

## EU GHG Emission Targets: “Mind the gap”

Ilaria Lojodice

In Durban, the European Union has been able to overcome the traditional dividing lines between developed and developing countries, setting a “roadmap” for a post-Kyoto framework. This would see countries conclude an “agreed outcome with legal force” on emissions targets by 2015.<sup>1</sup> Was this a key goal or a partial success for EU climate diplomacy? The main concerns are that the second commitment period would only come into force by 2021,<sup>2</sup> and that necessary carbon cuts are not to be increased before 2020.<sup>3</sup> The direct by-product for the EU victory has been the awakening of the debate about raising emissions reductions to 30%. In fact, as stated in the Low Carbon Roadmap, the EU has adopted a target of cutting emissions by 20% to by 2020, and of moving to a 30% reduction target if the conditions are right. Is this finally the time for Europe to improve its performance, even if it means going it alone? The EU has always been a strong defender of the Kyoto Protocol under certain constraints, such as developing and emerging countries entering into the deal. But does the EU have all the right assets to fight for this? Where is Europe in achieving its 2020 goal? In essence, this paper provides an estimate of what EU emissions could be in 2020, and how they stand compared to Kyoto and 20% objective of the 2020 strategy.

Ilaria Lojodice was intern with the Center for Energy

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<sup>1</sup> Harvey F., Vidal J., “UN climate change talks: EU plan raises hopes of last-ditch deal. Greenhouse gas emissions would be cut from 2020 if China decides to follow EU roadmap”, The Guardian, 8 December. 2011, <http://www.guardian.co.uk/environment/2011/dec/08/eu-plan-climate-deal-hopes>

<sup>2</sup> McDonagh S., SSC, What has happened to the EU’s leadership on Climate Change? Ecology Development, Mon, Dec 5, 2011

<sup>3</sup> van Renssen S., Durban leaves large question marks hanging over climate policy, 15 December 2011, European Energy Review



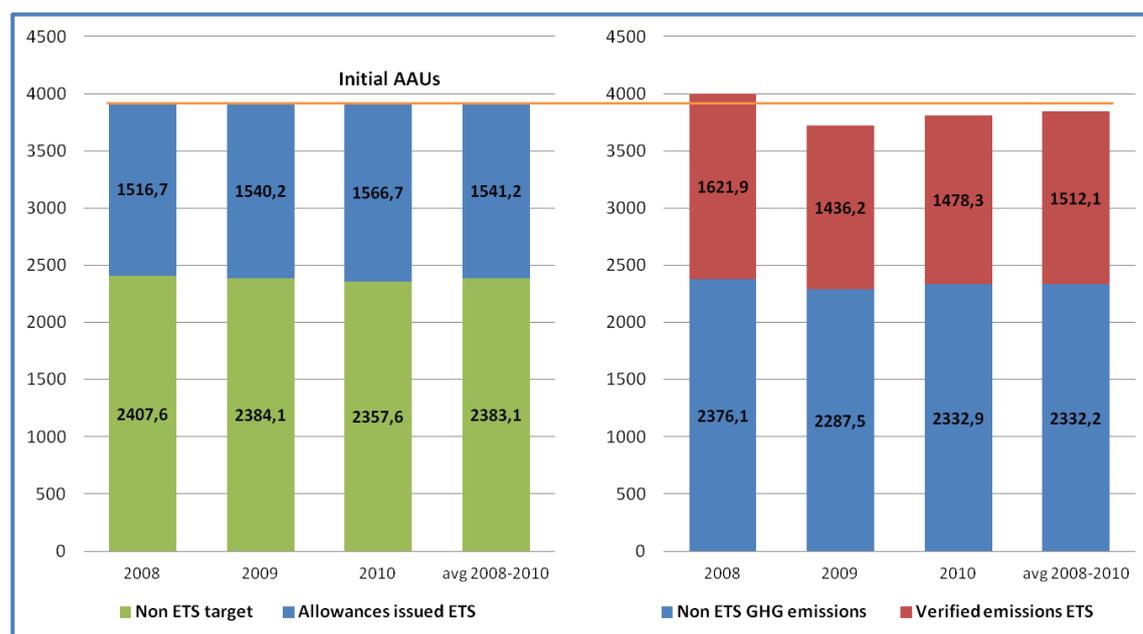
## On track towards Kyoto target

According to the **Kyoto Protocol**, the **EU-15** has assumed a **common pledge of reducing GHG emissions by 8% on average between 2008 and 2012, compared to 1990 levels.**<sup>4</sup> Within this overall target, under the **Burden-sharing Agreement**, **Member States committed to differentiated emission limits or reduction target averages** to be achieved during the period 2008-2012.<sup>5</sup>

The following paragraphs present an assessment of the progress achieved by the EU and selected European countries towards their GHG emissions goal, under the Kyoto Protocol and the Climate and Energy Package.

