Securing Energy Efficiency to Secure the Energy Union

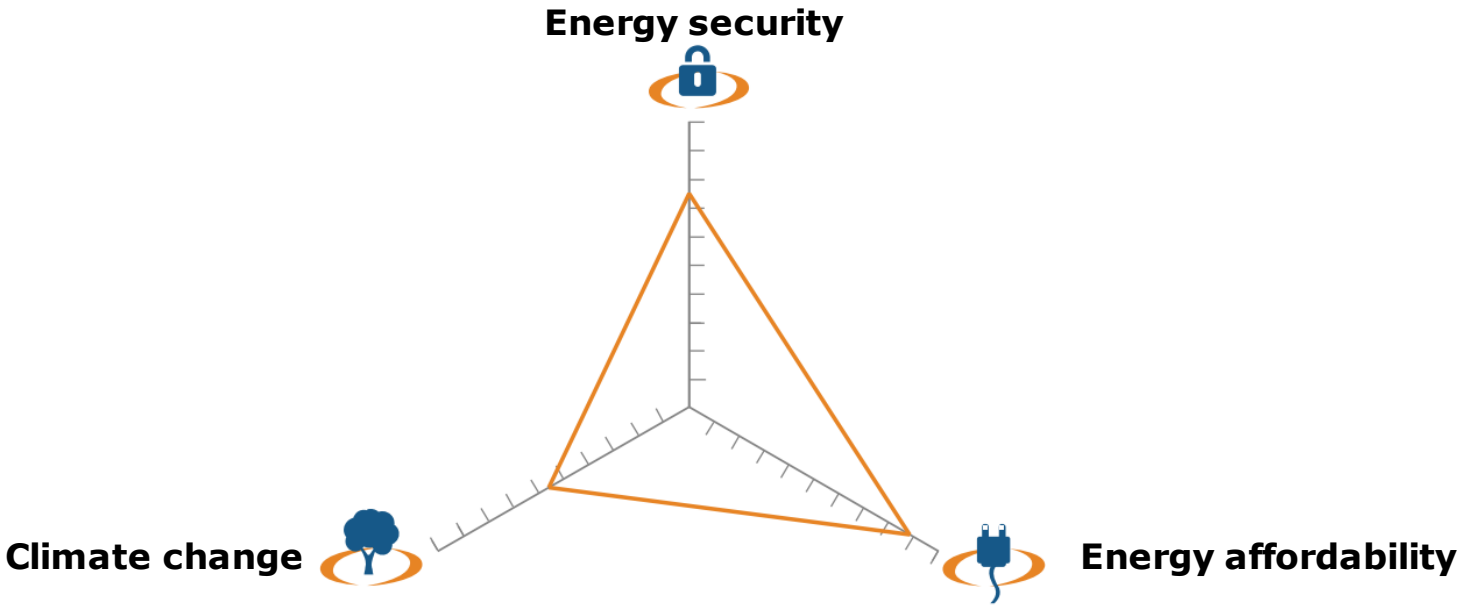


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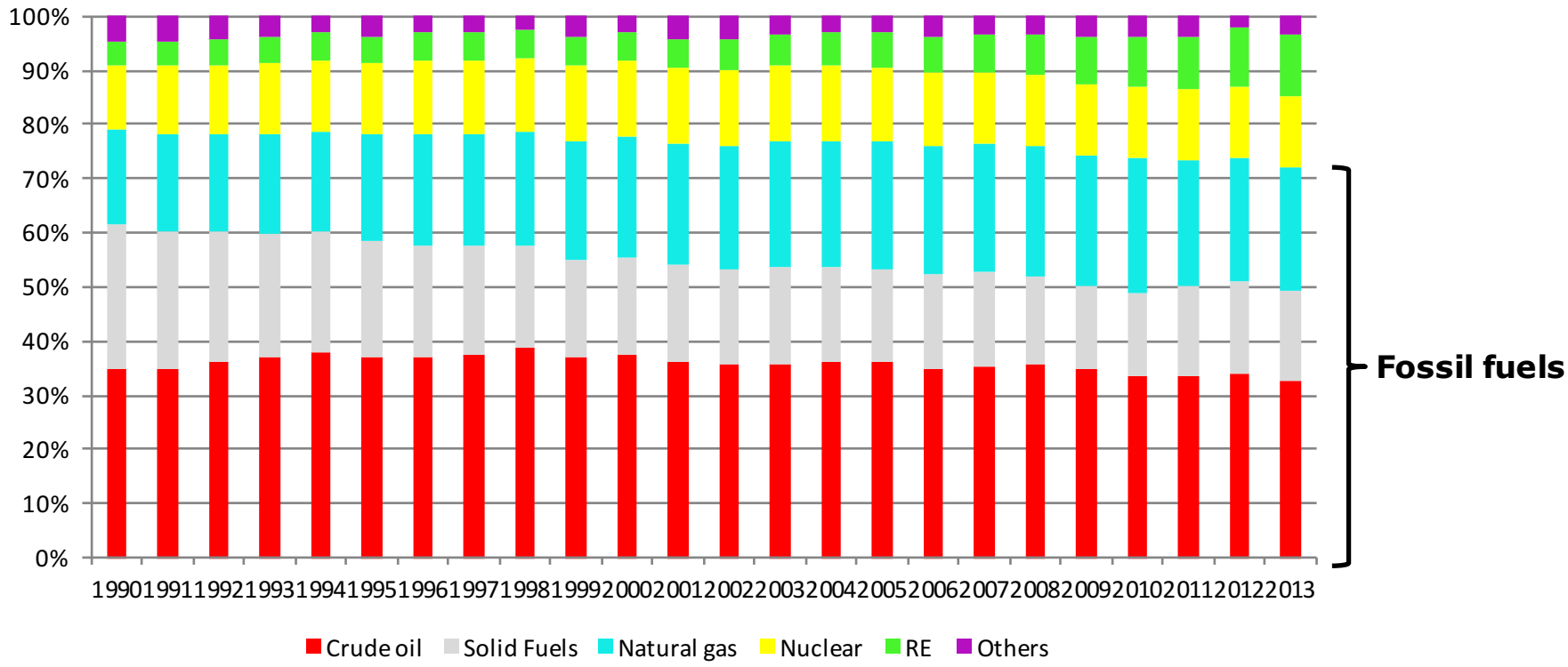
Yamina Saheb
Heinz Ossenbrink

Serving society
Stimulating innovation
Supporting legislation

Does energy efficiency reduce the size of the energy trilemma?



