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Fulfilment of National Objectives under the Renewable Energy Directive
State of play and projections

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Summary

The EU Directive on the promotion of the use of energy from renewable sources contains the main body of the EU's current renewable energy (RE) policy. Adopted in April 2009, the Directive provides a common framework for the promotion of energy from renewable sources in all EU member states. The act specifies binding national targets for the share of renewable energy (as a percent of gross final energy consumption) for each member state, which together amount to an EU-wide target of 20%. This report reviews the progress made to date by each member state towards fulfilling its target and offers projections about possible outcomes in the year 2020.

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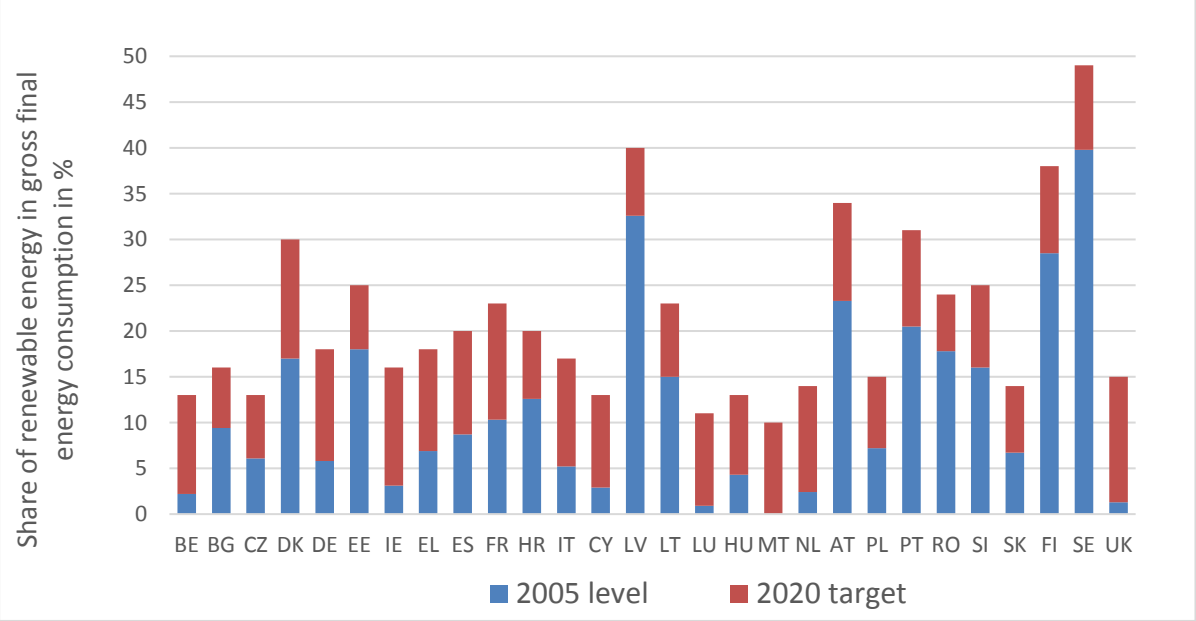
1. National objectives under the Renewal Energy Directive 2009/28/EC

Figure 1 shows the renewal energy (RE) targets, by each member state (MS), as called for in an annex (reproduced in Annex 1 of this report) of the EU Directive on the promotion of the use of energy from renewable sources, commonly referred to as the Renewable Energy Directive (RED).[1]

Figure 1. Projected share of RE in gross final energy consumption, by member state, 2020 (%)



Source: Annex I of Directive 2009/28/EC.

[1] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources.

1.1 Calculation methodology for targets

The targets were calculated on the basis of a methodology described in an Impact Assessment from January 2008,[2] which included the following rules of calculation:

- Total burden shared by all MSs is equal to 20% of projected gross final energy consumption (GFEC) in 2020.
- To acknowledge early efforts, MS whose growth in RE as a share of total consumption is higher than 2% points between 2001 and 2005 will have one third of this growth deducted from their 2005 base year share.
- 5.5% points are added to the modulated 2005 share for every MS (equal to half of total EU burden),
- The remaining half of the burden is allocated to each MS using a GDP/capita index.

