

30% CO₂-reduction in transport by 2030 in EU

Policies to gradually eliminate fossil fuels by 2050 and to direct all innovation and investment to renewable energy in transport

The logo for Studio Gear Up is a dark brown triangle pointing to the right. Inside the triangle, the words "studio", "gear", and "up" are stacked vertically in a white, lowercase, sans-serif font.

studio
gear
up

Eric van den Heuvel

4 March 2020

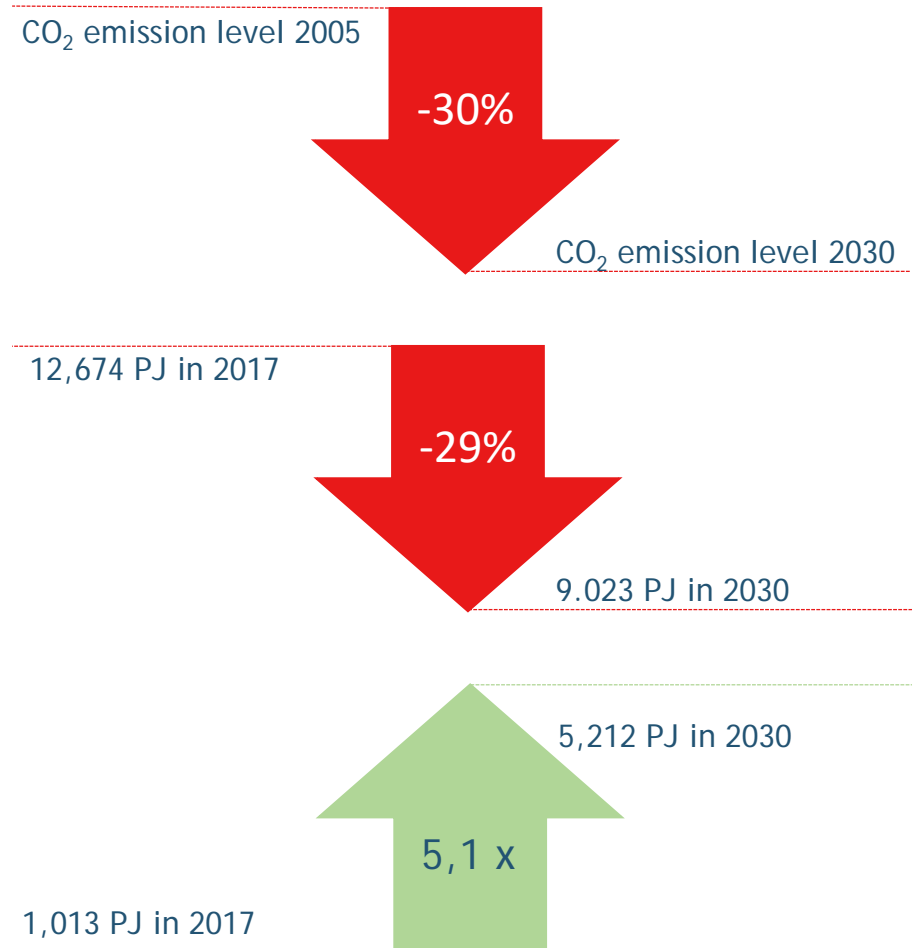
3rd EU-India conference on Advanced Biofuels

Key take-away messages

Effort Sharing Regulation
(for non-EU-ETS sectors)

