Benchmarking options for the effective achievement of the renewable energy target of the EU energy strategy by 2030

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Introduction

Research Questions

(1) What are **benchmark options** needed for?

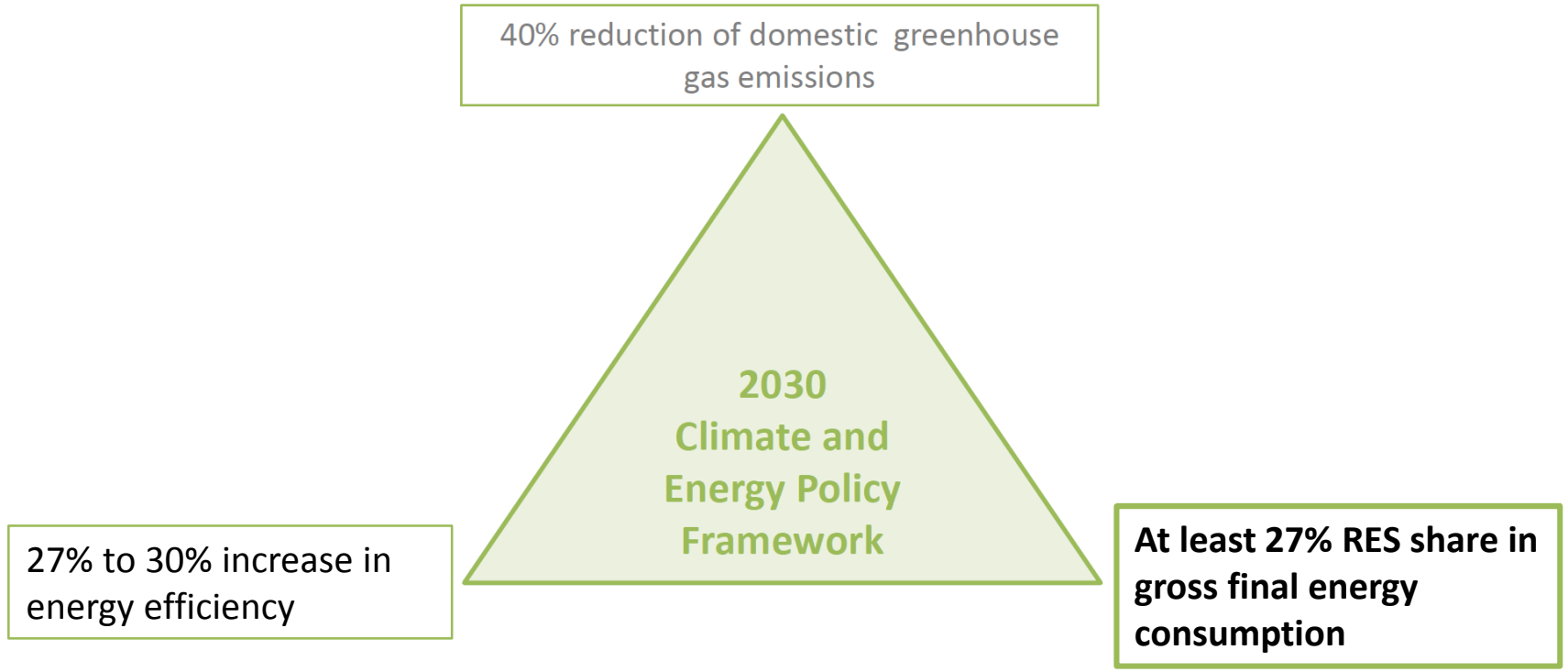
(2) What is the target for the share of renewable energies in the final energy consumption of **different benchmark options** for individual EU Member States to ensure the achievement of the 27% target of the EU?

(3) What **possible bandwidths** for the share of renewable energies in gross energy consumption are given by the different benchmark options?

(4) What is the **expected net increase in RES deployment** between 2020 and 2030?