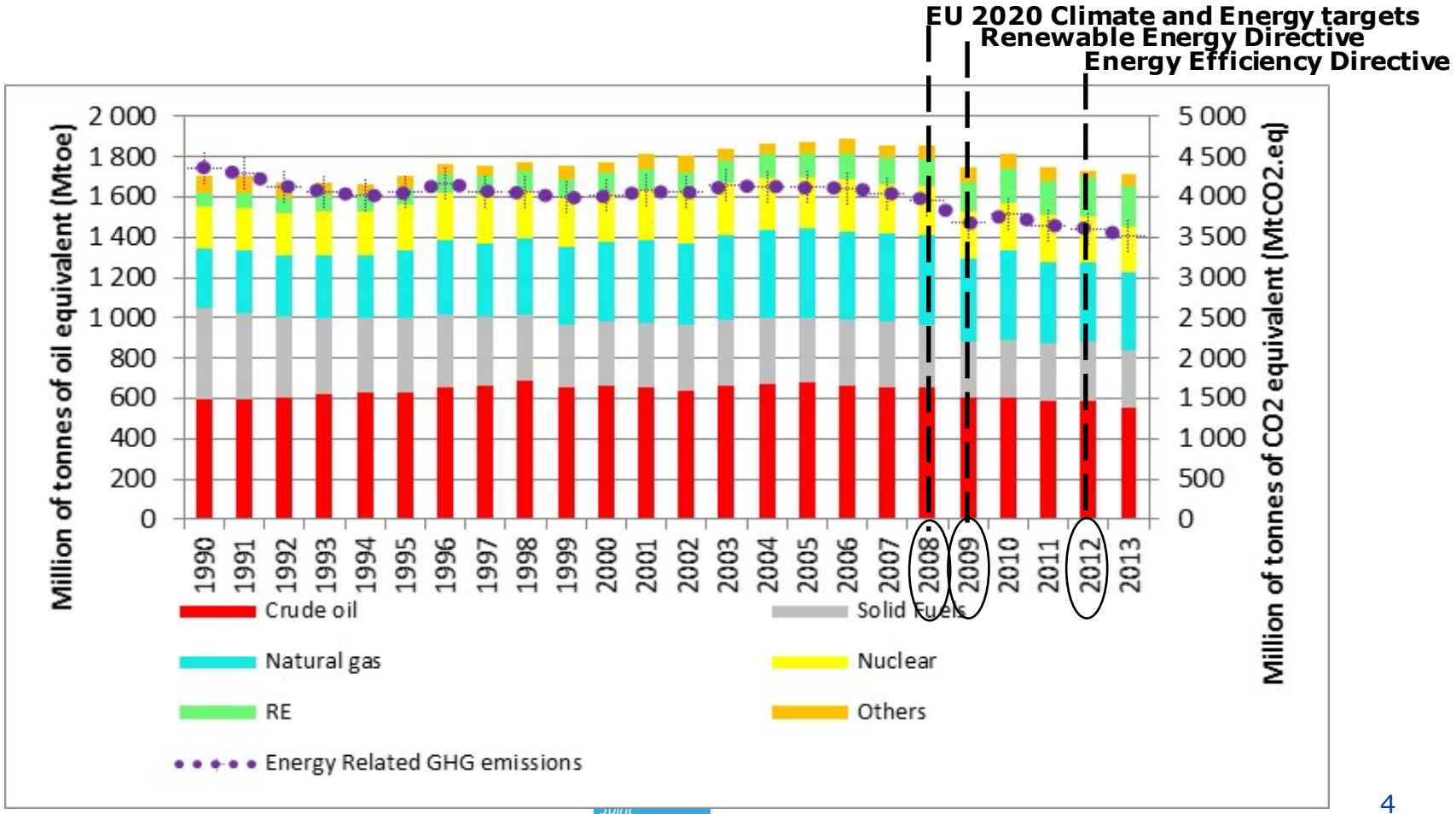
Fossil fuels accounted for 72% of the EU primary energy mix in 2013, six percentage points less than in 1990



26th August 2015

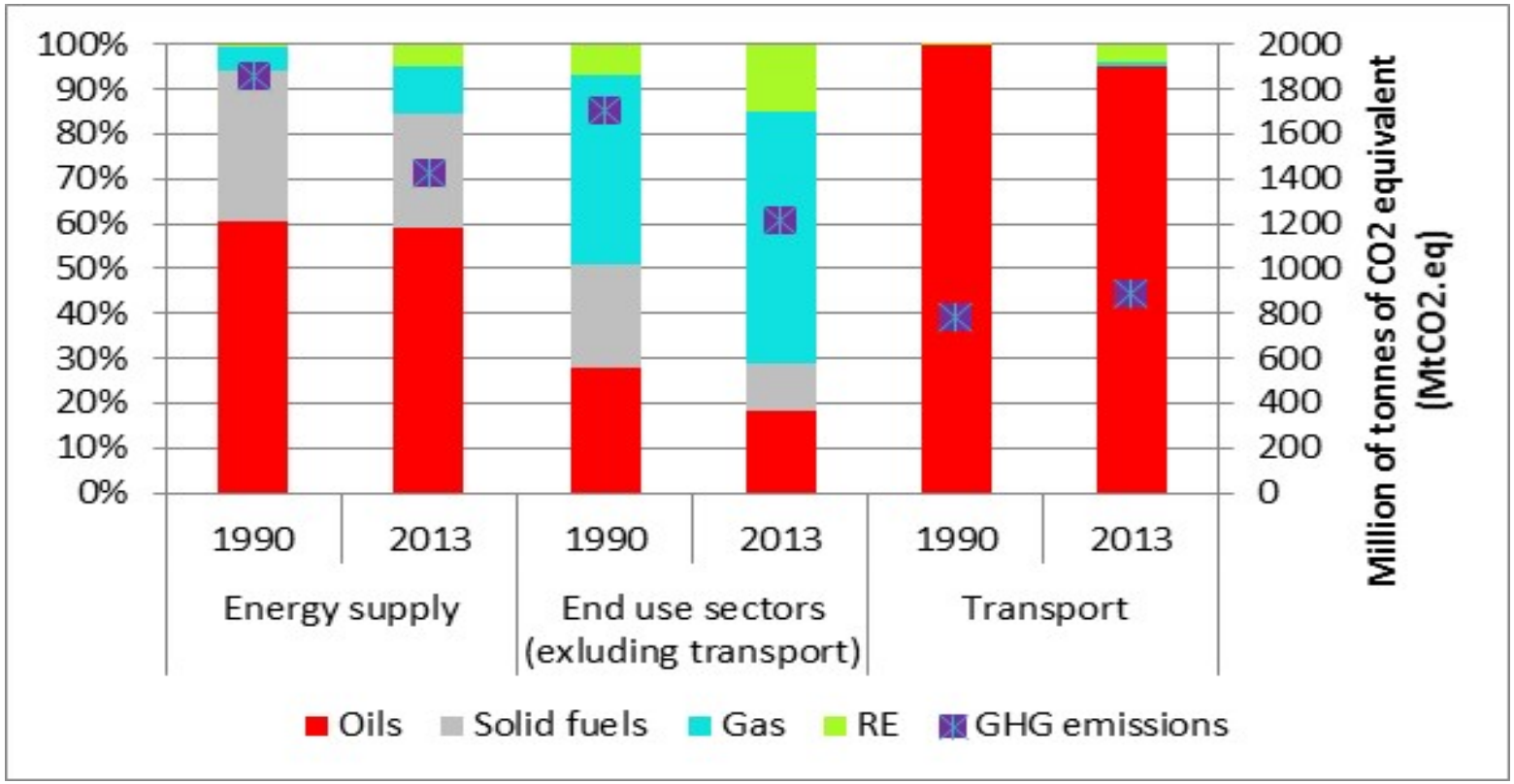
Source: EUROSTAT

EU GHG emissions decreased by 21% since 1990 but 79% of total GHG emissions were energy related in 2013