1.2 Calculation methodology for RE share

The share of RE in GFEC is the officially used indicator to quantify the level of RE deployment in EU-level and national energy systems. The general equation for calculating the share is:

$$RE\ Share = \frac{Final\ RE\ consumption}{GFEC}$$

GFEC is derived from final energy consumption (FEC). FEC is one way of measuring energy consumption and is notably smaller than primary energy consumption. Before energy is consumed, a number of energy conversion processes have in most cases been carried out. Each conversion step is connected to a loss of usable energy (e.g. heat loss caused by electrical resistance in a power transmission line). FEC accounts only for the amount of energy used after the final conversion step (for example, power from the power outlet).

The GFEC is the sum of FEC and consumption by the energy sector itself. When comparing Eurostat databases for FEC and GFEC for the EU-28 in the years 2005-13, GFEC is about 3% higher than FEC in all years.

The official calculation methodology for GFEC in the renewable energy Directive further provides a rule that energy consumption stemming from aviation is only to be considered to a maximum of 6.18% (Cyprus and Malta: 4.12%) in order to give an exemption to MSs that depend on air travel.

The final RE consumption is calculated as the quantity of final energy produced from renewable sources. The latter are defined in the RED and include wind, solar, aero thermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant

[2] Commission Staff Working Document, Impact Assessment Document, accompanying the Package of Implementation measures for the EU's objectives on climate change and renewable energy for 2020, SEC(2008) 85, 23 January 2008.

gas and biogases. Energy from wind turbines is averaged over four years and hydro power plants averaged over 15 years, in order to account for differences in annual weather patterns.

1.3 National Renewable Energy Action Plans

As called for in the RED, each MS had to provide a National Renewable Energy Action Plan (NREAP), which includes forecasts for the RE share for each year between 2010 and 2020. The data from these NREAPS are publicly available and form the basis of the calculations used to determine the extent to which national objectives are fulfilled.

2. Status on the fulfilment of national objectives based on Eurostat data

Data for the RE share for the EU-28 and for each MS are available online up to the year 2014. Data for 2015 are expected to be published in early 2017. The SHARES (SHort Assessment of Renewable Energy Sources) dataset includes the RE share calculated by the official methodology from national data. It represents the source of data used for legal considerations.

Table 1 shows the current status and projections for each MS under the assumption that growth of the RE share continues along the same trend it had shown between 2011 and 2014 (linear extrapolation).

Table 1. Status and projections of achieving RE targets, by member state

MS	Share 2014	2020 Target	Percentage of 2020 target achieved in 2014	Percentage of NREAP 2014 forecast reached	Gap based on linear extrapolation (percentage points)	
HR	27.9%	20%	NA	Exceeded	Achieved (13.7%)	
BG	18.0%	16%	151%	Exceeded	Achieved (11.4%)	
IT	17.1%	17%	102%	Exceeded	Achieved (9%)	
FI	38.7%	38%	111%	Exceeded*	Achieved (12.7%)	
SE	52.6%	49%	550%	Exceeded	Achieved (11%)	
RO	24.9%	24%	169%	Exceeded	Achieved (8%)	
EL	15.3%	18%	72%	Exceeded	Achieved (6.8%)	
LT	23.9%	23%	130%	Exceeded*	Achieved (8.5%)	
LV	38.7%	40%	77%	Exceeded	Achieved (9%)	
EE	26.5%	25%	175%	Exceeded	Achieved (3%)	
SK	11.6%	14%	48%	Exceeded	-0.7%	
CZ	13.4%	13%	109%	Exceeded*	Achieved (8.2%)	
DK	29.2%	30%	92%	Exceeded*	Achieved (10.5%)	
SI	21.9%	25%	38%	Exceeded*	Achieved (1.4%)	
HU	9.5%	13%	30%	Exceeded*	-2.8%	
BE	8.0%	13%	37%	Exceeded	-1.5%	
AT	33.1%	34%	76%	Exceeded*	Achieved (3.7%)	

DE	13.8%	18%	48%	Exceeded*	Achieved (0.1%)	
UK	7.0%	15%	32%	Exceeded	-2.6%	
LU	4.5%	11%	20%	Exceeded	-3.5%	
CY	9.0%	13%	46%	Exceeded	Achieved (2.2%)	
PL	11.4%	15%	43%	98%*	-1.3%	
ES	16.2%	20%	46%	91%*	Achieved (2.3%)	
PT	27.0%	31%	39%	87%	Achieved (0.3%)	
IE	8.6%	16%	32%	88%	-3.6%	
MT	4.7%	10%	46%	87%*	Achieved (0.2%)	
FR	14.3%	23%	20%	56%	-2.2%	
NL	5,5%	14%	12%	35%*	-6.8%	

Source: Authors' calculations based on Eurostat data.

