





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

# Approach for 2030 RE target setting

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











EU level

- On 30 November 2016 the European Commission published a package of proposals for legislative measures for the time horizon from 2020 to 2030 called "Clean Energy for all Europeans" commonly referred to as the winter package. It aims at further promoting the clean energy transition while developing the internal market for electricity and thus fostering the Energy Union.
- An ambitious political agreement on increasing renewable energy use in the EU has been taken recently: In a Statement of the European Commission (STATEMENT/18/4155) it was declared that the new regulatory framework includes a binding renewable energy target for the EU for 2030 of 32% with an upwards revision clause by 2023.
- At this point (6 September 2018), no agreement has been taken on the exact approach to be used for an effort sharing, nor on the binding character of MS pledges.
   → The lack of binding national targets was however also addressed by the European Parliament. Amendments adopted by the European Parliament on 17 January 2018 on the proposal for a recast of the RED include a newly designed formula (see Amendment 111 Proposal for a Directive ... Article 3 paragraph 2).





EnC level

- To increase the RE share at CP level according the **formula set out in Annex Ia** of the Amendments adopted by the European Parliament on 17 January 2018.
- This approach follows an integrated concept that takes into account:
  - the differences in economic development,
     the potential for cost-effective RE deployment, and
     the interconnection level in the European Network of Transmission

System Operators for Electricity (ENTSO-E) across the EU and the EnC.

This approach strictly follows the formula set out in Annex Ia, and distributes
the efforts across all CPs (and EU Member States) while maintaining the RE
ambition level as presumed at EU level (i.e. to aim for (at least) 32% RE as
share in gross final energy demand)





EnC level

#### The details of the calculation...

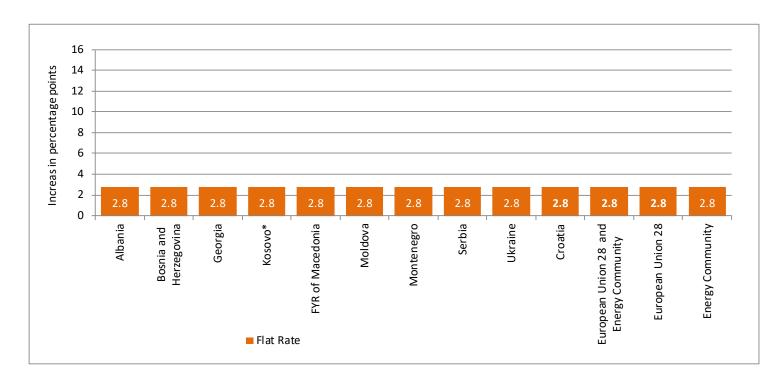
Amendment 270, Proposal for a directive Annex Ia (new) - Text proposed by the Commission

- 1. A Member State's targets for 2030 shall be the sum of the following components, each expressed in percentage points:
  - (a) the **Member State's national binding target for 2020** as set out in Annex I of the Directive COM(2016) 767 final/2 and Decision D/2012/04/MC-EnC, Article 4 for the Energy Community.
  - (b) a **flat rate contribution** ("C<sub>Flat</sub>");
  - (c) a **GDP-per-capita based contribution** ("C<sub>GDP</sub>");
  - (d) a potential-based contribution ("C<sub>Potential</sub>");
  - (e) a **contribution reflecting the interconnection level** of the Member State ("C<sub>Interco</sub>").





#### EnC level

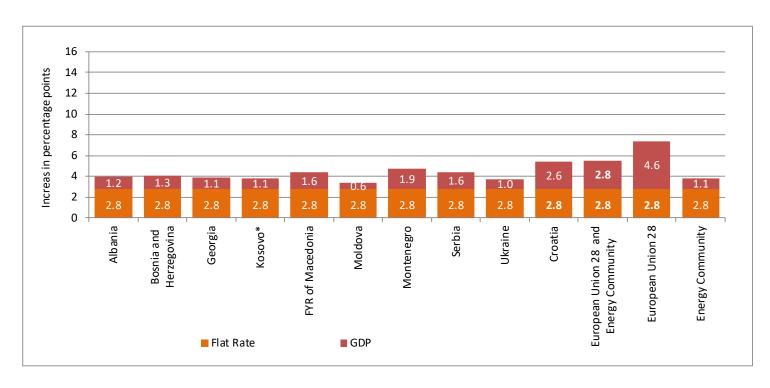


2. **C**<sub>Flat</sub> shall be the same for each Member State. All Member States' C<sub>Flat</sub> shall together **contribute 30** % of the difference between the Union's targets for 2030 and 2020.