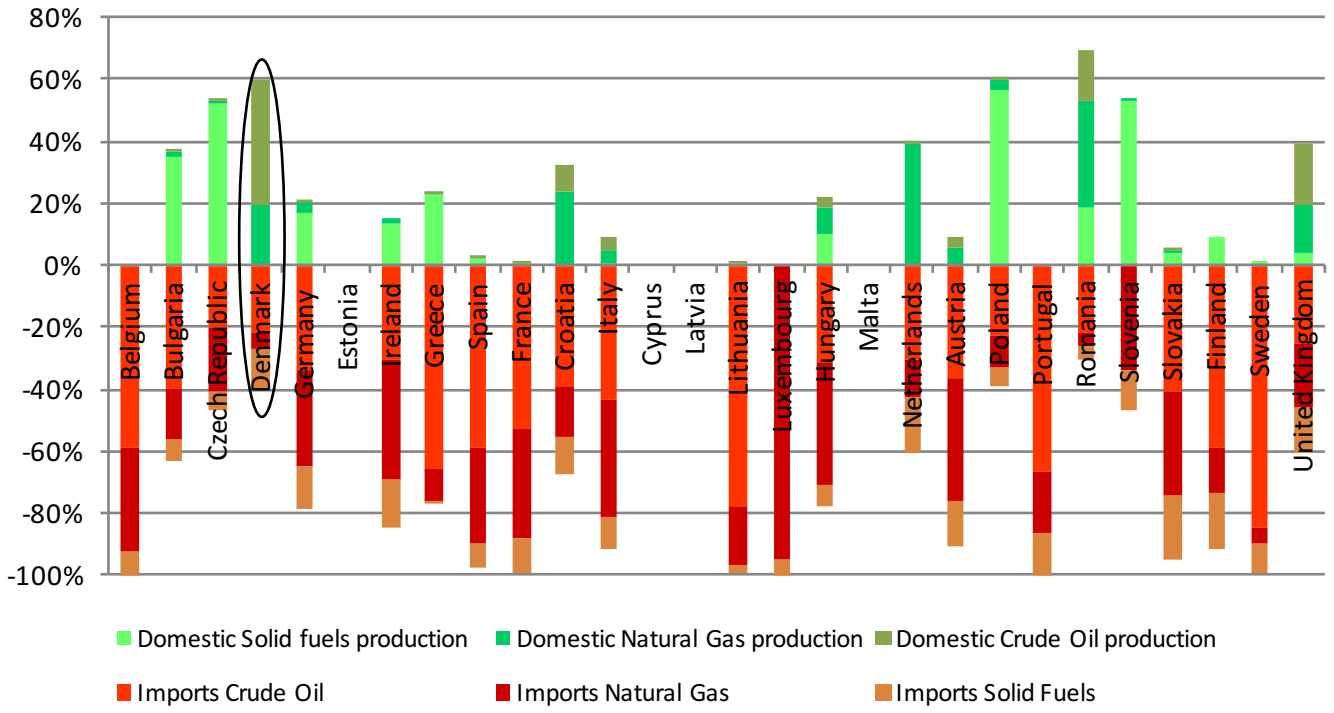
Source: EUROSTAT

Transport's GHG emissions increased over the period 1990-2013



Source: EUROSTAT

Domestic production of fossil fuels decreased by 16% while imports increased by 31% between 1990-2013