Notes:

a) A green bar designates MS that are projected to reach their targets under a linear growth scenario, while a red bar indicates those like to fail. A list of MS abbreviations appears in Annex 1.

b) The appearance of an asterisk (*) in the 5th column indicates that the NREAP 2020 ambition was higher than the prescribed 2020 target. The difference in percentage points: SE (1.2), LT(1), DK (0.4), AT (0.2), CZ (0.5), HU (1.7), DE (1.6), SI (0.3), PL (0.5), MT (0.2), ES (2.7) and NL (0.5).

The values resulting from linear extrapolation on the lower end show that some MSs would miss their targets by a significant margin. It is important to note that the total growth necessary to reach the target is back-loaded, meaning that accelerated growth is foreseen in the later years of the decade.

Thirteen MSs have undertaken to achieve a higher 2020 RE share in their NREAP than was assigned to them by the Renewable Energy Directive. Thus, trailing behind their NREAP trajectory (fifth column) for these MSs does not necessarily indicate that they are falling behind the trajectory to meet the prescribed 2020 target (see note a under Table 1).

3. Status on fulfilling national objectives based on other data

3.1 Available sources

Official data for the 2015 RE shares of MSs will only be published by Eurostat in early 2017. Few other data sources are available that can act as a basis for surveying national trends since 2014. A requirement for such data is that its quality if sufficiently high to allow for greater accuracy in forecasting the 2015 share than would be produced by a simple extrapolation of official historical values.

ENTSO-E provides data on transmitted power from renewable energy sources, but only power that passes through transmission lines is covered. Energy that is produced and consumed within the boundaries of a single Distribution System Operator (DSO), a non-negligible share, is not reflected in the data.

Technology-specific data exist for solar and wind energy from the respective EU-level associations, but they are not sufficient to allow for calculating the aggregated final RE consumption from all technologies and sectors.

Lastly, IRENA collects data for RE capacity additions in the electricity sector from a variety of sources, including a questionnaire, official statistics, industry association reports, other reports and news articles. This dataset was chosen as the best option for further data analysis, as it covers all RES-E technologies and data are available up to 2015 for all MSs (vs. 2014 for official data). The most important shortcoming is that the heating/cooling and transport sectors are not covered and that the IRENA data are given in terms of installed capacity (not produced energy).

The IRENA data cover the renewable electricity (RES-E) sector only. With the official SHARES dataset from Eurostat, it is possible to analyse past data by sector and apply individual methodologies for forecasting developments in each one. Hence, the RES-E capacities from the IRENA dataset can be applied to manipulate RES-E data only. This option necessitates the application of two more methodologies to the transport and heating/cooling sectors as well, which can only be done based on the official data up to 2014. However, trends in these sectors do not follow a strict growth pattern as is the case for RES-E. They are influenced by annually varying climate conditions in the MS (RES-H/C) as well as by agricultural limitations and policy changes (RES-T). The resulting volatility has been found to outweigh the benefits of an approach differentiated by sector. The method used works at a more aggregated level, manipulating the extrapolated growth in RE production from all sectors between 2014 and 2015, with a trend variable derived from the IRENA data.

3.2 Methodology

The RE share is calculated by dividing final RE consumption by GFEC. While GFEC has remained relatively constant in most MSs in recent years (variation each year, but no trend down or up), RE consumption has seen growth in all MSs, due to support policies.

IRENA data provide values for installed RES-E capacities in all MSs for the years 2006-15. Annual growth in capacity is, primarily, proportional to growth of produced renewable electricity, but it can also be interpreted as an indicator of the support action taken for RE by a government in a specific year. Under this assumption, we searched for a correlation between growth in RE (official data) and growth of installed RES-E capacity and found the following relationship:

$$G_{e,2014-2015} = G_{e,av,2011-2014} \cdot \left(\frac{G_{c,2014-2015}}{G_{c,av,2011-2014}}\right)^{2/3}$$

$G_{e,2014-2015}$: Growth rate of renewable energy from 2014 to 2015 (Eurostat data).

$G_{e,av,2011-2014}$: Average growth rate of renewable energy from 2011 to 2014 (Eurostat data).