#### EnC level

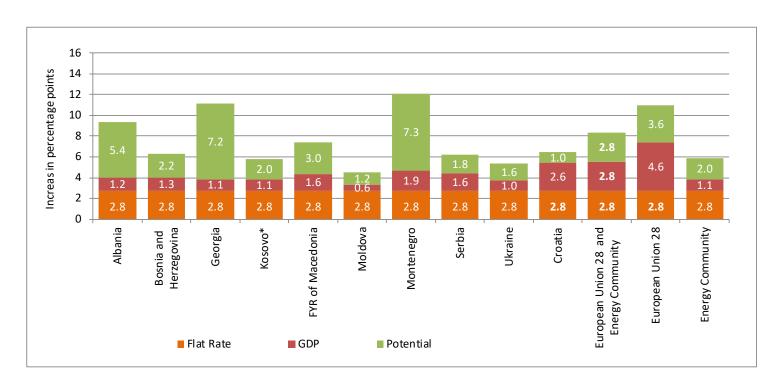


3.  $C_{GDP}$  shall be allocated between Member States based on a GDP per capita index to the Union average, where for each Member State individually the index is **capped at 150** % **of the Union average**. All Member States'  $C_{GDP}$  shall together **contribute 30** % of the difference between the Union targets for 2030 and 2020.





#### EnC level

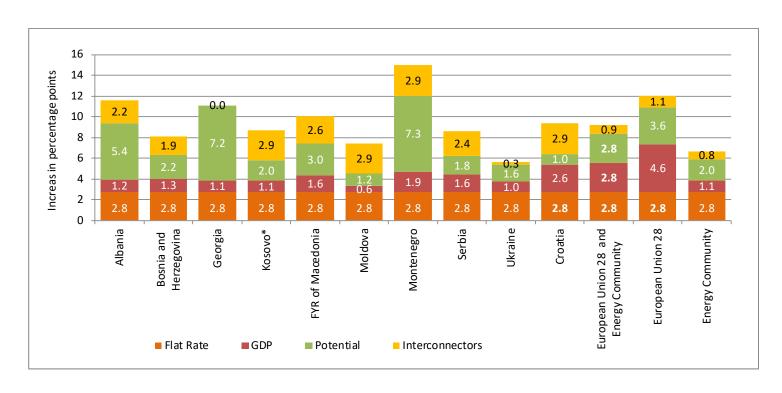


4.  $C_{Potential}$  shall be allocated between Member States based on the difference between a Member State's RES share in 2030 as shown in PRIMES EUCO.... scenario and its national binding target for 2020. All Member States'  $C_{Potential}$  shall together **contribute 30** % of the difference between the Union targets for 2030 and 2020. ( $\rightarrow$  Least cost allocation)





#### EnC level



5. C<sub>Interco</sub> shall be allocated between Member States based on an electricity interconnection share index to EU average, where for each Member State individually the interconnection share index is **capped at 150% of the EU average**. All Member States' C<sub>Interco</sub> shall together **contribute 10%** of the difference between the EU targets for 2030 and 2020.