Political framework

2030 Climate & energy framework



Political framework

Framing the obstacles

- According to current scenarios (PRIMES Reference 2016) the EU would reach a renewable share of 24.3% by 2030. This result shows that the EU would not meet the set target for 2030.
- There are **barriers** to achieve the target of **at least 27%** in a “business as usual" scenario:
  - Missing from cost-effectiveness
  - Imperfect markets
  - Update of the legal framework
  - Lack of citizen participation

Political framework

Mechanism to close the „ambition gap“

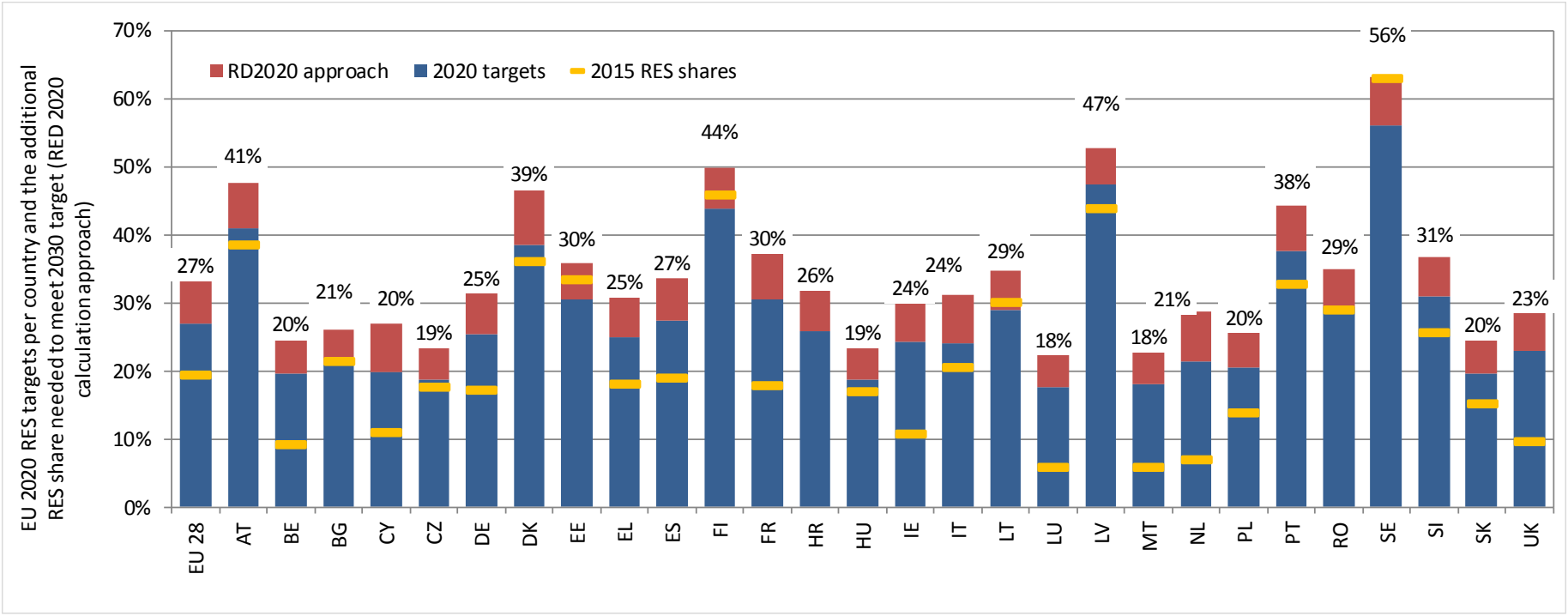
Option 0	Option 1	Option 2	Option 3	Option 4
•BASELINE - No EU mechanism	•Require Member States to revise ambition of national plans under the Energy Union Governance	•Include a review clause to propose additional EU level delivery mechanisms at a later stage	•Increase the ambition of proposed EU wide measures or introduce additional EU wide measures	•Introduce binding national targets

Pledging and Compensation Mechanisms - Benchmarks Needs?

- Benchmarks would enable the European Commission to provide "**guidance on sufficiently ambitious commitments** by EU Member States and to enable them to assess the contribution that individual Member States need to achieve the EU objective“
- Benchmarks would
  - provide an indicator for Member States for a 'fair contribution' to the overall EU objective
  - In order to implement a gaps-filling mechanism and associated financial payments from Member States in case of not achieving the overall EU target
- Benchmarking options are possible on the basis of different indicators