Looking at **average emissions** over the first three years of the first commitment period, the **EU-15** as a whole is on track to meet its **Kyoto target (Figure 1)**.

**Figure 1 ETS and non-ETS emissions trends in EU-15 compared to respective targets, 2008-2010 (Calculated using EEA data)**



For the end of 2010, **Figure 2** shows that **average EU-15 emissions in sectors which are not covered by the EU Emissions Trading System (ETS)**, such as transport, buildings, agriculture and waste,<sup>6</sup> were lower than the target by a **surplus of 50.9 Mt CO<sub>2</sub> per year**, without the use of flexible mechanisms and carbon sinks.<sup>7</sup>

<sup>4</sup> The EU-27 does not have a common target under the Kyoto Protocol since it was ratified before 2004 and 12 Member States joined the European Union only afterwards. 10 of the 12 new EU Member States (excluding Cyprus and Malta) adopted individual targets under the Kyoto Protocol.

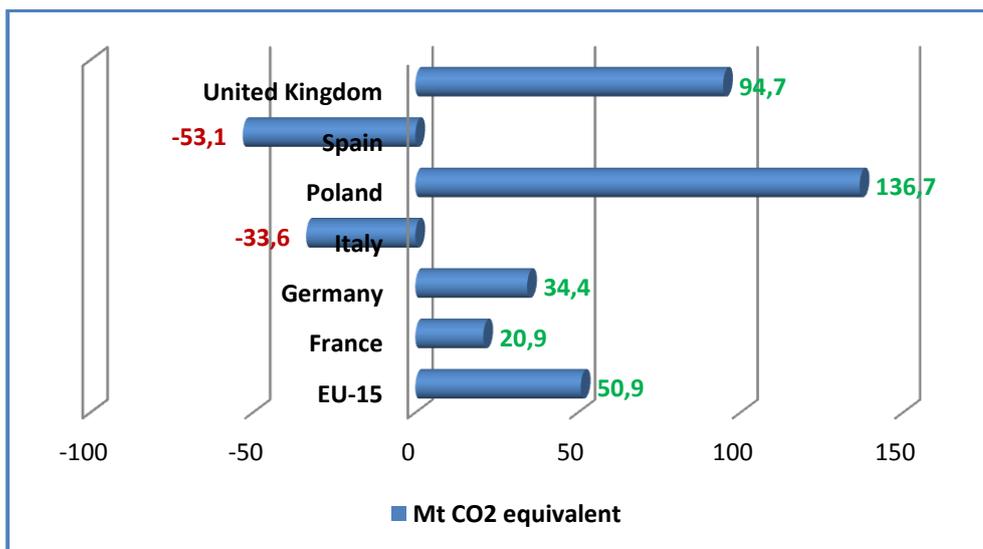
<sup>5</sup> COM (2010) 569 final.

<sup>6</sup> While the ETS covers CO<sub>2</sub> emissions from installations such as power stations, combustion plants, oil refineries and iron and steel works, as well as factories making cement, glass, lime, bricks, ceramics, pulp, paper and board.

<sup>7</sup> "To achieve its Kyoto target, a country should reduce or limit its emissions so that they do not exceed its emission budget. A country can also adjust its emission budget by adding or subtracting Kyoto units, through the use of the Kyoto Protocol's flexible mechanisms. Kyoto units may come from