Resulting impact on fossil fuel use

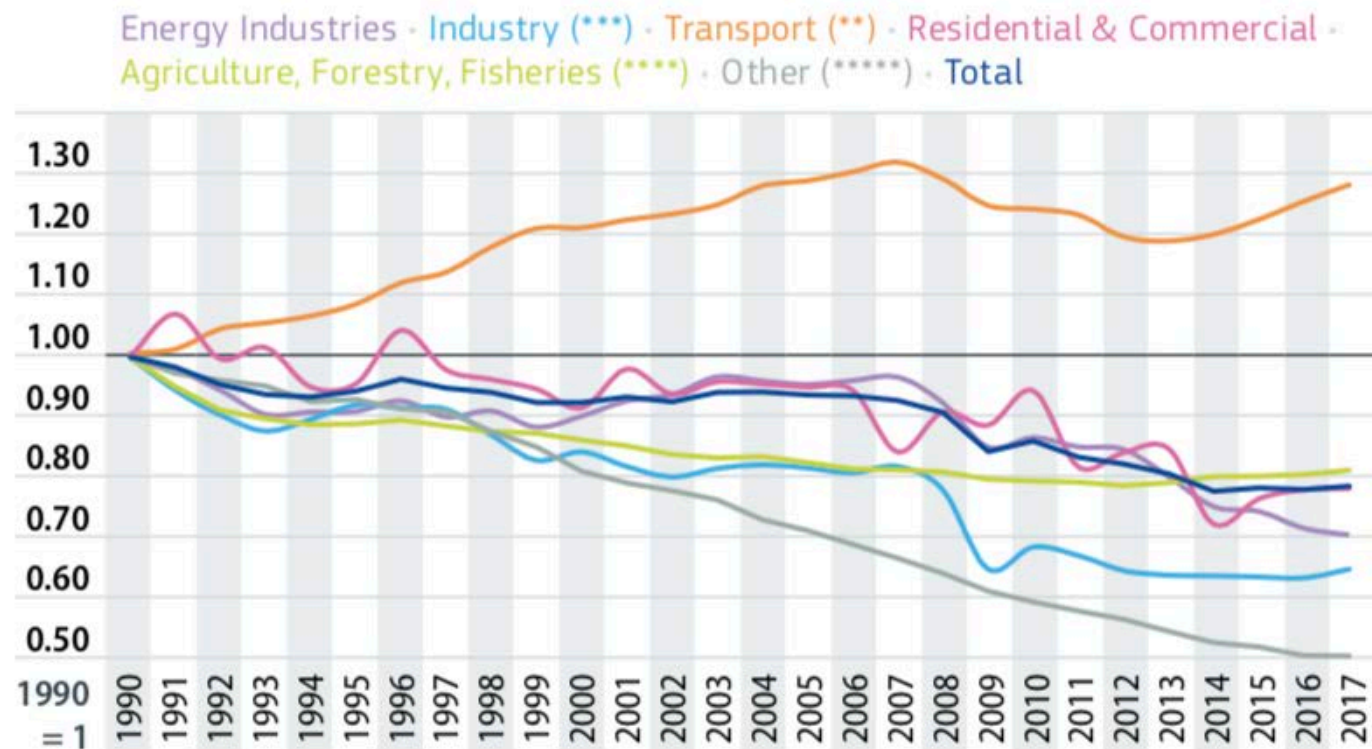
Required share of renewable energy



EU climate targets and RE targets for transport

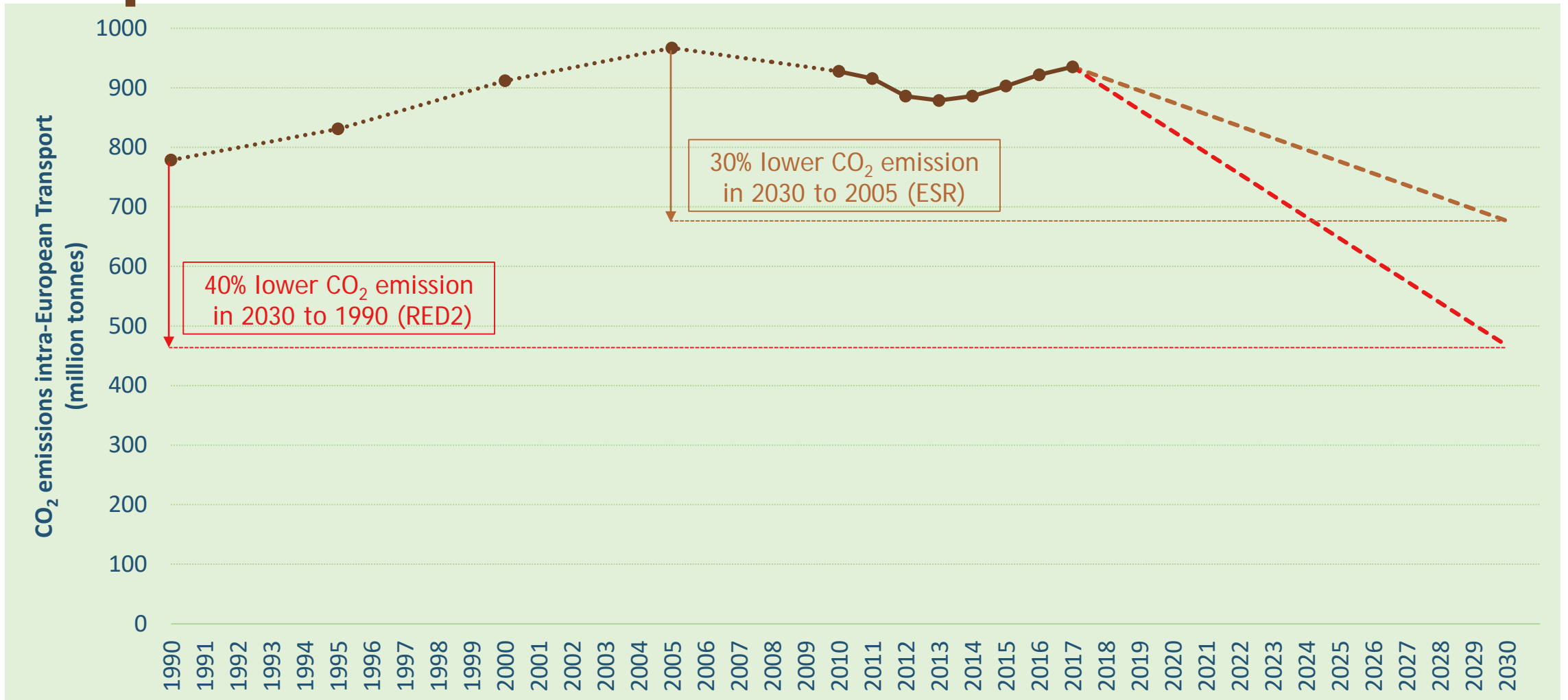
- Targets **Renewable Energy Directive** for 2021-2030 period:
 - > 32% renewable energy in final energy use
 - 40% lower CO₂ emissions than in 1990
 - At least 14% renewable energy in transport
- Target in **Effort Sharing Regulation**:
 - 30% lower CO₂ emissions compared to 2005
 - Sectors concerned: transport, agriculture, waste processing, built environment, non-ETS industry