Results

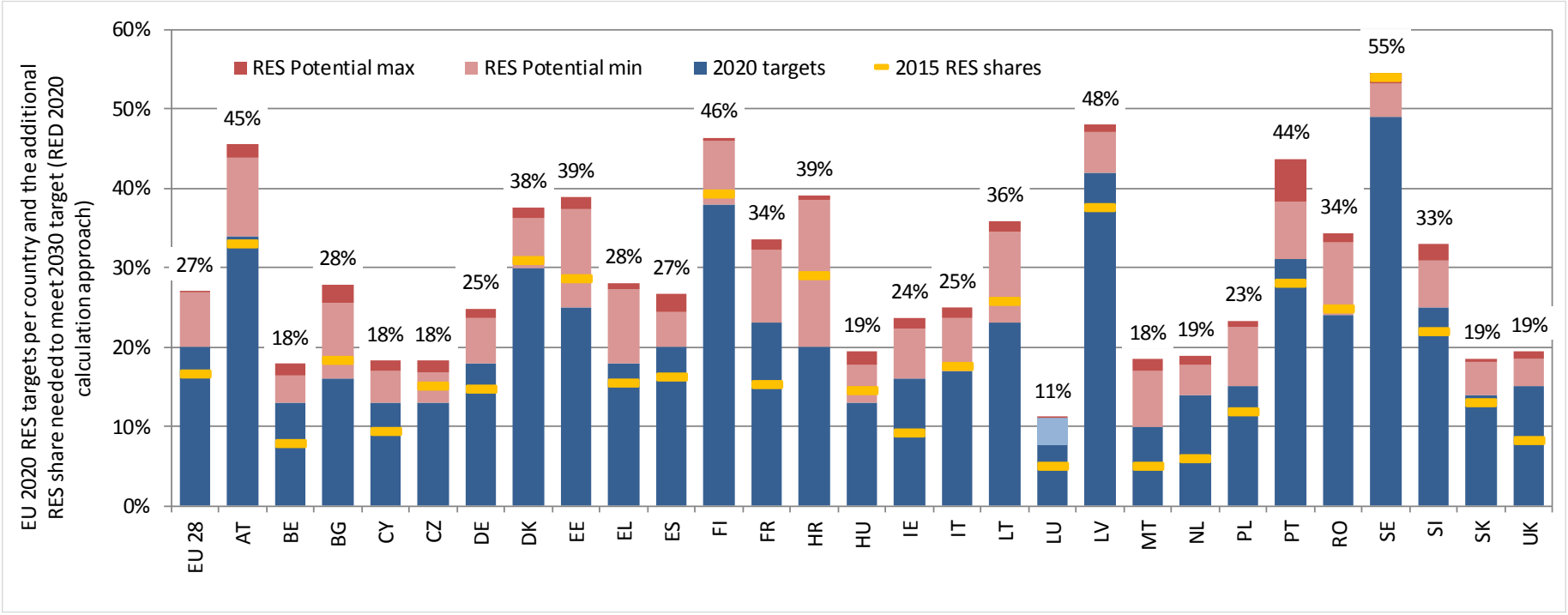
Benchmark according to the logic of the RD 2020



- 50% of the necessary effort is distributed globally and 50% by means of GDP weighting
- Allocation method with moderate differences between Member States
- The GDP-based approach does not always lead to the expected results

Results

Benchmark based on the national potential for renewable energies



- Bandwidths result from European least-cost scenarios – The min-max spread is based on a sensitivity analysis of nonfinancial barriers, energy consumption and the possible promotion of biofuels
- High burden for economically weaker countries

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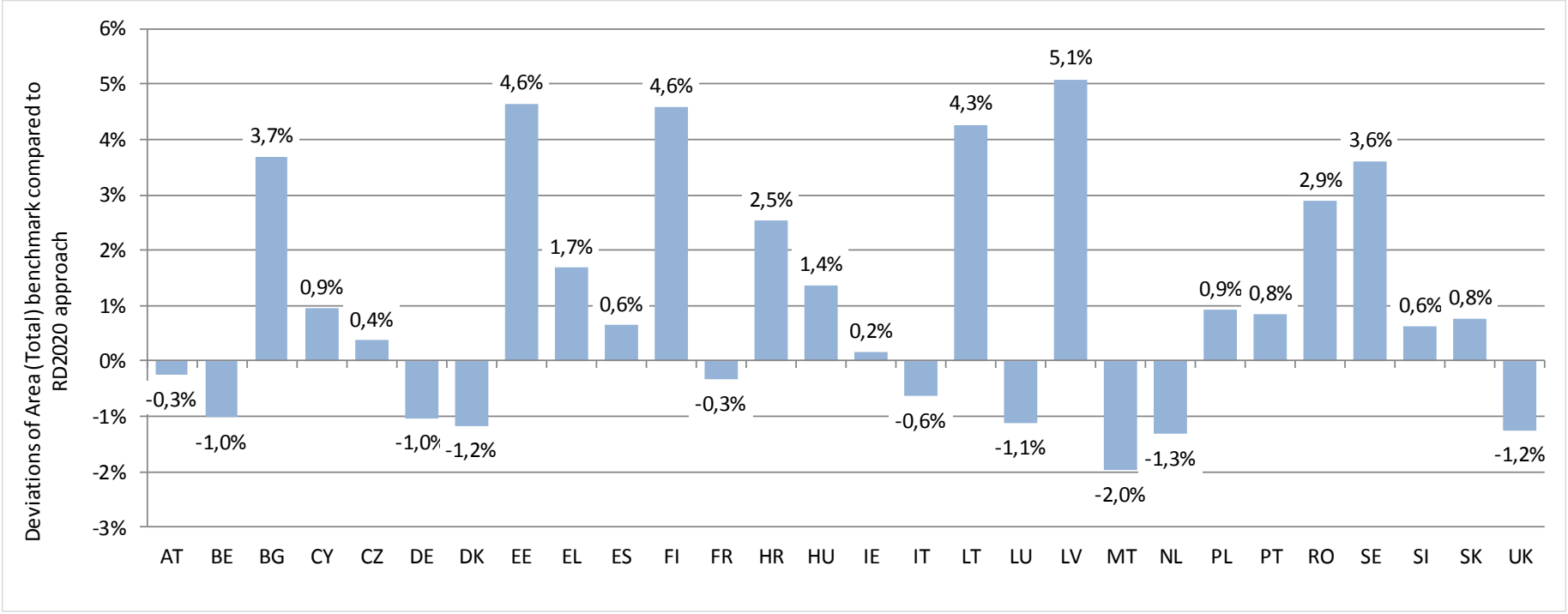
The "alternative approach" described in the Impact Assessment