$G_{c,2014-2015}$: Growth rate of installed RES-E capacity from 2014 to 2015 (IRENA data).

$G_{c,av,2011-2014}$: Average growth rate of installed RES-E capacity between 2011 and 2014 (IRENA data).

This relationship was found based on a trial-and-error approach, by applying various different equations to predict RE production in 2014 (which is available) and comparing accuracy.

As GFEC does not follow any obvious trend, but is dependent on many variables, we calculated that the best approach for predicting the following year is to take the same value as the previous year ($GFEC_{2014}$=$GFEC_{2015}$).

3.3 Results

Using this approach, the margin of error (average percentage deviation) between the predicted and actual 2014 values across all MSs was 4.9%, which includes a number of MSs in which the deviation was higher. The threshold value for acceptable deviation was chosen at 5%. The results are shown in Table 2 below, in which the margin of error is included in the far right column. MSs that have exceeded the threshold are marked in grey.

Table 2. Results from analysis using IRENA data

MS	2015 trend based on IRENA data	Share 2015	Percentage of NREAP 2015 forecast reached*	2020 gap based on linear extrapolation (percentage points)	Change in gap from 2014 projection (percentage points)		Margin of Error for 2014 validation run
HR	+	27.7%	Exceeded	Achieved (9.4%)	-4.3%		0.9%
FI	+	41.7%	Exceeded	Achieved (15.5%)	+2.9%		3.8%
SE	+	53.5%	Exceeded*	Achieved (8.3%)	-2.6%		1.0%
IT	-	17.5%	Exceeded	Achieved (4.1%)	-4.8%		2.7%
BG	-	18.1%	Exceeded	Achieved (5.2%)	-6.2%		4.2%
LT	+	26.4%	Exceeded*	Achieved (10.4%)	+1.9%		3.7%
RO	-	25.0%	Exceeded	Achieved (5%)	-2.9%		6.5%
EL	-	15.6%	Exceeded	Achieved (1.3%)	-5.5%		4.1%
LV	-	38.9%	Exceeded	Achieved (4.8%)	-4.2%		4.4%
EE	-	26.6%	Exceeded	Achieved (3.2%)	+0.3%		0.9%
DK	-	30.1%	Exceeded*	Achieved (8%)	-2.5%		5.6%
AT	+	34.2%	Exceeded*	Achieved (4.5%)	+0.8%		1.1%
CZ	-	13.7%	Exceeded*	Achieved (4.8%)	-3.4%		3.6%
SK	-	11.6%	Exceeded	Achieved (0.2%)	+0.9%		12.4%
HU	-	9.5%	Exceeded*	**-3.7%**	-0.9%		1.7%
UK	+	8.1%	Exceeded	-1.0%	+1.6%		9.1%
DE	-	14.5%	Exceeded*	Achieved (0.8%)	+0.8%		5.5%
BE	-	8.3%	Exceeded	**-2.7%**	-1.2%		2.0%
CY	+	9.8%	Exceeded	Achieved (1.9%)	-0.3%		10.0%
SI	-	21.9%	Exceeded*	**-1.7%**	-3.1%		2.4%

PL	+	11.7%	**93%***	**-2.1%**	-0.8%		1.5%
MT	-	5.2%	**94%***	**-0.8%**	-1.0%		19.3%
ES	-	16.7%	**84%***	Achieved (0.9%)	-1.3%		6.7%
LU	-	4.6%	**68%**	**-3.5%**	0.0%		3.5%
IE	+	9.4%	**83%**	**-2.7%**	+0.8%		3.1%
FR	+	15.6%	**71%**	**-4.2%**	-2.1%		2.0%
PT	-	27.0%	**65%**	**-0.1%**	-0.4%		7.9%
NL	+	5.9%	**37%***	**-6.0%**	+0.8%		10.1%

Notes:

a. A green bar designates MS that are projected to reach their targets under a linear growth scenario, while a red bar indicates those like to fail. A list of MS abbreviations appears in Annex 1.

b. The appearance of an asterisk (*) in this column indicates that the NREAP 2020 ambition was higher than the prescribed 2020 target. The difference in percentage points: SE (1.2), LT(1), DK (0.4), AT (0.2), CZ (0.5), HU (1.7), DE (1.6), SI (0.3), PL (0.5), MT (0.2), ES (2.7) and NL (0.5).