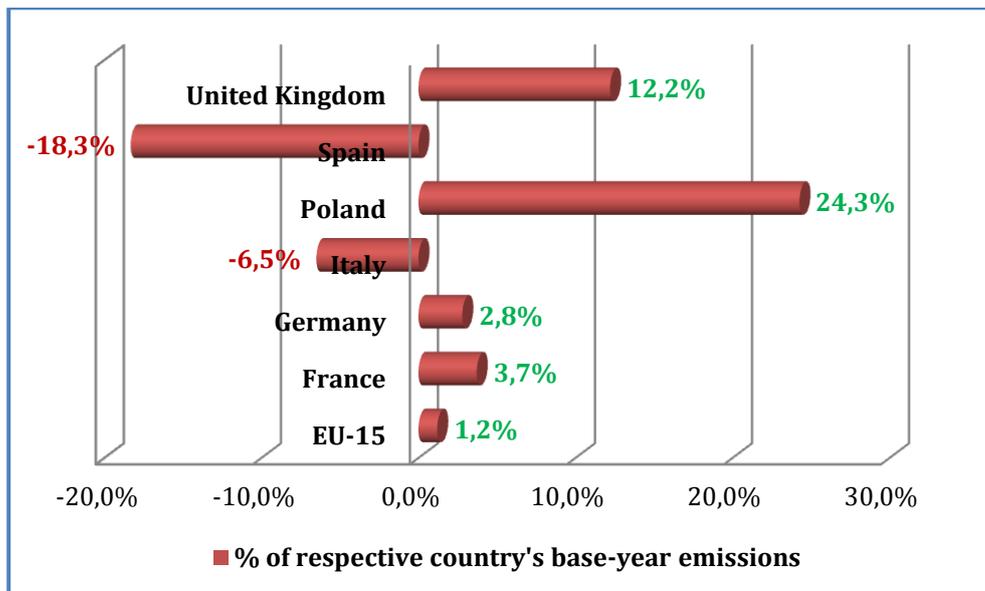
This is **equivalent to** saying that the EU-15 has a **surplus of 1.2% on base year emissions**, or that it currently stands 9.2% below its base year-emissions. In the paper, the use of carbon sinks and flexible mechanisms are not considered in estimating the real improvements by Member States towards the Kyoto pledges through the use of existing domestic policy and measures. Indeed, the success in reducing emissions from non-ETS sectors will determine whether governments need to use Kyoto flexible mechanisms to achieve their targets.

**Figure 2 Gaps between Kyoto targets and average 2008-2010 emissions in the sector not covered by the EU ETS (without the use of carbon sinks and flexible mechanisms) (Calculated using EEA data)**



other countries' emission budgets (AAUs), be generated from carbon sink activities (RMUs) or from emission-reducing projects in other countries (CERS, ERUs)." Notably:

- **Assigned amount units (AAUs)** can, to a certain extent, be traded between countries under one of the three Kyoto flexible mechanisms called "**international emission trading**";
- **Certified emission reductions (CERs)**, issued for emission reductions from certain emission-reducing projects in developing countries (which have themselves no target under the Kyoto Protocol). These units correspond to one of the three Kyoto flexible mechanisms called the "**clean development mechanism**";
- **Emission reduction units (ERUs)**, issued for additional emission reductions or emission removals from certain emission-reducing projects in other industrialized countries (which have themselves a target under the Kyoto Protocol). These units are issued by converting an equivalent quantity of existing Kyoto units of the project's host country. They correspond to one of the three Kyoto flexible mechanisms called "**joint implementation**";
- **Removal units (RMUs)**, issued when specific activities (**related to land use and forestry and often referred to as carbon sink activities**) contribute to removing carbon dioxide (CO2) from the atmosphere. European Environment Agency, *Questions and answers on.... Key facts about Kyoto targets*, 4 June 2010



These figures take into account the role of ETS allowances and emissions on the EU Kyoto pledge. In fact, to state a country's situation with regards to its Kyoto target, one must account for the effect of the EU ETS on the overall emission budget.<sup>8</sup> Thus, the status of a country can be checked by comparing average emissions in non-ETS sectors with the non-ETS emission budget:<sup>9</sup>

**[Total GHG emissions – ETS verified emissions] vs. [Kyoto emission budget – national EU ETS cap for 2008–2012 (allocated allowances)]**

Therefore, when Member States fix their national emissions caps, they allocate *de facto* part of their Kyoto emissions budget to the ETS sector. So, once ETS caps have been set, emissions in these sectors do not affect Kyoto targets. It is relevant to observe that whether the recession led to GHG emission reductions in 2009 all over Europe, the existing gap between the target and the non-ETS emissions is only partially due to the economic crisis which has largely affected the emissions reduction of the ETS sectors.