- The "alternative approach" described in the Impact Assessment implicitly takes the potential availability of renewables resources into consideration by including the size of the country as a determining parameter in addition to GDP and equal sharing ("flat rate").
- More precisely, these impact factors are weighted differently in the RES target allocation – i.e. the allocation is based on 50% flat-rate, 25% GDP and 25% land area per capita.

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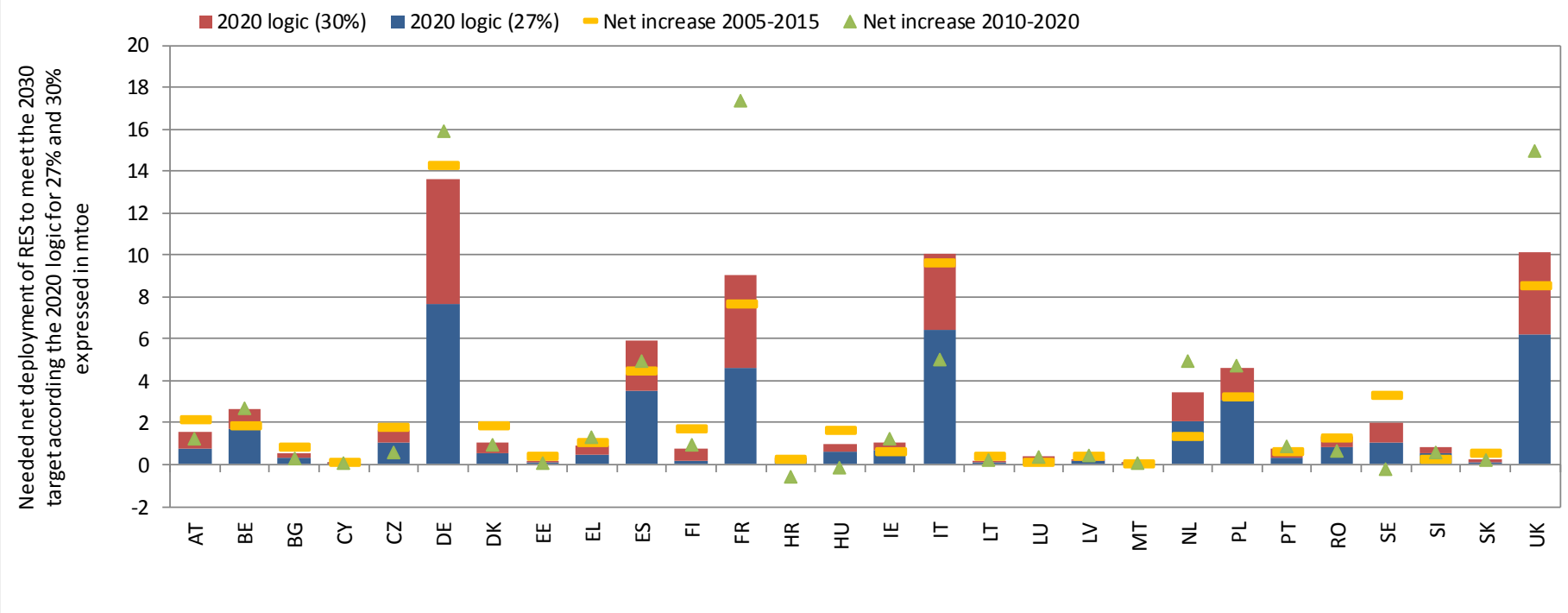
Needed net deployment of RES between 2020 and 2030