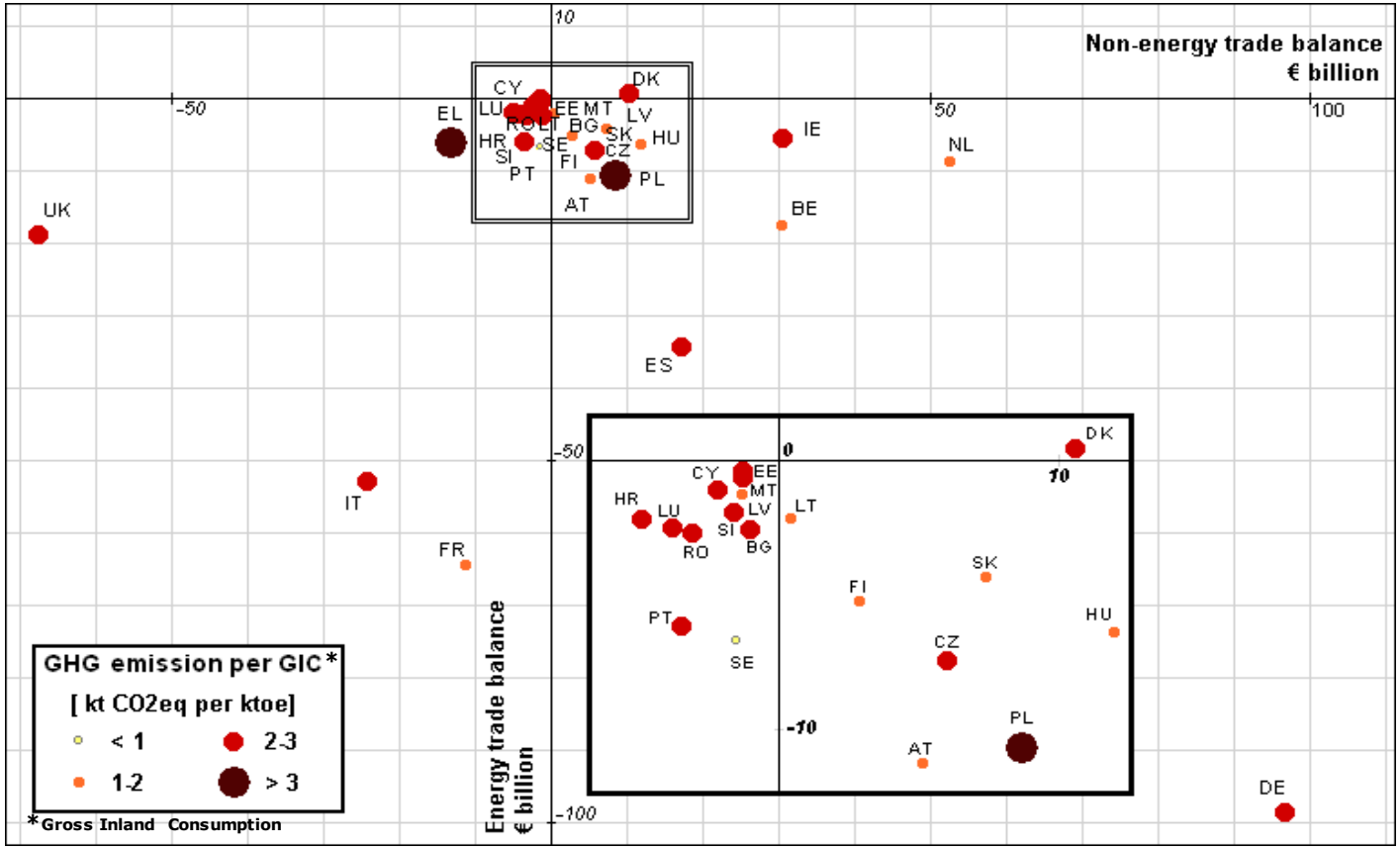


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Source: EUROSTAT

Fossil fuel import bills exacerbate the trade deficits of most MSs and worsen their contribution to climate change



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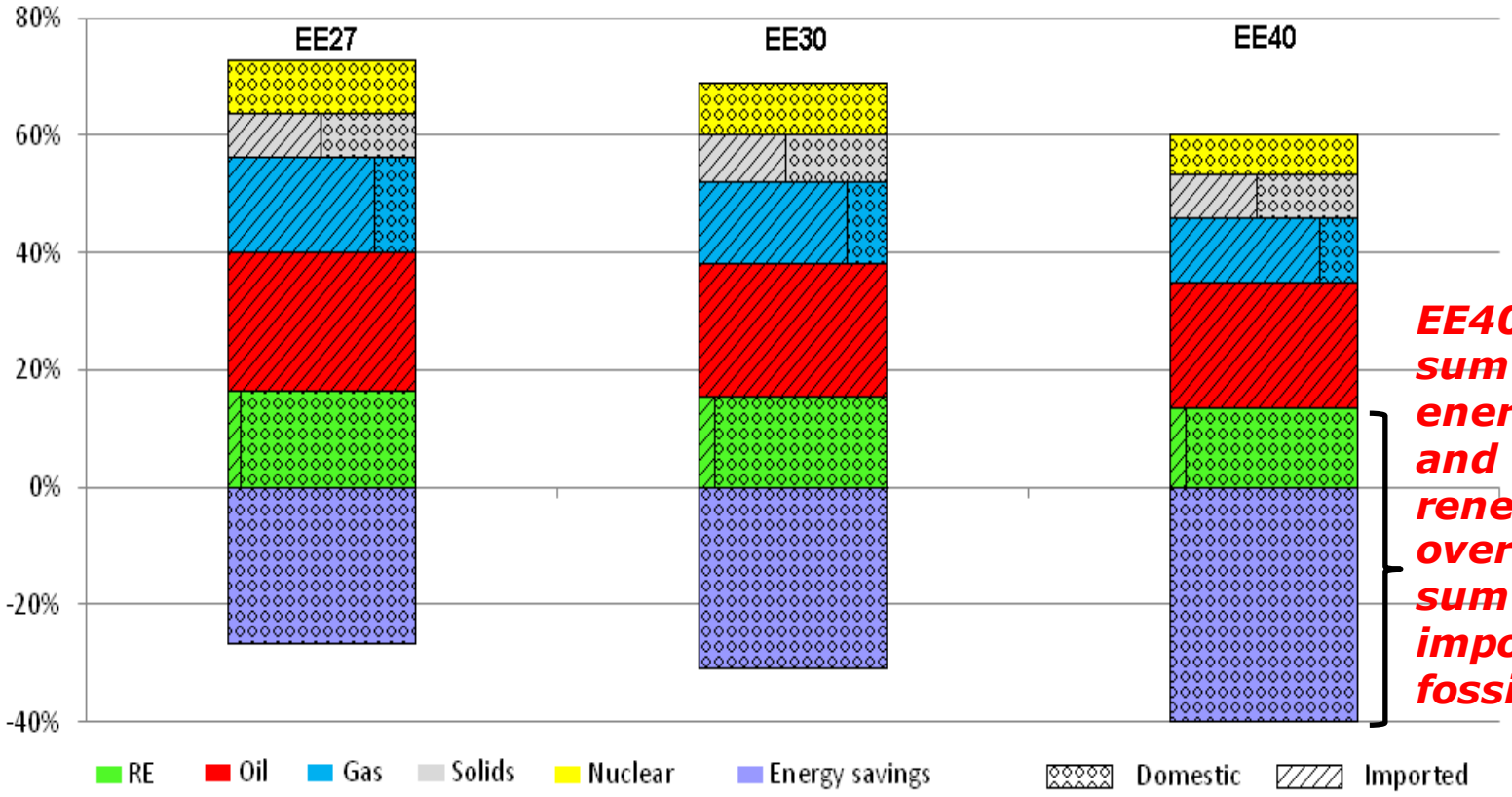
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Source: EUROSTAT

EU decarbonisation scenarios and the energy trilemma

- EE27: Current energy saving target set by the European Council for 2030
- EE 30: the possible energy saving target to consider when the 2030 climate and energy policy framework is reviewed in 2020
- EE40: Energy saving target as called by the European Parliament for 2030

Energy saving: First fuel of the EU by 2030



EE40, the sum of energy saving and renewables overtake the sum of imported fossil fuels