4. Assumptions on countries reaching their objective

The real outcomes in 2020 will be influenced by different factors of both the past and the future. Renewable energy growth depends, inter alia, on the development of technology costs, cost of capital, market prices, market barriers and member states' support policies, but also public acceptance.

A key element for reaching the target will be economic growth as well as growth in energy consumption. With the available data we could not find a clear correlation across all member states between economic growth and energy consumption. There could be multiple reasons, among them different speeds at which energy efficiency policies are developed at the national level, varying weather conditions and different shares of electricity in heating.

Nevertheless, some qualitative remarks can be made. The development of energy consumption affects the RE share considerably. Some of the growth in the RE share to date is due to reduced energy consumption, which is partly attributable to a reduction in economic activity caused by the economic crisis of 2009. As a result the current renewable energy shares have been inflated to higher values than would have been the case had the crisis not erupted. If the economy picks up and energy demand rises again, RE shares may decrease.

Some member states are back-loaded, i.e. higher growth rates are foreseen in the final years of the policy cycle. Based on Eurostat data, this is the case for the member states that fall in the lower range of the *Percentage of 2020 target achieved in 2014* (e.g. below 40%) but in a higher range (e.g. above 60%) of *Percentage of NREAP 2014 forecast reached* (Table 1). Based on 2014 figures, these would describe BE, IE, HU, LU, SI and the UK.

These member states would be particularly vulnerable to accelerating economic growth assuming that it translates into higher energy consumption. A comparison of historical growth rates from 2006 to 2015 shows that economic growth in Ireland (IE) has been accelerating

between 2014 and 2015 (see Annex 3). If this growth rate continues, the gap to target will grow in absolute terms. Ireland has seen a positive trend in terms of RE growth in 2015, according to analysis based on IRENA data, with the RE growth rate increasing compared to the previous year. However, the acceleration was not strong enough to keep up with the back-loaded NREAP reference curve, resulting in a drop in the *Percentage of NREAP 2015 forecast reached* from 88% to 83%.

Out of the group of back-loaded countries, high economic growth rates can also be observed for the UK and Luxembourg, possibly jeopardising their prospects of achieving their target. The UK is a special case as a result of Brexit; by invoking Art. 50 of the EU Treaty, most likely in March 2017, the UK will be free to revoke its target. The uncertainty may also have a tempering effect on economic growth.

In the case of Luxembourg, high economic growth may make it more difficult for the country to reach its target. According to the analysis based on IRENA data (Table 2), RE growth in Luxemburg decreased between 2014 and 2015. While the country exceeded the RE share foreseen for 2014, the 2015 analysis points to merely 68% being reached in 2015, indicating that Luxembourg is falling behind.

France and the Netherlands appear to face the most critical situation: based on 2014 Eurostat data, they are very low in *Percentage of 2020 target achieved in 2014* (FR = 20%; NL = 12%) and are also far lower than the forecast of the NREAP indicates. France has achieved less than 60% of its forecast for 2014 and the Netherlands only 35%.

The Netherland is the country where target achievement is virtually ruled out. The most optimistic estimates assume that the country might achieve a value of between 11-12% of renewables of GFEC, compared with a target of 14%. There are large-scale infrastructure projects under construction, but such projects often face delays. In 2005 when the RED was adopted, the Netherlands reported a RE share of only 2.4%, which shows there has been progress, although not enough to meet the target. The Dutch authorities seem to accept the likelihood that they will miss the 2020 target.

Among the reasons is the lack of a long-term objective in combination with a strong focus on cost-efficiency. This focus on efficiency has been at the expense of effectiveness, i.e. actual growth in the share. Within this logic, support systems have been frequently changed; three times between 2000 and 2007. The current system of floating feed-in premium seems to work better. The so-called Energy Agreement, a high-level political accord between the government, industry and civil society, which is unprecedented for the Netherlands, has led to the formulation of a new target of 16% by 2023, an ambition that many think could be achieved. Adopting this new target and making some progress towards it are likely to help the Netherlands to deal with a possible or infringement procedure for non-compliance with the RED that the European Commission will very likely launch. The Netherlands can make the case that after delays, the renewables support policy is finally in place to deliver growth, even if it is late. Missing the 2020 target will likely have a negative impact on the country's credibility

related to the promotion of RE and implementation of the international climate change agreements.

