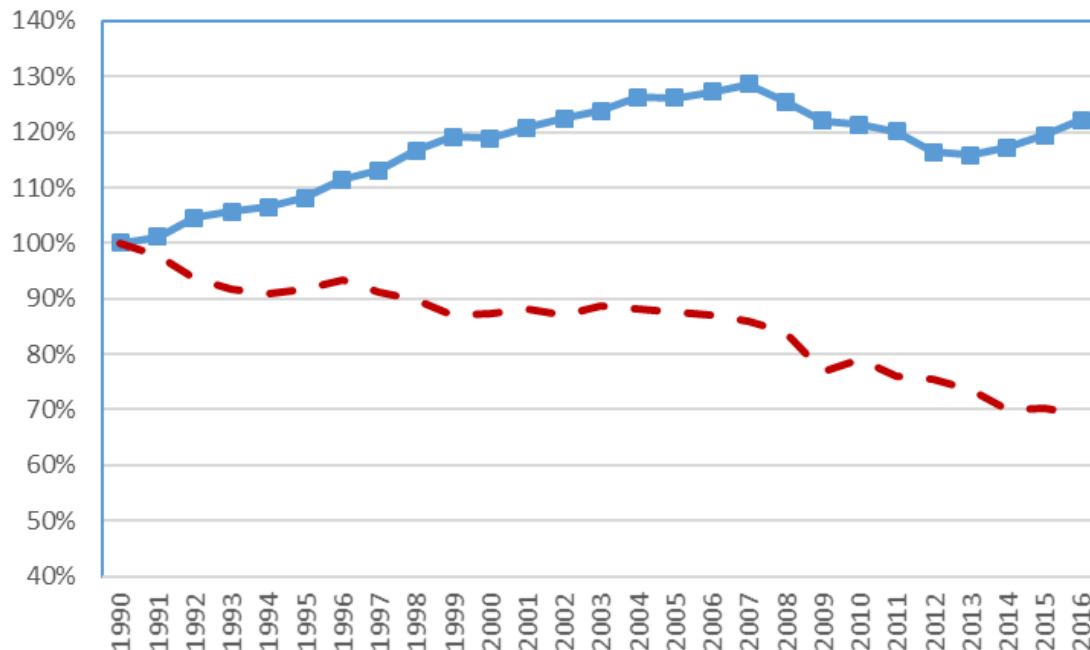
Ensuring resilience to the adverse impacts of climate change and reducing the emission of greenhouse gases

Climate Action

- Guideline including a methodology for project-level climate risk assessment for MFF-funded projects
- New version under preparation
- In the next financial period, climate-proofing requirement not limited to major projects
- E.g. constructions or renovations of building blocks or larger buildings would have to be climate-proofed

Paris Agreement – transport to further decarbonize

GHG emissions, 1990=100%



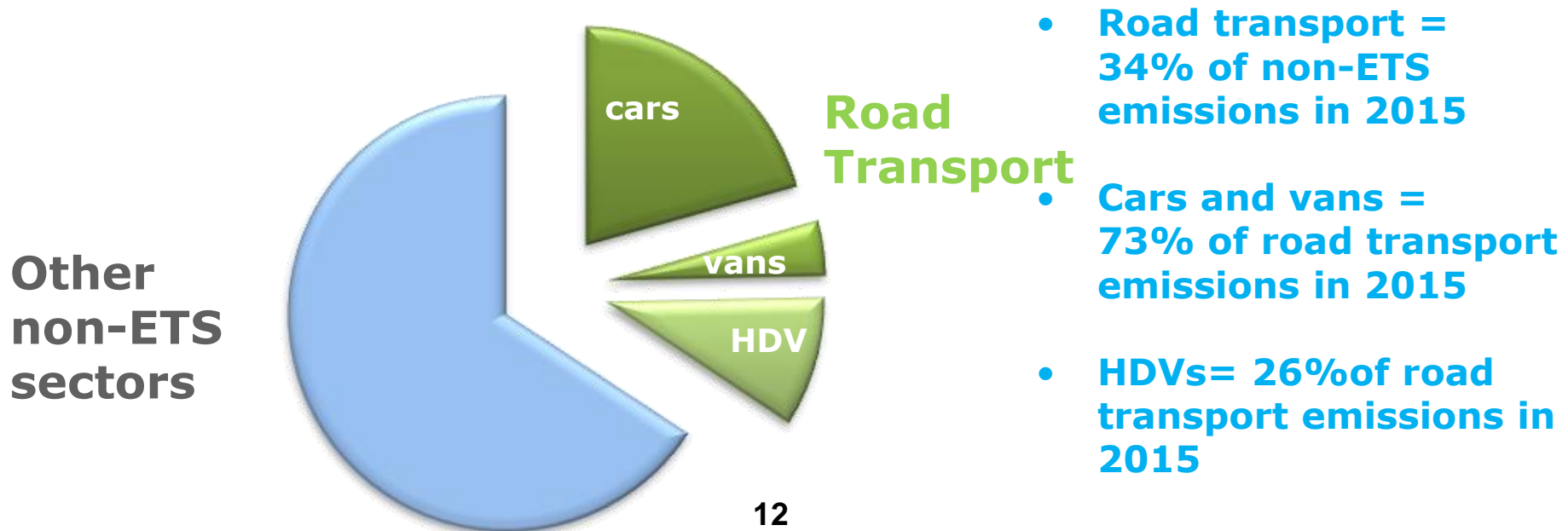
Road transport =
21% of total EU
emissions