Development of CO₂ emissions in EU

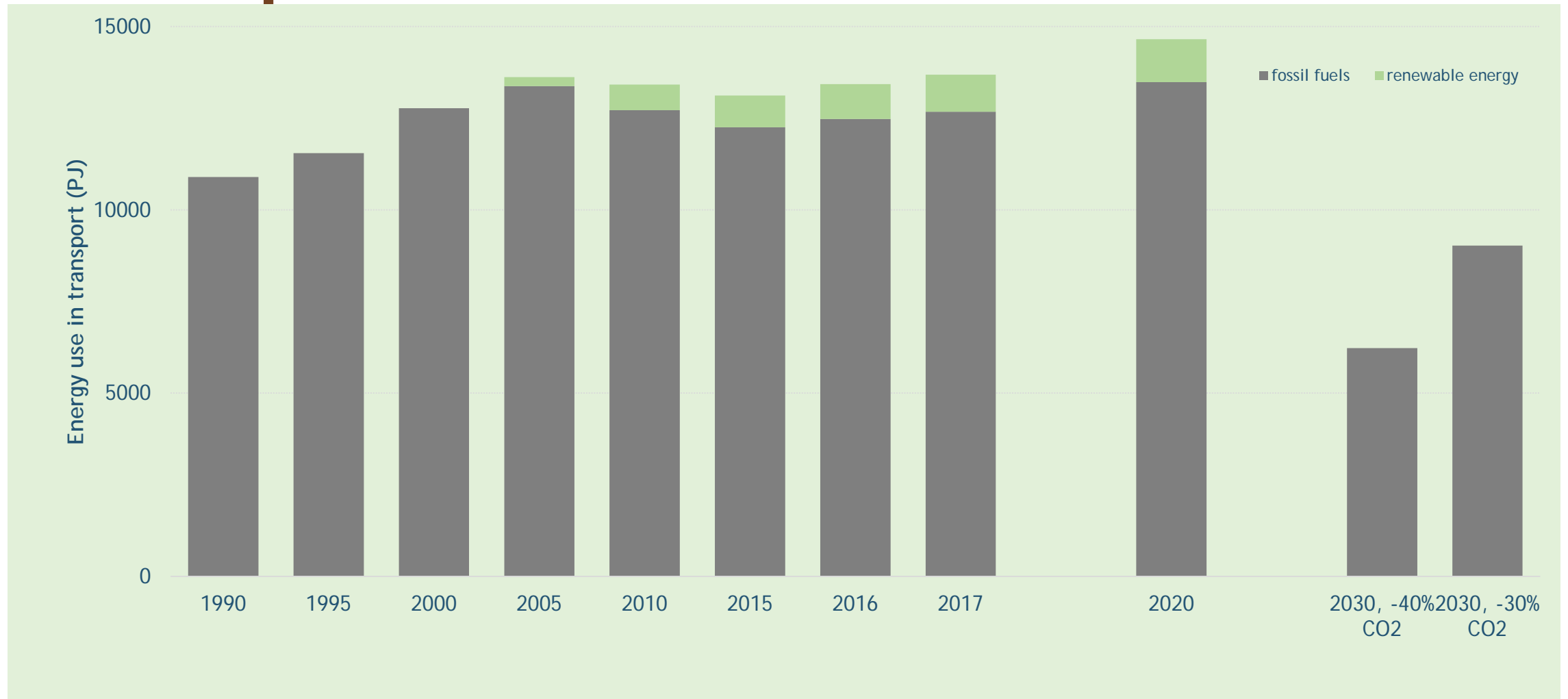


- Notes:** (*) Excluding LULUCF (Land Use, Land-Use Change and Forestry) emissions and international maritime, including international aviation and indirect CO₂.
- (**) Excluding international maritime (international traffic departing from the EU), including international aviation.
- (***) Emissions from Manufacturing and Construction, Industrial Processes and Product Use.
- (****) Emissions from Fuel Combustion and other Emissions from Agriculture.
- (*****) Emissions from Fuel Combustion in Other (Not elsewhere specified), Fugitive Emissions from Fuels, Waste, Indirect CO₂ and Other.