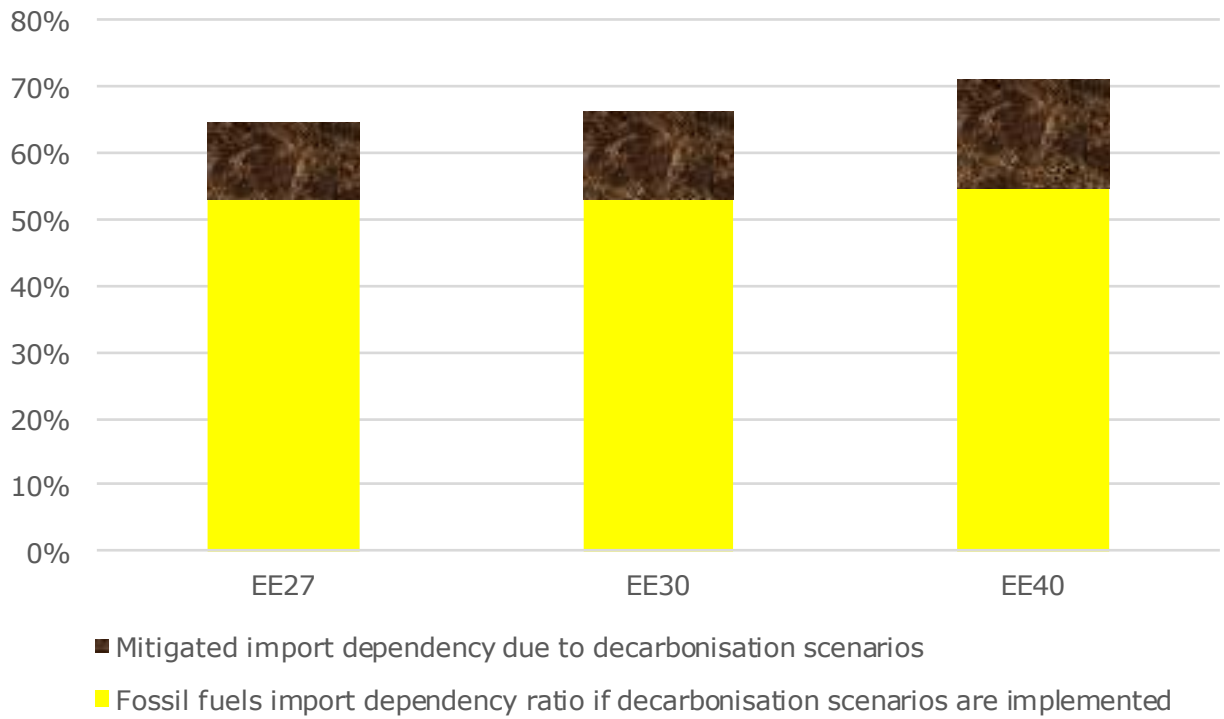
Source: PRIMES 2014

2015: Vintage year for Energy Efficiency

*''It is necessary to fundamentally rethink **energy efficiency** and treat it **as an energy source in its own right**, representing the value of energy saved. As part of the market design review, the Commission will **ensure that energy efficiency and demand side response can compete on equal terms with generation capacity**.''*

Source: A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy Energy Union Package, COM(2015) 80 final

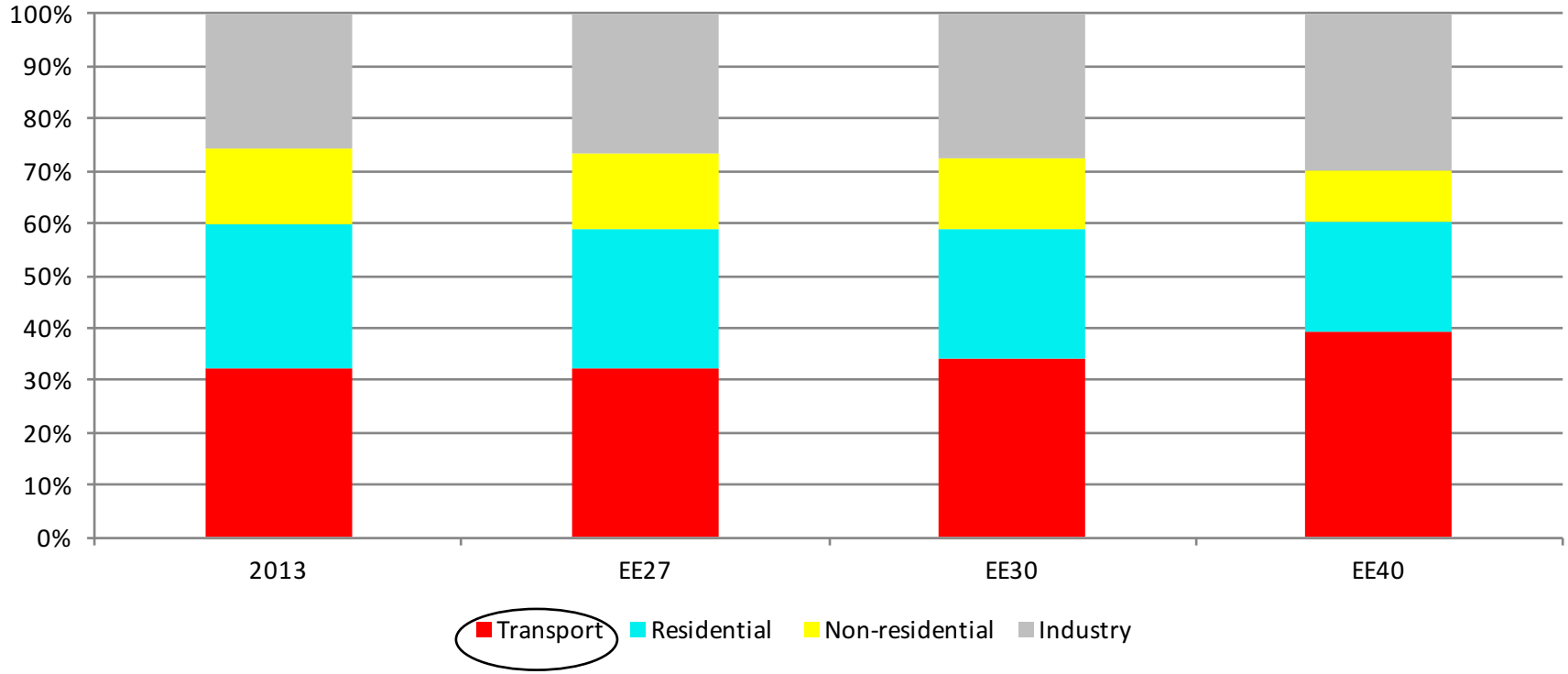
Energy dependency may reach 70% if saving potential is left untapped