Road transport ■ ; Other sectors ---

CO₂ Emission Trends

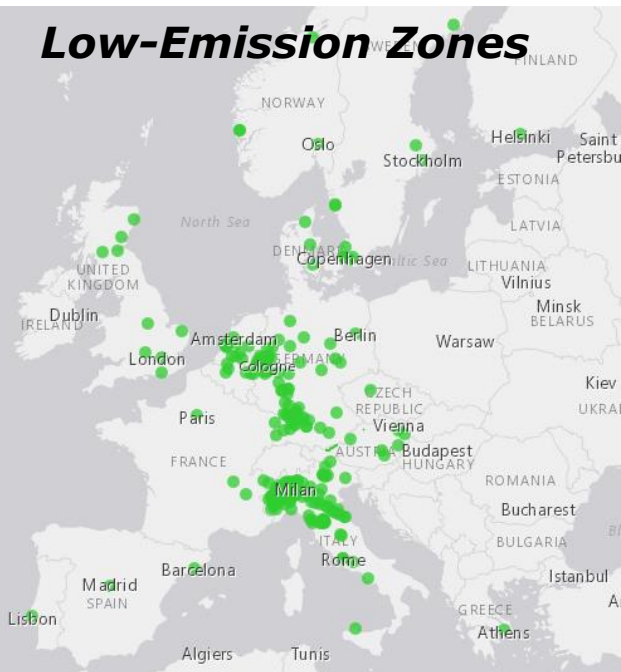
Road transport as part of Effort Sharing sectors