France is in a similar situation and is not on track to reach the target. In 2014 it had reached 14% of its 23% target. The principal reason is the adoption of the Energy Transition Law as late as 2015 and the late adoption and implementation of effective support mechanisms. This means that the government's vision for renewables is mainly set for the post-2020 period. With both the vision and the support systems in place, France could possibly build up its RE share, although it is probably too late to meet its target.

According to analysis for the year 2015, France seems to have been able to increase its *Percentage of NREAP forecast reached* from 56% in 2014 to 71% in 2015. The country's increased *2020 gap based on linear extrapolation* in the same timeframe is due to the fact that it experienced a large share of its RE growth up to now between 2010 and 2011, which is no longer included in the linear extrapolation of 2015 data.

Another factor influencing the achievement of RE targets are retroactive changes to support systems (see Egenhofer et al., 2016). The case of Spain stands out, both due to the material size of the cuts and the large volume of investments affected, although the Czech Republic, Bulgaria, Poland, Romania and Italy have also introduced reforms that have significantly altered the investment environment for the renewable sectors. All of these countries, with the exception of Poland and Spain, have already achieved their targets in 2014 and it is unlikely that the retroactive changes will affect existing installations to such an extent that they fall below current levels.

Spain and Poland, on the other hand, are close to being on track with their foreseen developments (see *Percentage of NREAP 2014 forecast reached*). In 2014 Spain reached 46% of its 2020 target while the respective figure for Poland is 43%. Retroactive changes in these two countries are likely to jeopardise target achievement. The Polish situation is even more critical, as the new government has imposed strict requirements on new wind projects, which may bring developments to a halt in this sector. Moreover, economic growth is above the EU average, which may lead to higher GFEC in the coming years, creating a possible further obstacle to meeting the target.

Although the 2015 data based on IRENA does not allow for accurate quantification, a negative trend in installed capacity can be discerned in the data for Spain. While Poland had higher capacity additions in 2015 than on average in the previous years, the increase was not great enough to offset higher demand due to back-loading, with *Percentage of NREAP forecast reached* dropping from 98% to 93%. With the recent policy changes, a stronger decline may be ahead.

Lastly, in Portugal, analysis for 2015 implies that progress was already delayed in 2014 (*Percentage of NREAP 2014 forecast reached* at 83%) and RE growth is further slowing.

5. Conclusions and recommendations

Growth of the RE share has been facilitated by a low economic growth rate, which has in some cases reduced energy consumption in the member states. Economic growth rates will most likely not affect target achievement of those member states that are close to reaching their target or have already done so, namely HR, BG, IT, FI, SE, RO, LT, LV, EE, CZ, DK and AT. However, for those member states that are only half way or less towards meeting their targets (i.e. have achieved around 50% or less of their target), which with the exception of SK, ES, PL and HU are member states with generally high GDP per capita, economic growth is likely to matter.

Recent retroactive changes to the existing support system can be expected to 'only' jeopardise target achievement in Spain and Poland. Other countries that featured retroactive changes (i.e. Bulgaria, Czech Republic, Italy and Romania) have already achieved their targets. Poland in addition features a relatively high economic growth rate. We could expect that the two effects together, high economic growth and retroactive changes, will negatively affect the trajectory towards target achievement and ultimately may result in non-compliance with the RED. Spain may also slide into non-compliance if the downwards trend continues.

Target achievement is helped if the costs of technology go down, as was the case for example in the recent Dutch auction for offshore wind, where the winning bid was priced at an average of €72.70 per MWh.

Two member states, the Netherlands and France, are very likely not to reach their targets and may face an infringement procedure for non-compliance with the RED. Both member states, however, have recently adapted their policies to ensure a growth in renewables capacity that is more in line with EU 2030 targets.

Recommendations

- The European Commission should continue its efforts to discuss with member states that are not on track to achieve their targets ways to develop strategies aimed at bringing their policies in line with their targets.
- The European Commission should initiate planning on the necessary actions to take when a member state misses its target. These might include facilitation of statistical transfers between member states in the accounts or other forms of action to compensate for a member state's non-compliance.
- Countries that face a high risk of missing their targets should consider the possible consequences and initiate talks with partners from other MSs and/or the European Commission to ensure that their shortfall is compensated for.
- In its evaluation of member states' performance in achieving their targets, the European Commission should more effectively take into account economic growth rates and retroactive changes.
- The European Commission should think about developing an EU-wide framework to address retroactive changes to renewable support policies as well as in other fields.