Development of CO₂ emissions in EU transport sector



Energy consumption development in EU transport



Based on EC, 2019, Pocketbook Transport in Figures, EU 2016 Reference Scenario

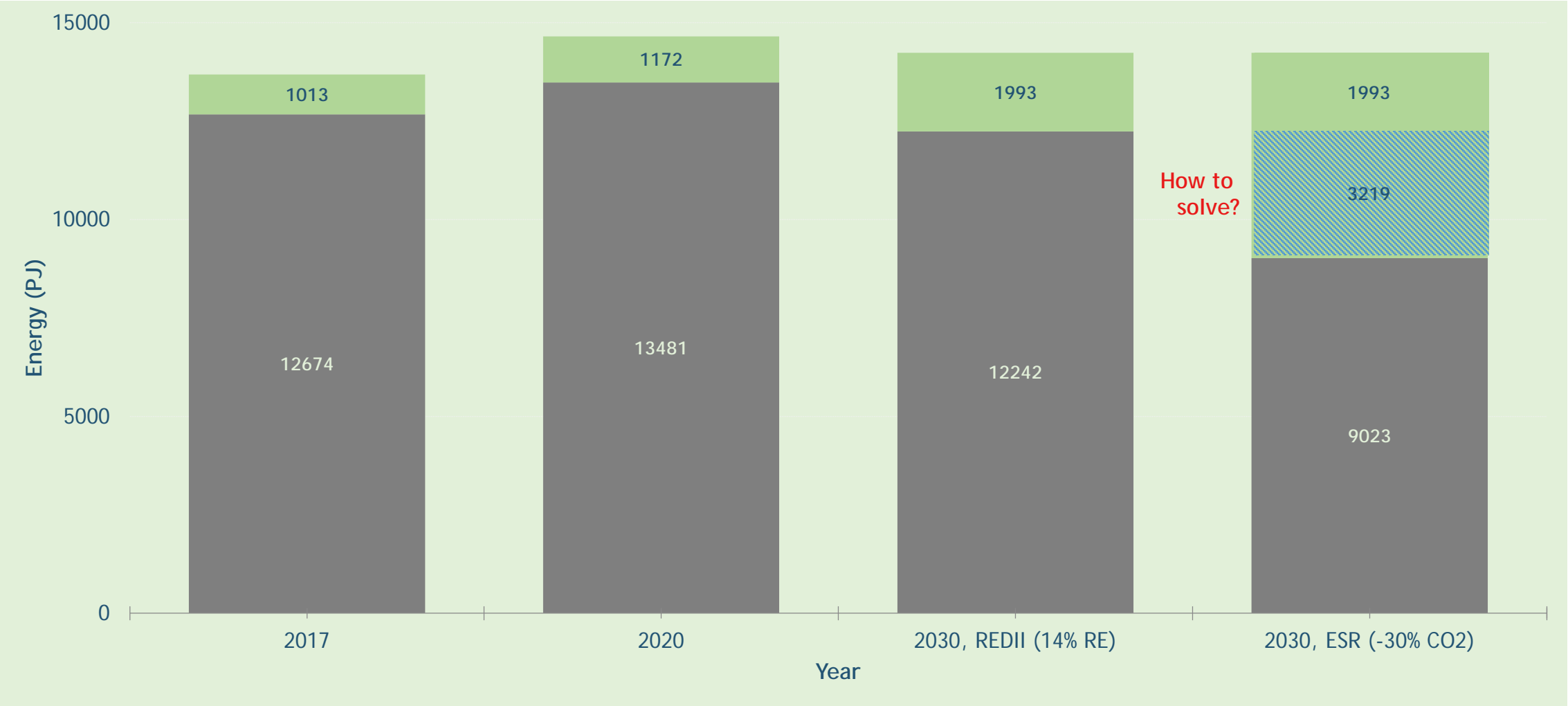
RED2 transport goals fall short to reach ESR targets



