



Study on 2030 overall targets (energy efficiency, renewable energies, GHG emissions reduction) for the Energy Community

**Gustav Resch, Lukas Liebmann, Albert Hiesl,
Andreas Türk*, Laszlo Szabo****

TU Wien, Energy Economics Group

Email: resch@eeg.tuwien.ac.at

Web: <http://eeg.tuwien.ac.at>

*** Joanneum Research, Austria**

**** Regional Centre for Energy Policy Research (REKK), Hungary**

- The core objective of this project is to **develop a methodology and to conduct a quantitative assessment to show pathways for achieving calculated 2030 energy efficiency, renewable energies and GHG emissions reduction targets** that can be expected under aligned framework conditions in the Energy Community Contracting Parties.
- For doing so, we will **align our methodologies to the approaches used for energy and climate target setting at EU Member State level**, and we make use of specialised energy system models for assessing certain impacts related to that.

2020 and 2030 Target Setting at EU level

EnC 2030 Targets

Renewable Energy Targets

GHG Emission Reduction Targets

Energy Efficiency Targets

2020

Top-down approach:

- Flat rate / GDP based approach

Top-down approach:

- Split between ETS (EU bubble) and Non-ETS (national targets)
- Allocation of national targets reflects difference in economic welfare

Mix of top-down and bottom up allocation:

- EE Directive prescribes strong measures to be implemented
- National allocation plans reflect country-specifics / preferences

2030

- Only EU target set by now, bottom-up approach proposed

- Same approach as used for 2020

- Only EU targets set by now (but same approach is likely to be followed)

- A closer look at economic welfare:

GDP per capita in the European Union and the Energy Community

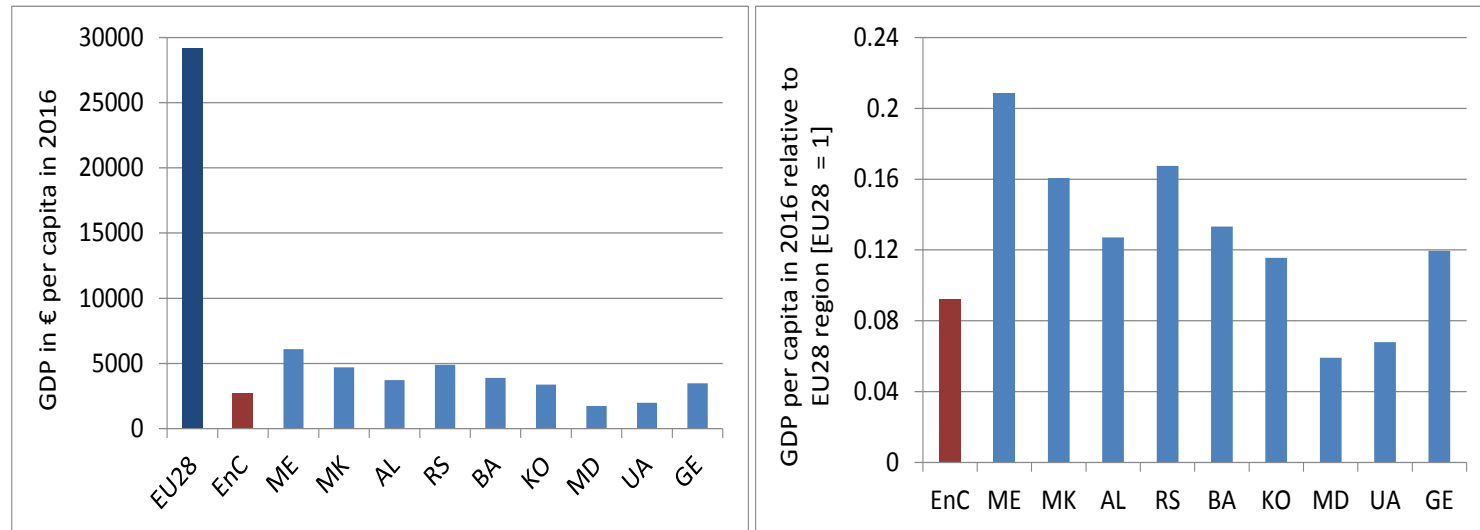


Figure: The GDP per capita for the year 2016.

- On the left-hand side the GDP per capita of all CPs is compared to the overall GDP per capita of the EU28 and EnC regions.
- On the right-hand side the indicator is translated into relative terms, in which the EU 28 indicator is standardized to 1. (EUROSTAT, 2017; World Bank, 2017)

Options for 2030 RE target setting within the Energy Community

- As starting point (**step 1**) for establishing a methodology for 2030 RE target setting we **take a closer look at the overall Energy Community and elaborate on the ambition level concerning future RE deployment.**
- Two different approaches appear suitable to determine the ambition in increasing the deployment of renewable energies at Energy Community level:
 - **Option 1a (RE): Same increase of RE share at EnC and at EU level**
 - **Option 1b (RE): Increase of RE share at EnC level according to flat rate / GDP based approach**
 - *As alternative to above, the required increase in renewables energies might be set at a lower level compared to the EU, **respecting differences in economic welfare** that exists (on average) between the EU and the EnC.*
 - *For calculating the required increase one can make use here of the approach used by the European Commission for establishing national 2020 RE targets (Flat rate / GDP based approach).*

Options for 2030 RE target setting within the Energy Community

- As a next step (**step 2**), the aggregated effort (at EnC level) needs to be broken down to national entities.
- Here we propose to make use of the benchmarking options for 2030 as published by the European Commission within the “Clean Energy for all Europeans” winter package (SWD (2016) 410 final).
- Additionally, as default option a flat rate approach is introduced, meaning that under that approach all CPs have to increase their RE targets for 2020 by the same percentage points – similar to the overall net increase at EnC level
 - *Option 2a (RE): Same increase of RE share at CP level as applied at EnC level (flat rate approach)*
 - *Option 2b (RE): Increase of RE share at CP level according to flat rate / GDP based approach*
 - *Option 2c (RE): Increase of RE share at CP level according to the EC’s alternative benchmarking approach ... considering also land area (→ domestic RE potentials) in addition to GDP*

- *With respect to **energy efficiency and renewable energies** a **two-step approach** is recommended.*
 - *As starting point (step 1) for establishing a methodology for 2030 EE and RE target setting the overall ambition level at Energy Community level needs to be determined.*
 - *As a next step (step 2), the aggregated effort (at EnC level) needs to be broken down to national entities.*
- *For **GHG target setting complexity increases**.*
 - *A key question arises whether the split between ETS and Non-ETS sectors as undertaken at EU level makes sense also for the EnC.*
 - *The practical implementation of such a parallel scheme (in addition to the EU approach) is under question.*
 - *In general, derived draft options build largely on similar considerations as taken at EU level.*

**Thanks for your
attention!**

Dr. Gustav Resch

Contact details:

resch@eeg.tuwien.ac.at

+43-1-58801-370354