- The required increase in net additional RES deployment is significantly higher if we assume an RES target of 30% instead of 27%. However, even with a 30% RES target, this would result in lower or comparable net renewables increase in 2020-2030 compared to 2010-2020 for most Member States.

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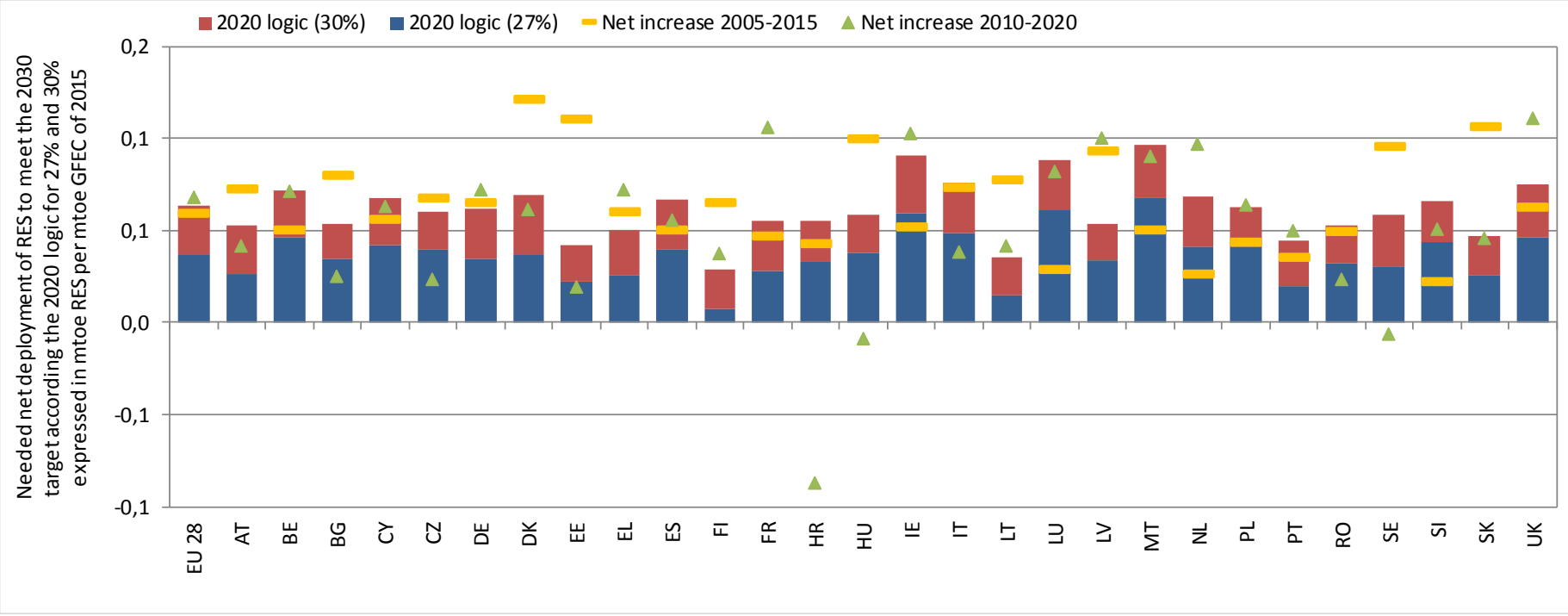
Needed net deployment of RES between 2020 and 2030 relative to the GFEC of 2015



- The required increase in net additional RES deployment expressed in RES per gross final energy consumption (GFEC) of 2015

Conclusions

- Benchmarks can guide the Member States through the pledging process and form the basis for gap-filling mechanism
- A “fair and efficient" approach to ensure political feasibility (depending on the gap between the benchmarks of the Member States)
- Contrary benchmarks in a GDP and a potential-based benchmarking approach deliver a valid argument for regional cooperation
- Assuming a 30% energy efficiency target, an EU RES-target of 30% would result in lower or comparable net renewables increase in 2020-2030 compared to the 2010-2020 effort for most Member States

Thank you for your attention!

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