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Annexes

1. National RE targets by EU member state

Country	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV
2020 Target [%]	13	16	13	30	18	25	16	18	20	23	20	17	13	40
Share in 2005 [%]	2.2	9.4	6.1	17	5.8	18	3.1	6.9	8.7	10.3	12.6	5.2	2.9	32.6
Difference [%-points]	10.8	6.6	6.9	13.0	12.2	7.0	12.9	11.1	11.3	12.7	7.4	11.8	10.1	7.4

Country	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
2020 Target [%]	23	11	13	10	14	34	15	31	24	25	14	38	49	15
Share in 2005 [%]	15	0.9	4.3	0	2.4	23.3	7.2	20.5	17.8	16.0	6.7	28.5	39.8	1.3
Difference [%-points]	8.0	10.1	8.7	10.0	11.6	10.7	7.8	10.5	6.2	9.0	7.3	9.5	9.2	13.7

2. Member state abbreviations

Country	Code	Country	Code
Belgium	BE	Lithuania	LT
Bulgaria	BG	Luxembourg	LU
Czech Republic	CZ	Hungary	HU
Denmark	DK	Malta	MT
Germany	DE	Netherlands	NL
Estonia	EE	Austria	AT
Ireland	IE	Poland	PL
Greece	EL	Portugal	PT
Spain	ES	Romania	RO
France	FR	Slovenia	SI
Croatia	HR	Slovak Republic	SK
Italy	IT	Finland	FI
Cyprus	CY	Sweden	SE
Latvia	LV	United Kingdom	UK

3. GDP by member state, indexed to 2010

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
AT	96.9	100.4	102	98.1	100	102.8	103.6	103.7	104.4	105.4
BE	95.7	98.9	99.7	97.4	100	101.8	102	102	103.3	104.7
BG	89.9	96.6	102.4	98.7	100	101.9	101.9	102.8	104.2	108
CY	92.3	96.7	100.5	98.7	100	100.3	97.2	91.4	90	91.5
CZ	94.8	100	102.7	97.8	100	102	101.2	100.7	103.4	108.1
DE	97.5	100.7	101.8	96.1	100	103.7	104.2	104.7	106.4	108.2
DK	103.6	104.4	103.7	98.4	100	101.2	101.1	100.8	102.1	103.1
EE	112.5	121.2	114.7	97.8	100	107.6	112.2	113.8	117	118.7
EL	107.4	110.9	110.6	105.8	100	90.9	84.2	81.5	82.1	81.9
ES	98.8	102.5	103.7	100	100	99	96.1	94.5	95.8	98.8
FI	99.9	105.1	105.8	97.1	100	102.6	101.1	100.3	99.6	99.8
FR	98.5	100.8	101	98.1	100	102.1	102.3	102.9	103.5	104.8
HR	102.4	107.6	109.8	101.7	100	99.7	97.5	96.5	96	97.6
HU	104.9	105.4	106.3	99.3	100	101.7	100.1	102.2	106.4	109.7
IE	103.5	107.4	102.7	98	100	100	98.9	99.9	108.4	136.9
IT	103.6	105.1	104	98.3	100	100.6	97.7	96.1	96.1	96.8
LT	101.3	112.5	115.5	98.4	100	106	110.1	114	118	120.1
LU	93	100.8	99.9	94.5	100	102	102	106.3	111.3	115.2
LV	114.5	125.9	121.3	103.9	100	106.2	110.5	113.7	116	119.2
MT	92.1	95.8	99	96.6	100	101.8	104.7	109.4	113.2	120.2
NL	97.2	100.8	102.5	98.6	100	101.7	100.6	100.4	101.8	103.8
PL	84.1	90	93.9	96.5	100	105	106.6	108	111.5	115.6
PT	98.5	100.9	101.1	98.1	100	98.2	94.2	93.2	94	95..5
RO	93.6	100	108.5	100.8	100	101.1	101,7	105,3	108,5	112.5
SE	96.8	100.1	99.5	94.3	100	102.7	102.4	103.6	106.3	110.7
SI	97	103.7	107.1	98.8	100	100.6	97.9	96.9	99.9	102.2
SK	86	95.3	100.7	95.2	100	102.8	104.5	106.1	108.8	113
UK	100.6	103.2	102.6	98.1	100	101.5	110.4	110.4	110.4	110.4

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