Based on EC, 2019, Pocketbook Transport in Figures, EU 2016 Reference Scenario



Share of fossil and renewable energy under existing and assumed policies



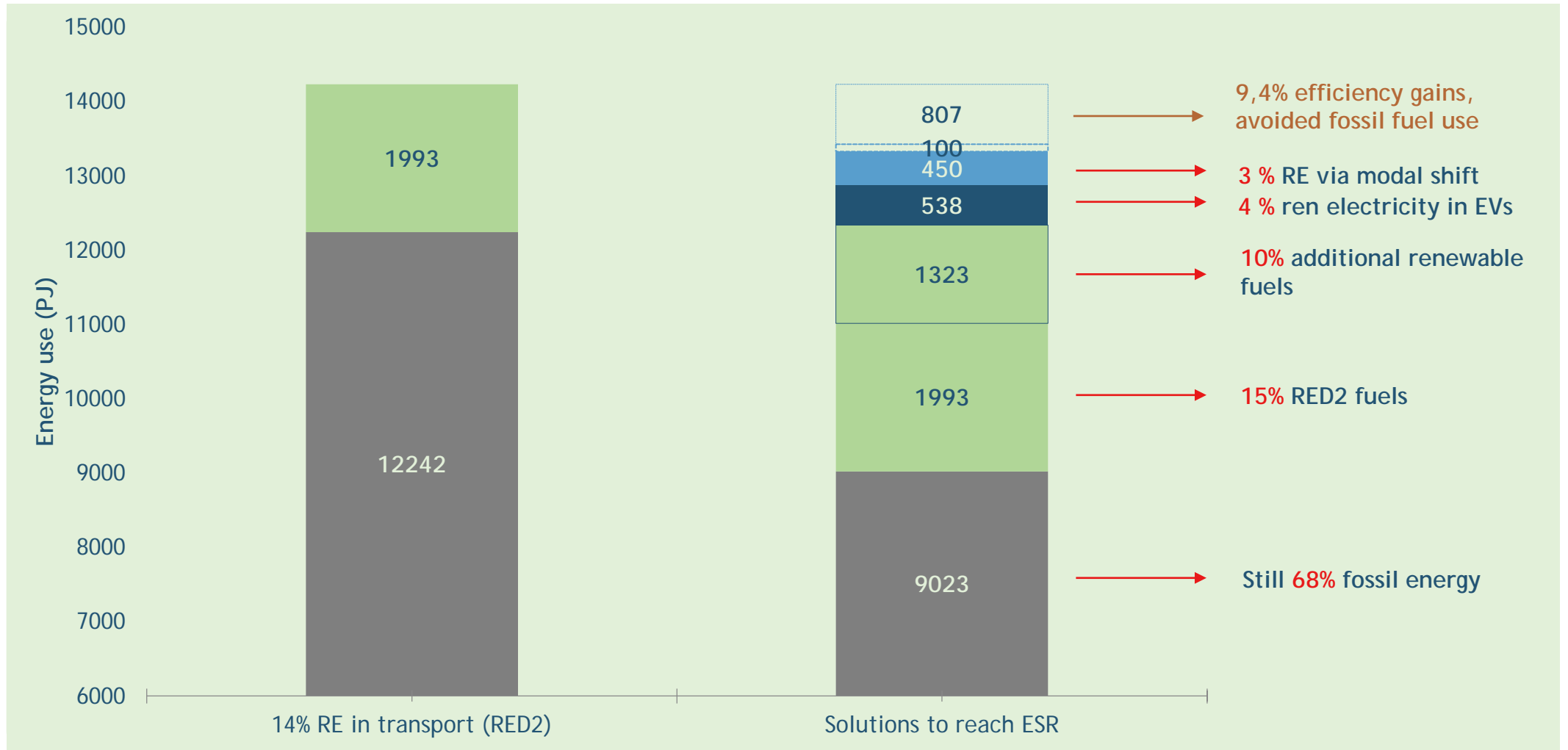
Based on EC, 2019, Pocketbook Transport in Figures, EU 2016 Reference Scenario



Achieving Effort Sharing Regulation, building on RED2

RED II - deployment renewable fuels	14% share of renewable energy in transport	1,993 PJ
Electric Mobility	Assumption: 260 million passenger cars in EU, share EV in 2030: 23% (IEA): 60 million	538 PJ
Energy Efficiency	Efficiency gains from EV use (807 PJ) + logistics optimisations, speed reduction on highways (100 PJ)	907 PJ
Model shift in personal mobility	Promotion of public transport and 'unpowered' mobility (especially in urban areas)	450 PJ
Renewable energy carriers	Additional volume needed in legacy fleet park on top of REDII volumes	1,323 PJ

How does this work out?