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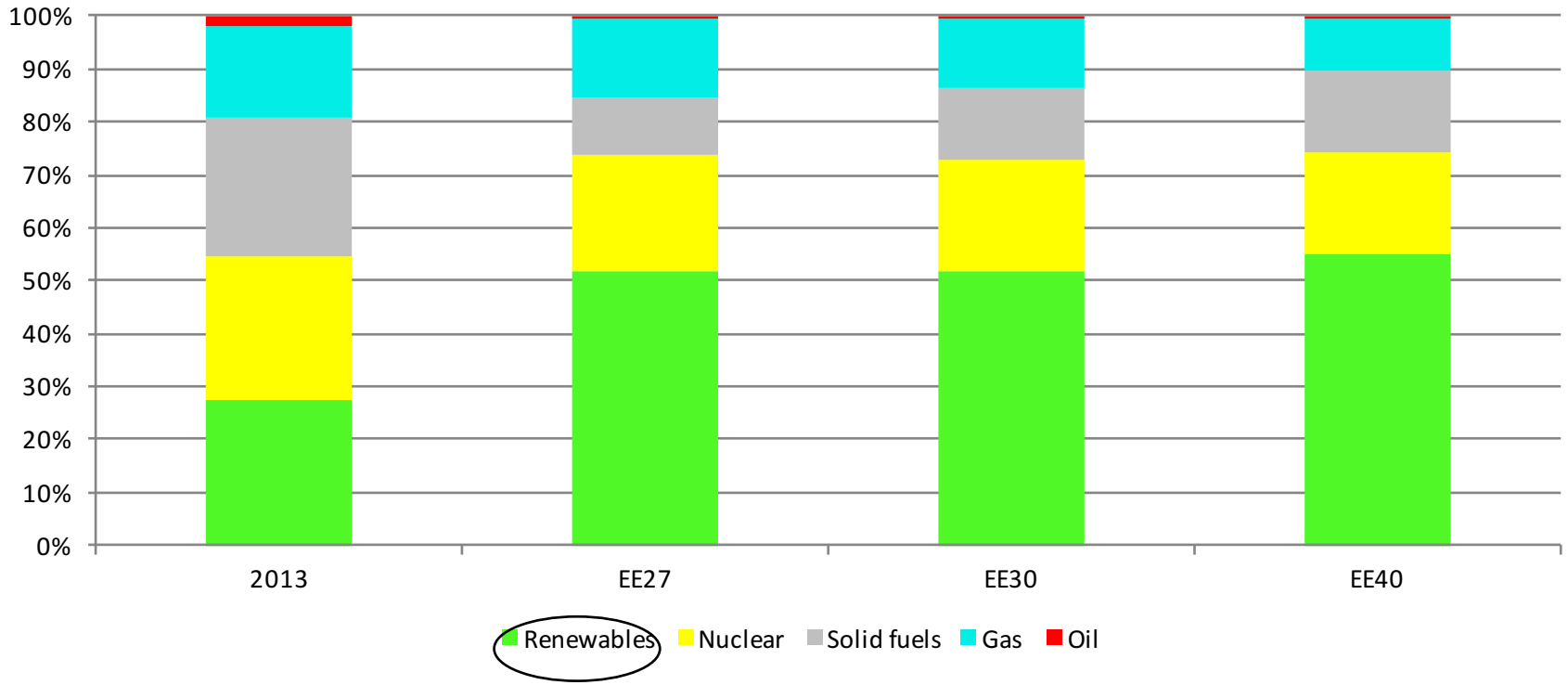
Source: PRIMES 2014

The transport sector is projected to have the highest share of the EU final energy consumption