2015 Emissions in non-ETS sectors



Tackling urban air pollution

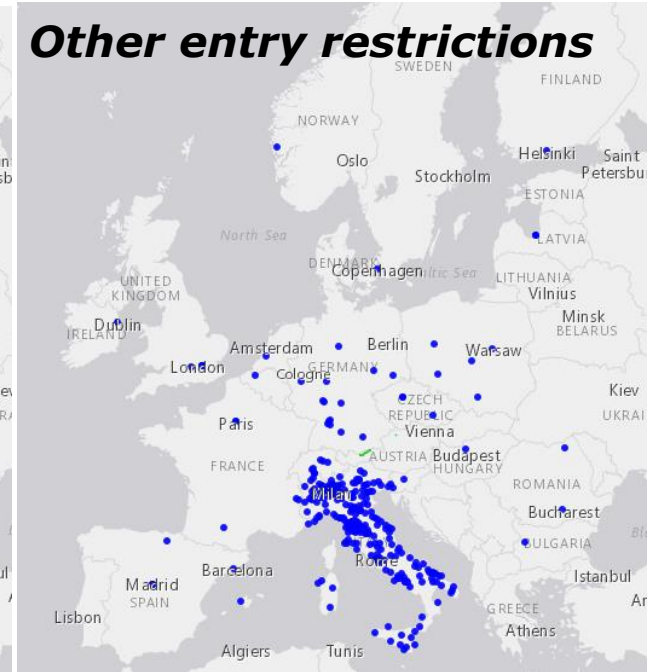
Low-Emission Zones



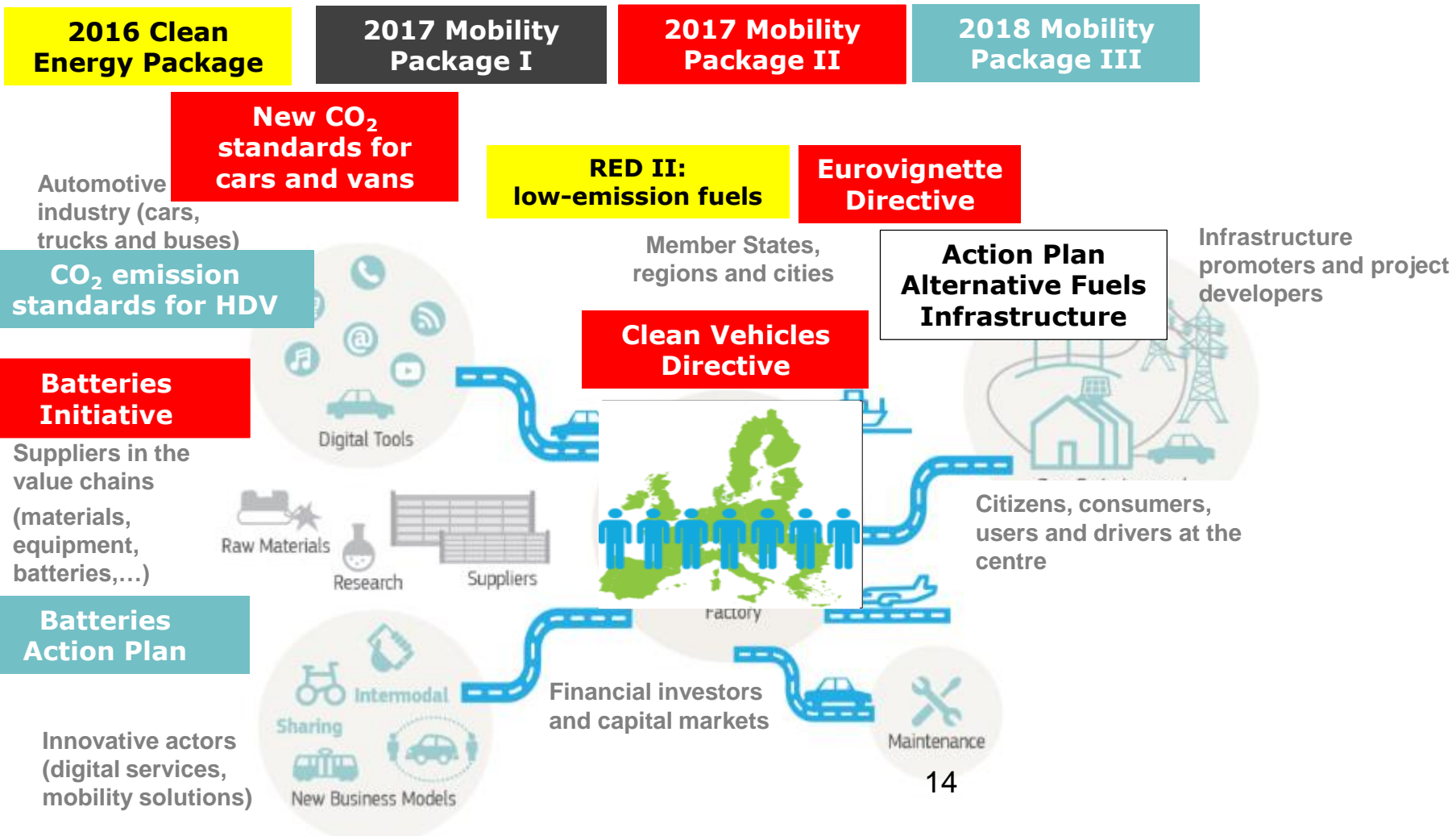
Urban Road Tolls



Other entry restrictions



2030 framework: integrated policy proposals



Post 2020 CO₂ emission standards for cars/vans

- **EU fleet-wide targets:** as % reduction compared to 2021 starting point
 - 2025: cars: -15%, vans: -15%
 - 2030: cars: -37.5%, vans: -31%
- **Zero and low emission vehicles (ZLEV) incentive:** Bonus only crediting system
 - 1% exceedance = 1% target bonus; 5% cap
- **ZLEV benchmarks (% of ZLEV in manufacturer's fleet)**
 - cars: 15% (2025) – 35% (2030) vans: 15% (2025) – 30% (2030)
- **Governance**
 - Real-world emission monitoring and reporting
 - In-service verification
- **Review 2023**