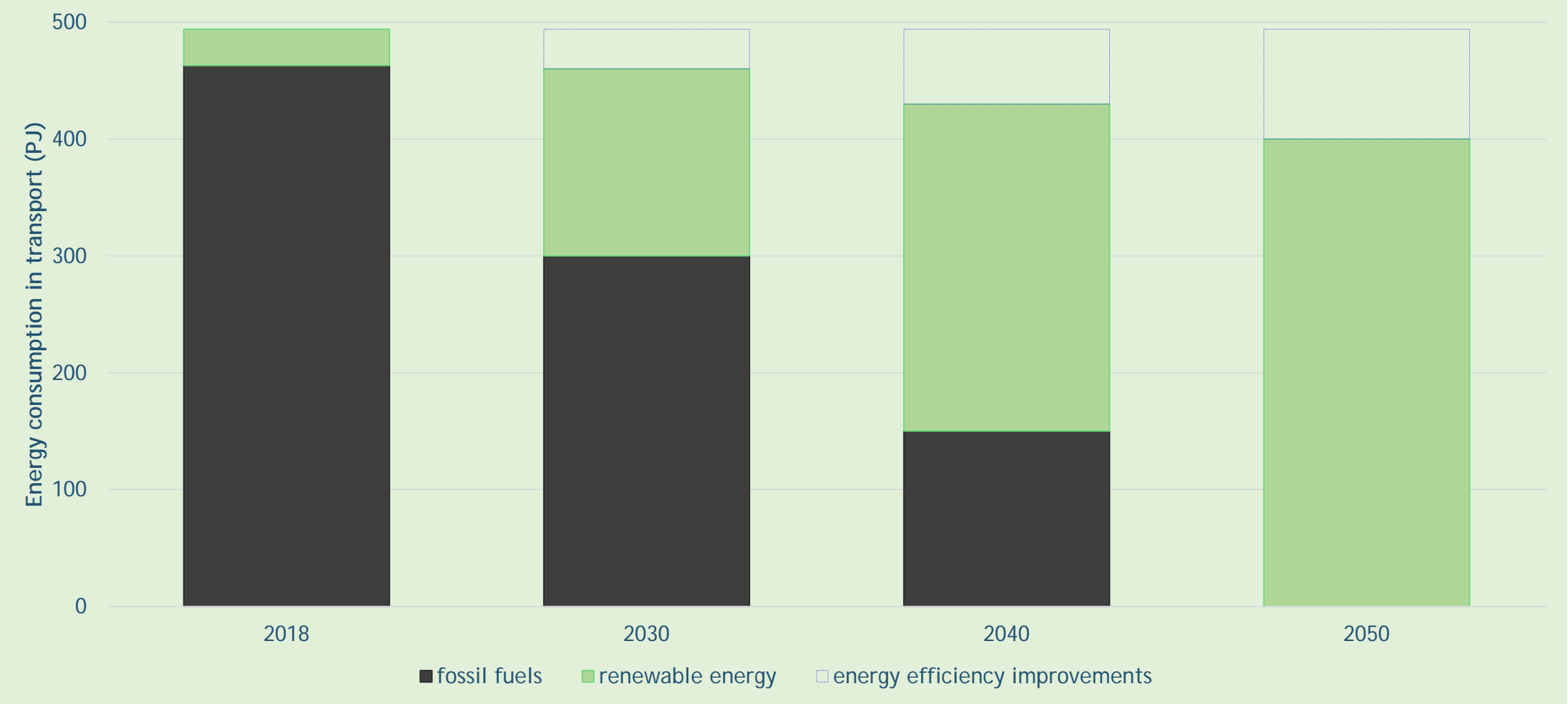
Renewable energy in transport in coming decade:



Which policies are needed to make this happen?