In fact, as reported by the latest EEA report, **observing trends for 2008-2010 (Figure 1)**, while GHG emissions in 2008 were higher than the annual average Kyoto target, emissions in non ETS-sectors were lower than their budget.<sup>10</sup> In 2009 there was a sharp 6.2% decrease of GHG emissions in the EU-15 compared to 2008, mostly due to the economic recession. However, **breaking down the emissions by emitting sectors, the ETS reduction in absolute values was more than twice that of non-ETS sectors.** Moreover, we should consider that the number of allowances allocated to ETS operators grew each year from 2008 to

<sup>8</sup> A Kyoto target, expressed as a percentage, corresponds in practice to an emission budget, i.e. a quantity of emissions that a country is allowed to emit during a certain period [EEA definition], *ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> EEA Report No 4/2011, Greenhouse gas emission trends and projections in Europe 2011.

2010. Thus, the non-ETS emission target was reduced in 2010 compared to 2009, diminishing the effect of the GHG decrease in the non ETS-sector. Generally, EU-15 non-ETS emissions were lower than the EU-15 non-ETS target in 2009, but this overachievement lessened in 2010.

Looking at the national level, a sample of Member States (such as France, Germany, Italy, Poland, Spain and United Kingdom) is used here, because of their relevance. Notably, Germany and United Kingdom are the two largest emitters, together accounting for about 40% of total EU-15 GHG emissions over the period 1990-2010. Yet, these two Member States have achieved total GHG emission reductions of 479 million tonnes CO<sub>2</sub>-equivalents compared to 1990 (**Table 1**). As stated in the EEA technical report,<sup>11</sup> the main reasons for the favorable trend in Germany were increasing efficiency in power and heating plants as well as the share of renewables in the energy mix and the economic restructuring of the five new *Länder* after German reunification. The reduction of GHG emissions in the United Kingdom was primarily the result of liberalizing energy markets and the subsequent fuel switches from oil and coal to gas in electricity production.

France and Italy were the third and fourth largest emitters with a share of 13% and 12% of total emissions, respectively in 2010. Italian GHG emissions initially increased, primarily due to road transport, electricity, heat production and petrol refining. However, they decreased significantly between 2008 and 2010 (8.8 %), also because of the increase in renewables. France's emissions were 6.7 % below 1990 levels in 2010. In France, large reductions have been achieved in N<sub>2</sub>O emissions from adipic acid production, but CO<sub>2</sub> emissions from road transport and emissions from the consumption of halocarbons increased considerably between 1990 and 2009. In addition, the cold winter in 2010 resulted in higher energy consumption for heating.

Poland and Spain are the fifth and sixth largest emitters in the EU-15, each accounting for about 10% of total EU-15 GHG emissions in 2010. Spain increased emissions by almost 25% between 1990 and 2010. This was largely due to emission increases from road transport, electricity and heat production, as well as from manufacturing industries, although primary consumption of renewables continued to grow at high rates. Poland decreased GHG emissions by 13% between 1990 and 2010 because of the overall restructuring of its economy after the 1990s. The Polish case is particularly interesting because the country is 95% dependent on coal for generating electricity, so that today it has a significant weight in the European policy balance.

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<sup>11</sup> EEA Technical Report No 2/2011, Annual European Union greenhouse gas inventory 1990–2009 and inventory report 2011.