#### EnC level

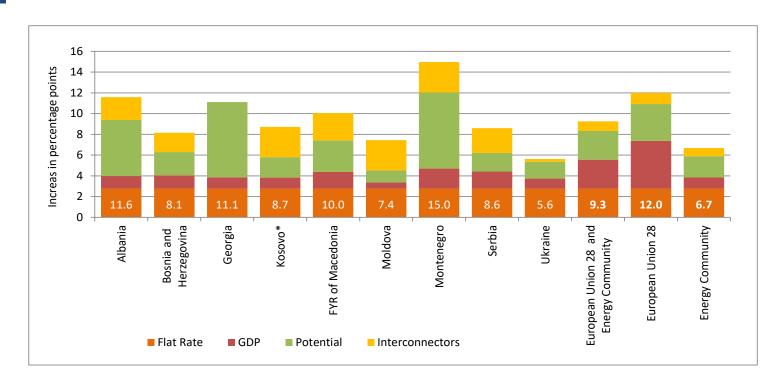


Figure: Resulting RE share net increase between 2020 and 2030 for all CPs and the EnC region according to the proposed target setting approach (i.e. a "four component" approach).

(Source: EUROSTAT, 2018; IEA, 2018; IMF, 2018; NTUA, 2012; own calculations)





#### EnC level

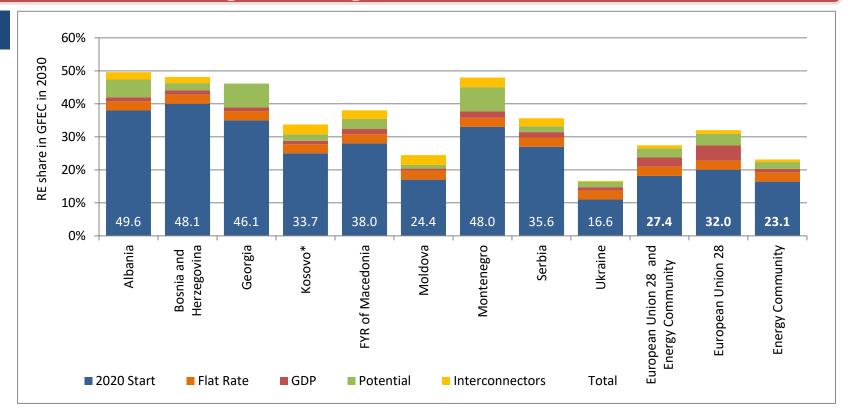


Figure: 2030 RE Targets for all CPs and the EnC region according to the proposed target setting approach (i.e. a "four component" approach).

(Source: EUROSTAT, 2018; IEA, 2018; IMF, 2018; NTUA, 2012; own calculations)





#### EnC level



Figure: Comparison RE shares per region an Contracting Party. The historic RE share for the year 2015 (grey) in gross final energy consumption (GFEC) is compared to the 2020 target (light blue) and 2030 target (dark blue).

(Source: EUROSTAT, 2018; IEA, 2018; IMF, 2018; NTUA, 2012; own calculations)





#### EnC level

RE share in gross final energy consumption	RE share as of EUROSTAT Shares tool		<b>2020 Targets</b> according to the RD2020 approch	2030 Targets according the 4 componets approch	Needed increas in percentage points (2020 vs 2030)
	2014	2015	2020	2030	2020 vs. 2030
Contracting Party	[%]	[%]	[%]	[%]	[pp]
Albania	32.0%	34.9%	38.0%	49.6%	11.6%
Bosnia and Herzegovina	41.1%	41.5%	40.0%	48.1%	8.1%
Georgia	32.3% <sup>1</sup>	33.0% <sup>1</sup>	35.0%	46.1%	11.1%
Kosovo*	19.5%	18.5%	25.0%	33.7%	8.7%
Moldova	12.4%	15.8%	17.0%	24.4%	7.4%
Montenegro	37.2%	37.7%	33.0%	48.0%	15.0%
FYR of Macedonia	19.6%	19.9%	28.0%	38.0%	10.0%
Serbia	22.7%	21.8%	27.0%	35.6%	8.6%
Ukraine	3.3%	4.3%	11.0%	16.6%	5.6%
Energy Community	10.1%	12.0%	16.4%	23.1%	6.7%

#### Remark:

Table: RE Targets and historic shares

(Source: EUROSTAT, 2018; IEA, 2018; NTUA, 2012;

own calculations)

The RE share for Georgia for the years 2014 and 2015 is an approximate value, as the available data is not as detailed as needed to calculate the exact RE share.