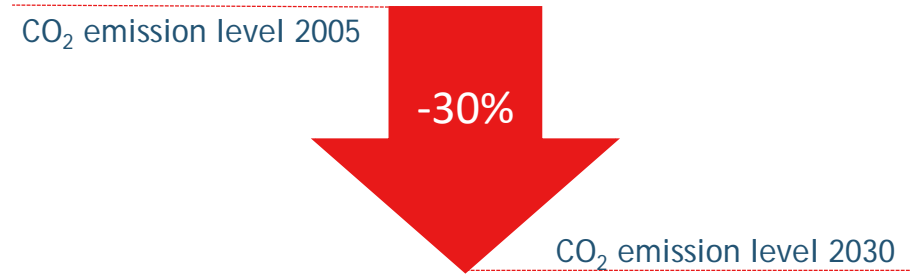
- Technology neutral policies that steer on the outcome: lower CO₂-emissions
- Well-to wheel approach to avoid 'leakage'
- No policies that prescribe the approach to follow
- Set clear boundary conditions for the level of sustainability performance and give preference for the better performing options
- Targets for share of renewable energy may set a too low pace.
- Instead set volumetric and over years declining limits for the share of fossil. This directs innovation and investments to a wide portfolio of renewable options and gives long term clarity
- Supportive measure to this approach is a tax based on carbon intensity

Limit fossil fuel in 2030 to max 2/3rd of current level:

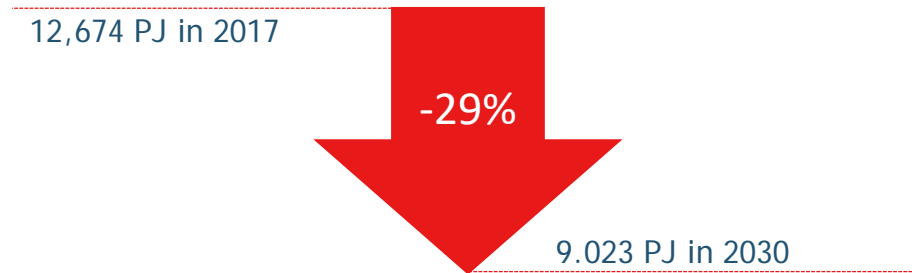


To conclude for the coming decade

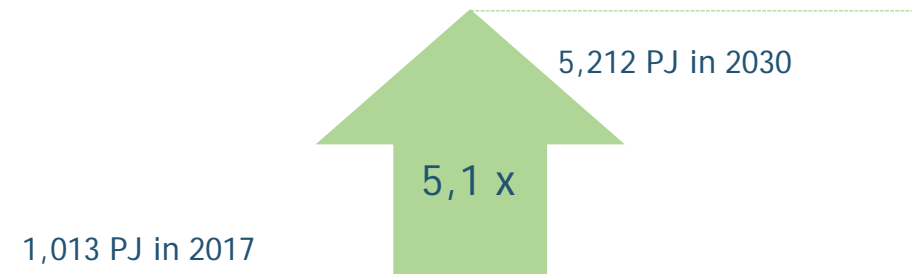
Effort Sharing Regulation
(for non-EU-ETS sectors)



Resulting impact on fossil fuel use



Required share of renewable energy



To conclude for the coming decade

- Effort Sharing Regulation requires more ambition than RED2
- The share of renewable energy in transport must reach around 30% of total energy use
- This equals a 5-fold increase, compared to 2017 level of renewables
- To reach Effort Sharing Directive, in coming decade around 67% of renewable fuels are needed - investments in new production facilities need to ramp up.
- Introduction of Electric Vehicles needs to accelerate too, to reach around 25% share in passenger car market.
- Energy-wise spoken, it's contribution still remains moderate
- Most impactful policy: set gradually decreasing limits on fossil fuel use

More information:

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Report:

CO₂ reductions in the transport sector in the EU28

The need for renewable fuels to achieve
2030-targets



February 2020