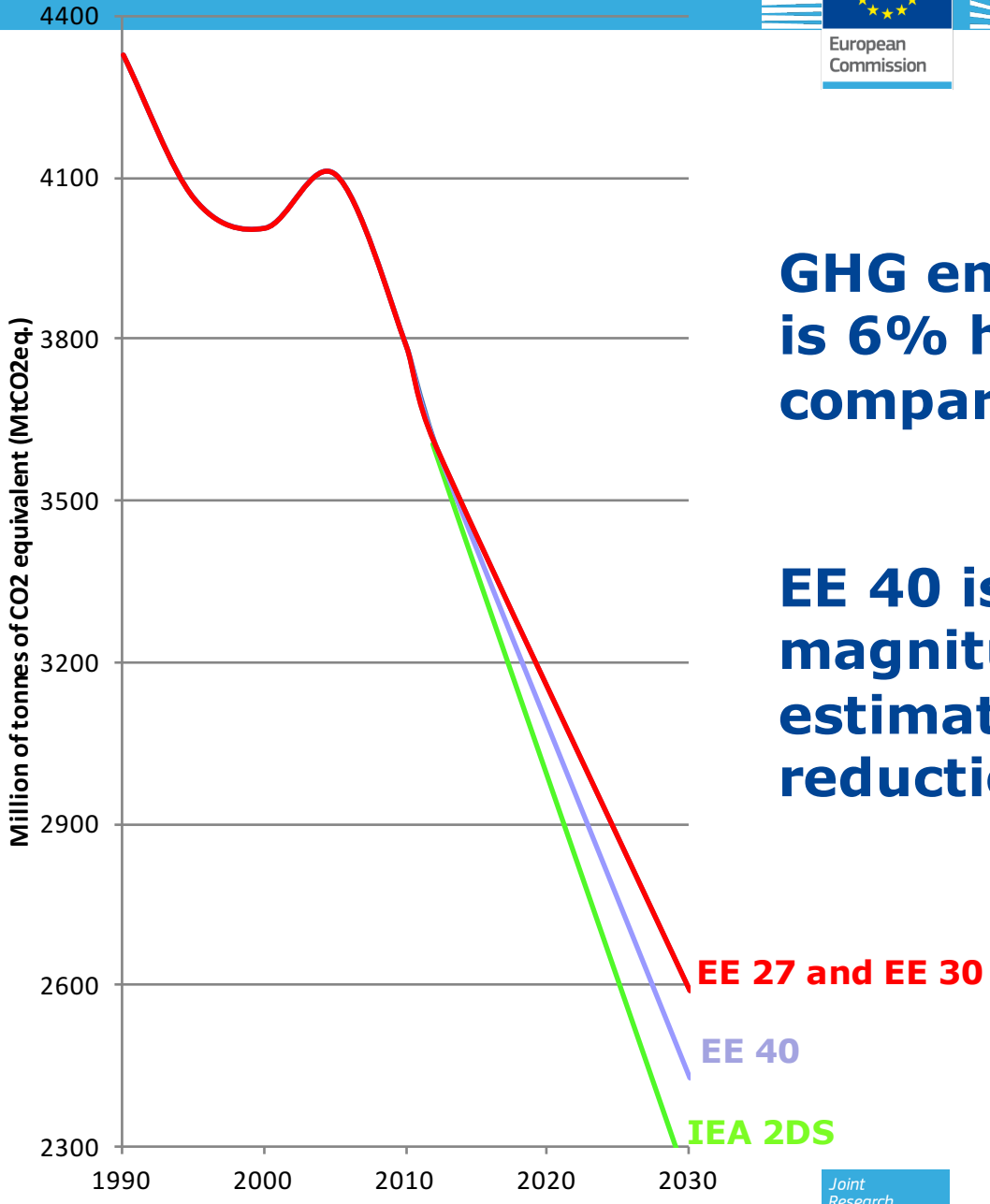


Source: PRIMES 2014 for EE scenarios Eurostat for 2013

Renewables will be the first fuel of power generation by 2030



Source: PRIMES 2014 for EE scenarios Eurostat for 2013

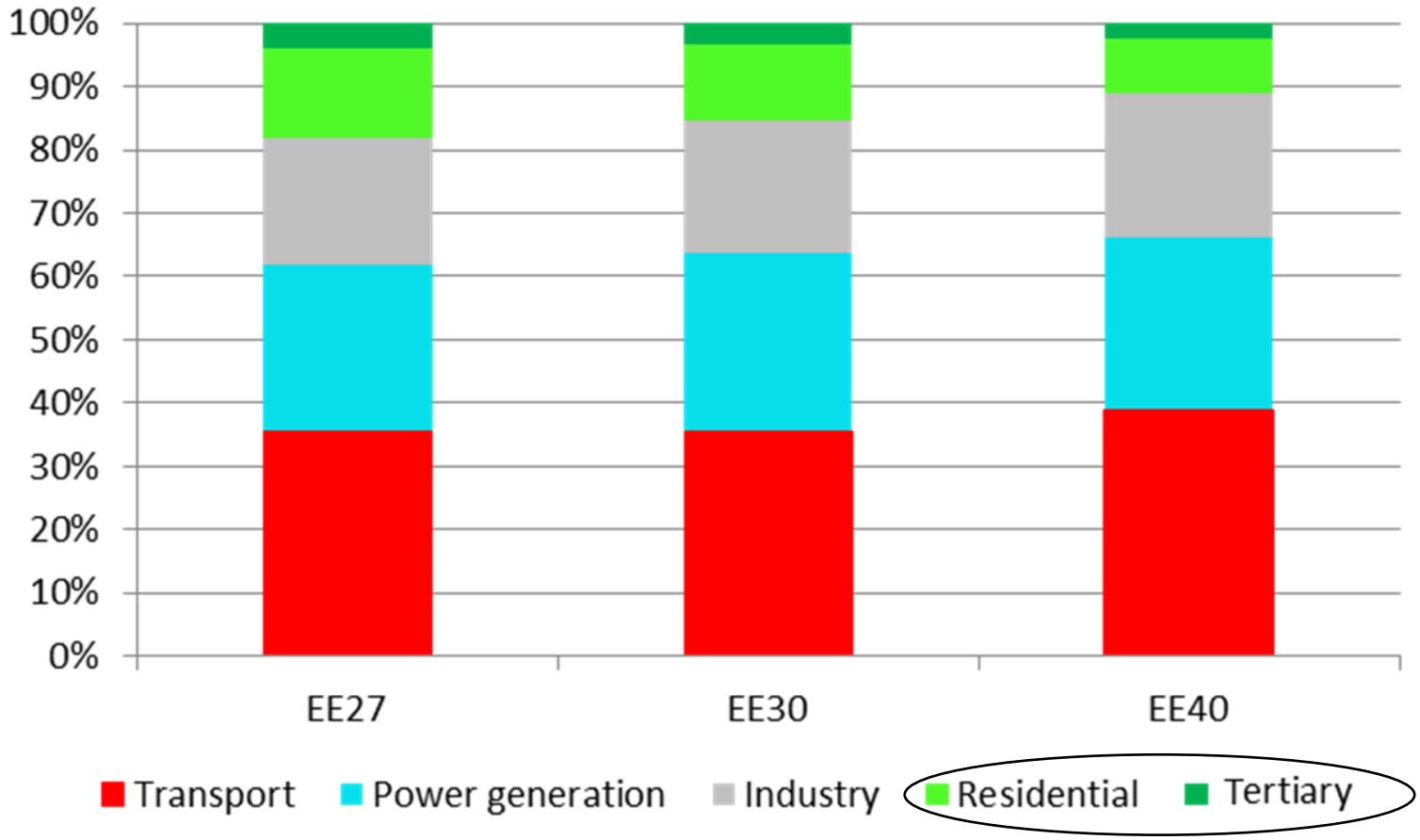


GHG emissions reduction is 6% higher in the EE 40 compared to EE27 and EE30

EE 40 is in the same order of magnitude than the IEA 2DS estimates for GHG emissions reduction for Europe by 2030

Source: PRIMES 2014

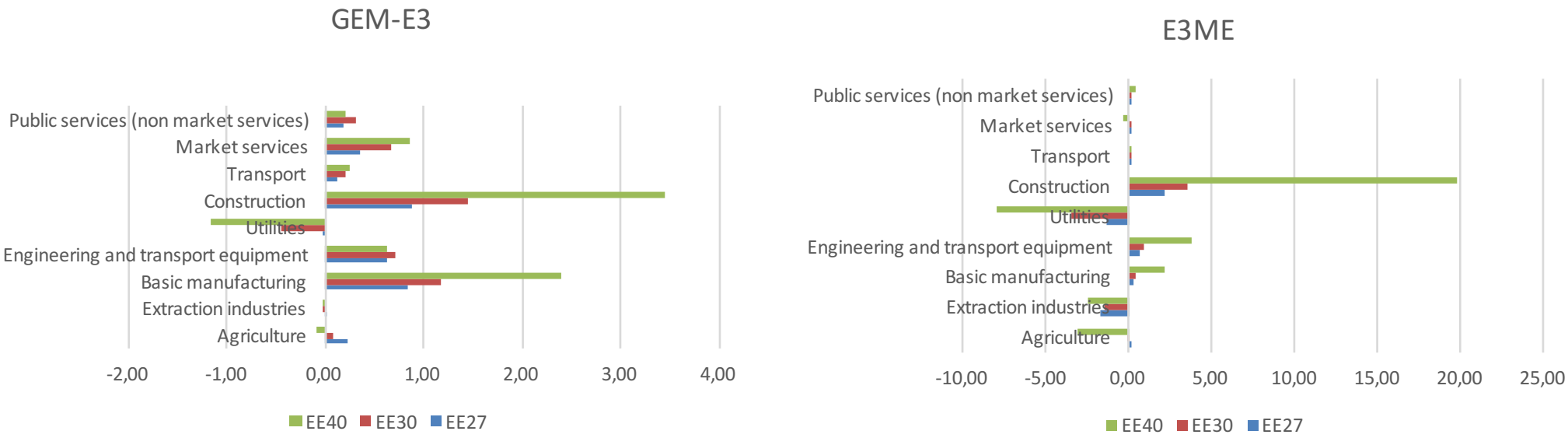
The building sector is projected to be the least emitting sector by 2030