CO₂ emission standards for HDV

- **Targets** (as % reduction compared to 2019 reference)
 - 2025: -15%
 - 2030: -30%
- **ZLEV incentives**
 - Super-credits until 2024 subject to a cap
 - One-way/bonus crediting system based on a 2% benchmark from 2025 onwards
- **Governance**
 - Real world emission monitoring and reporting
 - In-service verification
- **Review 2022**

Expected key benefits new CO2 emission standards

1. 24% reduction of **GHG emissions** from road transport (cars, vans and trucks) in 2030 compared to 2005
2. **Savings** for consumers and transport operators
3. Positive impacts on **economy-wide employment**
4. Signal for investors in **refueling and recharging infrastructure**

Action Plan on Batteries

Objective: Develop a competitive and sustainable batteries value chain in Europe:

Decrease dependency on Asian suppliers

Acquire technological leadership

Capture part of the EU market (200 GWh by 2030) and also the world market (600 GWh)

Actions: Secure access to raw materials, financial support, R&D, skills, adequate legislative framework (recyclability, consistency with other legislations), sustainability, recharging network...

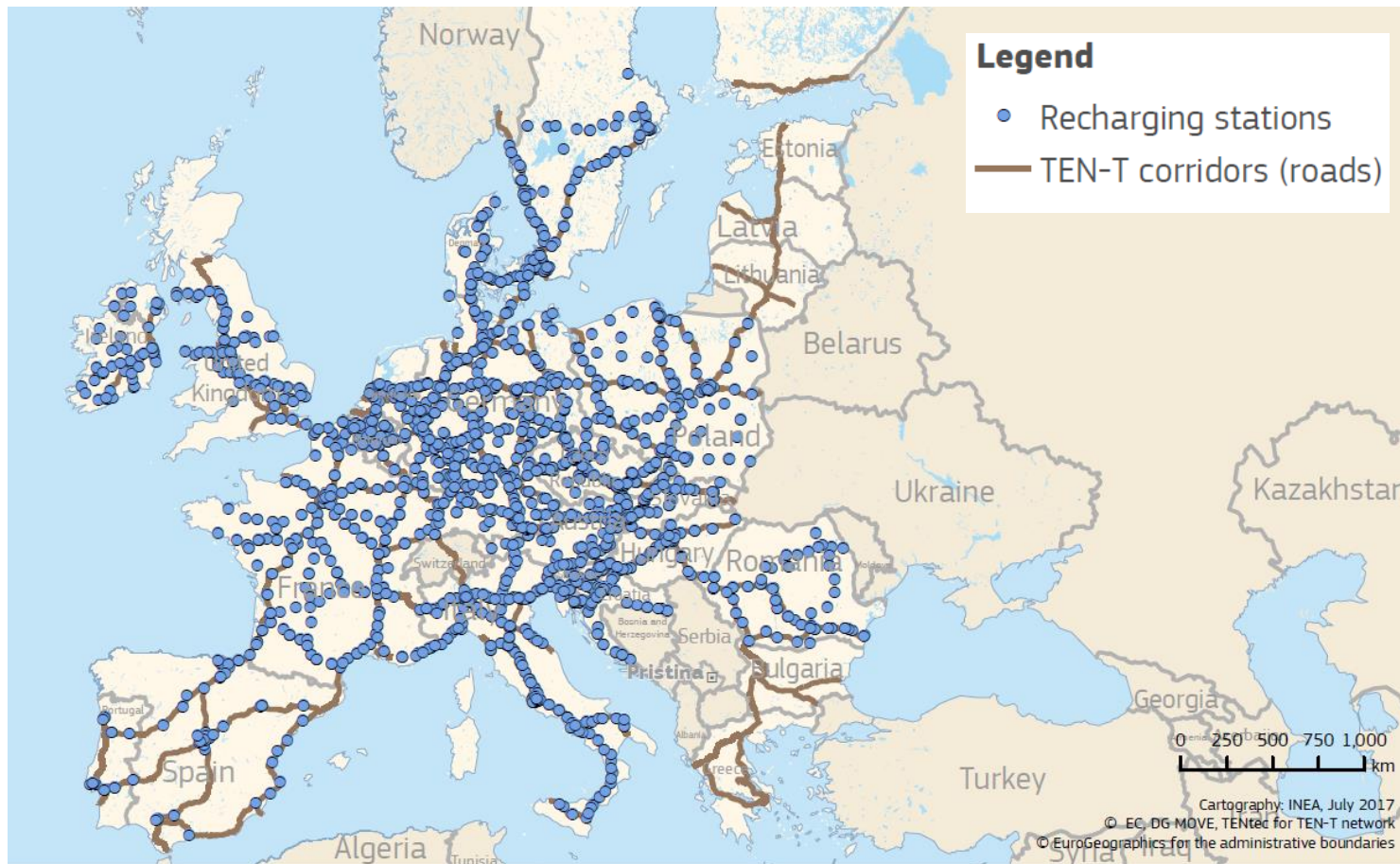
Clean Vehicles Directive

- The general objective of this initiative is to accelerate the public procurement of clean vehicles in the Union
- applies to contracts for the purchase, lease, rent or hire-purchase of road transport vehicles
- Definition of Clean Vehicle:
 - Cars 25g CO₂/km in 2025(+ air pollution RDE limit) , 0g/km in 2030
 - Busses with alternative fuels (Electricity, hydrogen, natural gas including CNG, LNG, biomethane)
- Minimum procurement targets
differentiated by GDP per capita and population density

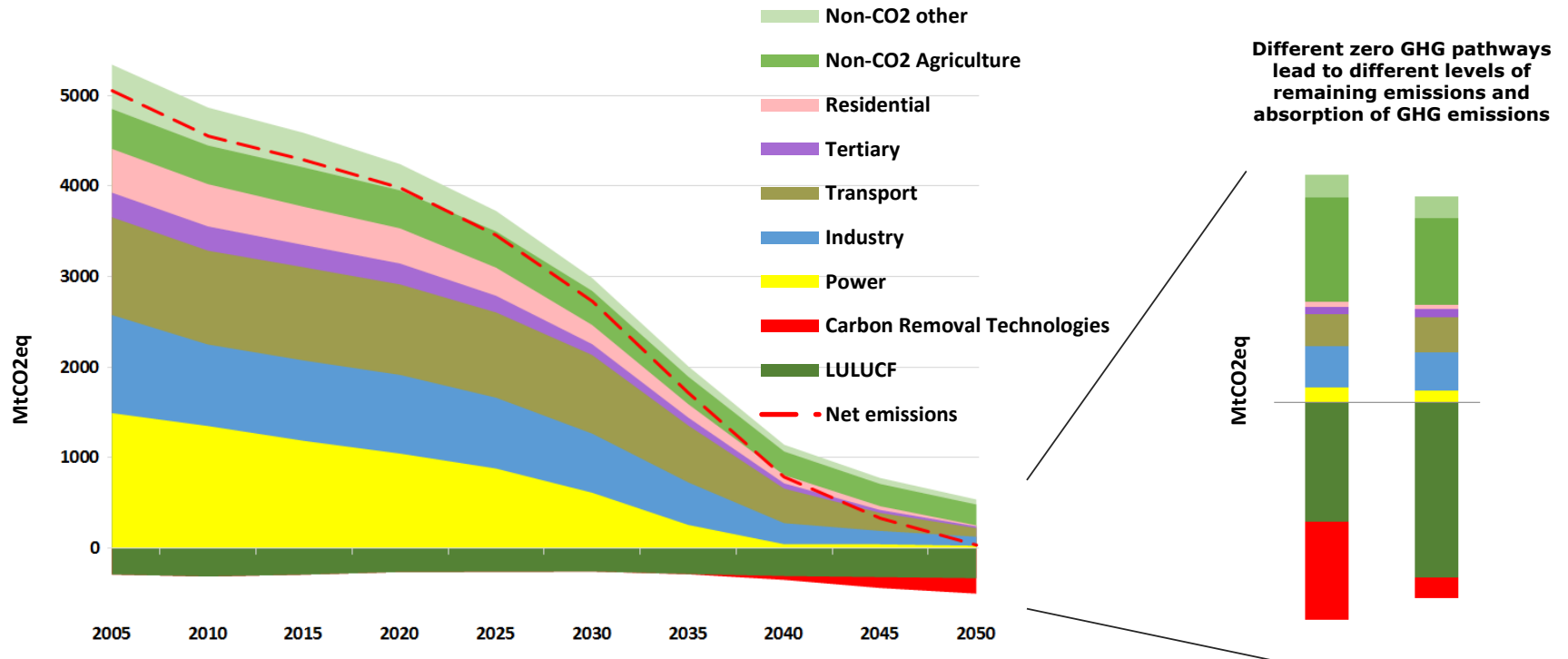


European
Commission

Action Plan Alternative fuels – Financing EV infrastructure along EU highways



Outlook to 2050: A European strategic long term vision for a prosperous, modern, competitive and climate neutral economy





Thank you!

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Read our book "EU Climate Policy Explained"

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