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Source: PRIMES 2014

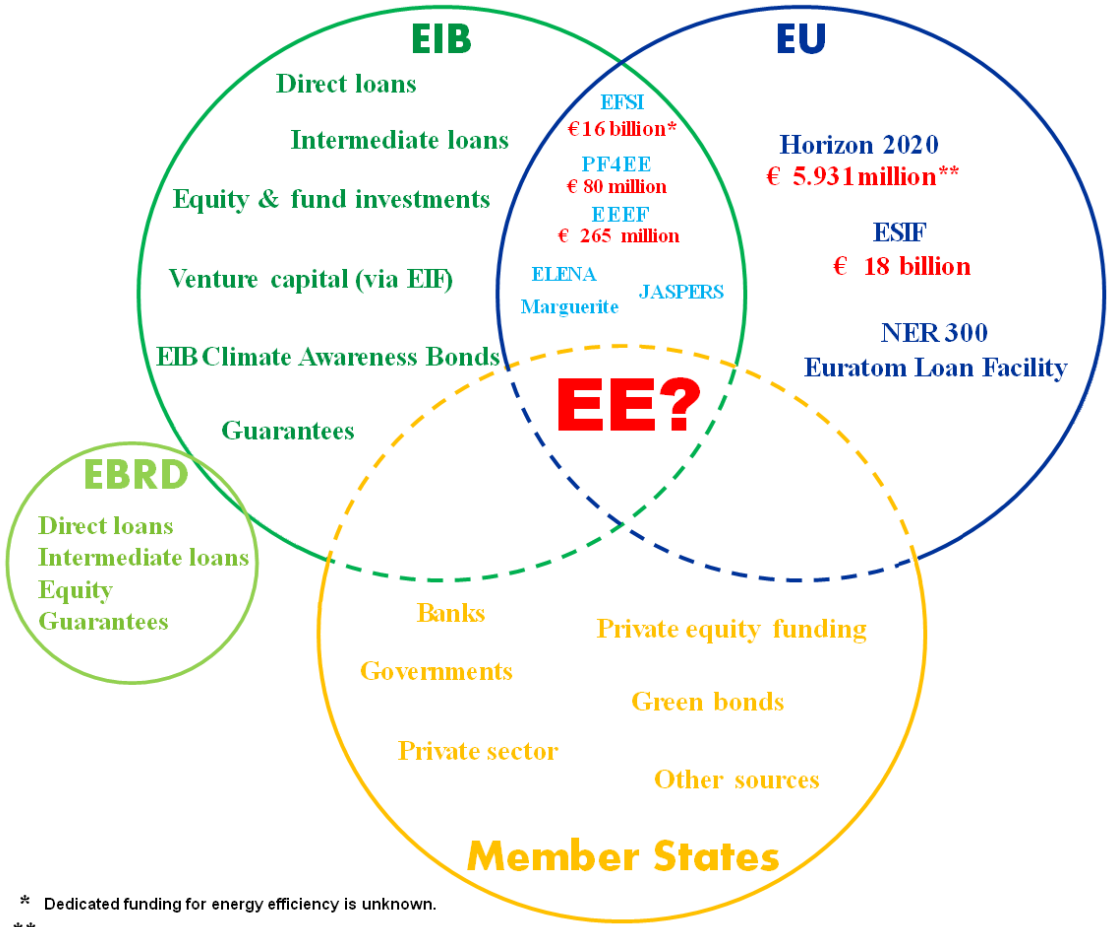
An ambitious EE target would boost job creations



Changes in number of persons employed compared to the reference scenario

Source: PRIMES 2014

A guarantee fund is needed to leverage private finance and create a market for EE services



* Dedicated funding for energy efficiency is unknown.

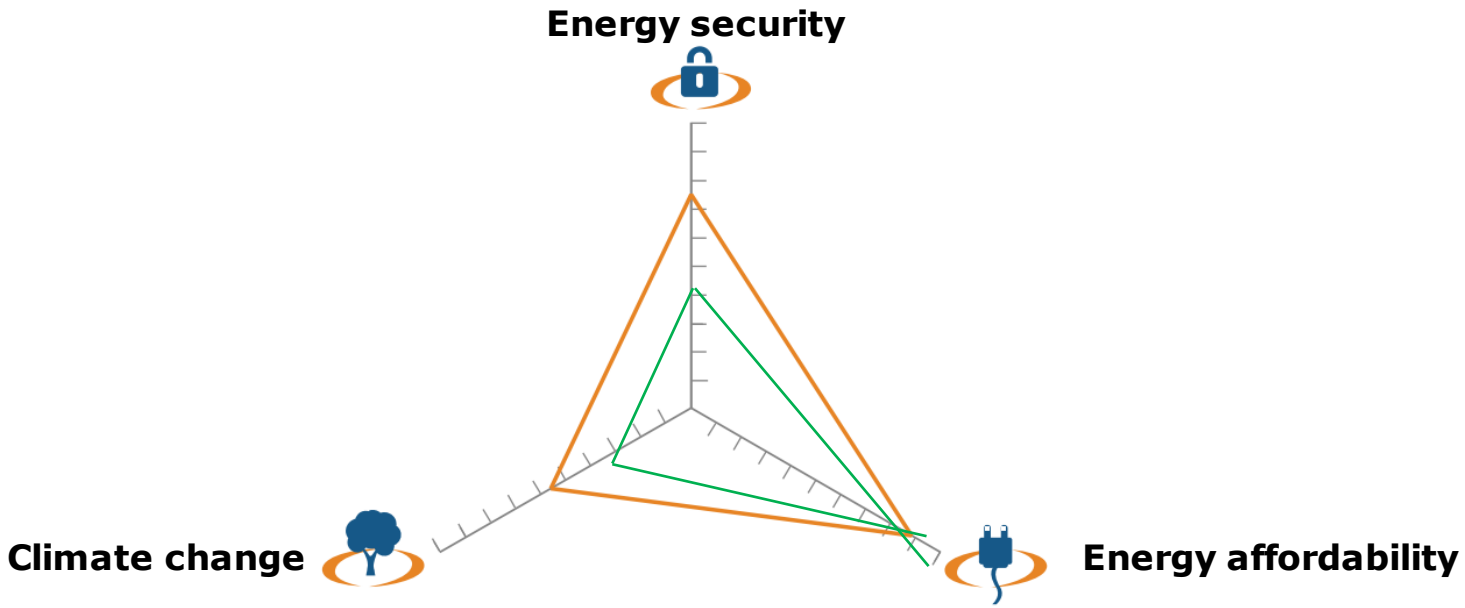
** Includes all non-nuclear energy.

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A long-term investment framework at the ambition level of the EU challenges is needed for…

- …de-risking energy efficiency investments by providing a guarantee;
- …reshaping institutions and skills;
- …monitoring, evaluation and enforcement of EE policies.

Setting EE target should be based on costs/benefits analysis to reduce the size of the energy trilemma



Thank you for your attention

To download the report:

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC97451/2015-12-09%20securing%20energy%20efficient%20to%20secure%20the%20energy%20%20union%20online.pdf



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