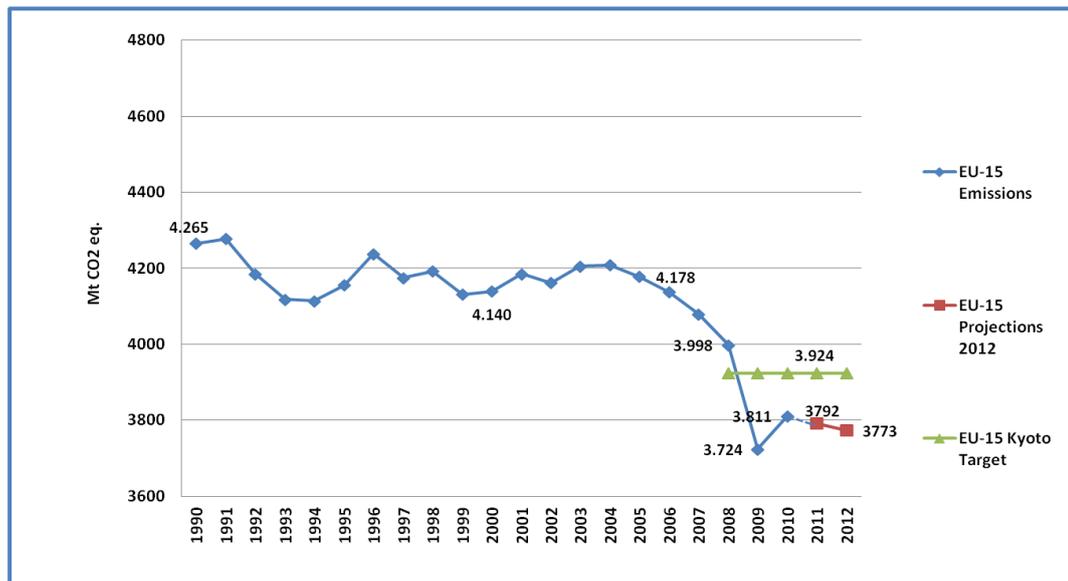
**Table 1 GHG emissions in CO2 Mt-eq. (excluding LULUCF and flexible mechanisms) and Kyoto protocol targets for 2008-2012 (Elaborated on EEA Technical report No 2/2011 data)**

Member States	EU GHG emissions 1990-2010 in CO2 Mt-eq.														Kyoto Target 2008-2012	
	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	avg 2008 - 2010	%	Mt CO2-eq.
France	563	560	567	569	564	566	566	569	553	545	539	517	525	527	0%	0
Germany	1248	1120	1042	1057	1037	1031	1021	1000	1002	980	981	920	960	954	-21%	-262
Italy	519	530	552	557	559	573	577	575	564	555	542	491	494	509	-6,5%	-34
Spain	283	315	380	380	397	404	420	434	426	437	405	368	354	376	15%	43
United Kingdom	776	710	670	674	653	658	656	651	645	634	620	566	585	590	-12,5%	-97
EU-15	4265	4155	4140	4185	4162	4205	4208	4178	4137	4080	3998	3724	3811	3844	-8%	-341
Poland	453	440	389	386	373	385	386	388	402	401	396	377	393	389	-6%	-27

Returning to **Figure 2**, data show that **all the selected Member States were on track for their Kyoto targets, except Italy and Spain**. Although, when the intended use of the flexible mechanism and carbon sinks are taken into account, Spain is also on the right track with a positive, average gap of 10.1 Mt CO<sub>2</sub> equivalent between non-ETS emissions and Kyoto targets. In contrast, Italy must achieve further emission reductions in the two remaining years of the commitment period (8.6 Mt CO<sub>2</sub> equivalent on average in 2011-2012) and increase the quantity of emission credits it intends to acquire through flexible mechanisms or carbon sinks. The surprising improvement in Polish emissions has been triggered by significant economic change and modernization, mostly in heavy industry, related to the political transformation from a centralized to a free market economy.

Assuming that EU-15 emissions are projected to decrease slightly from 2010 levels by an average 0.5% per year in 2011 and 2012 (as in the previous 20-year period), **the current projections for the EU-15** in the remaining years of the commitment period suggest that – **with existing measures in place – GHG emissions** will on average be 11.3% below base-year levels (**Figure 3**), thus **very likely overachieving the Kyoto target**.

**Figure 3 Trends and projections of EU-15 Total emissions (excluding LULUCF) Mt CO<sub>2</sub> eq. (Calculated using EEA data)**



### Achieving the 2020 target

The previous paragraphs have shown how the EU-15 is close to its Kyoto pledge. However, looking at the flip side of the coin, this might actually mean that the Kyoto targets were insufficiently ambitious. If so, considering that the second Kyoto commitment period has been negotiated on behalf of 27 Member States instead of 15, then it could nevertheless be difficult to agree on a larger reduction.

Notwithstanding the positive steps towards achieving the Kyoto target shown by projections for 2008-2012, further efforts and additional measures will be necessary to cope with the 2020 targets.

The **Climate and Energy Package**, adopted in 2009, sets a new **total target for the EU-27 of a 20% reduction of 1990 levels of GHG emission reductions by 2020** (i.e. -14% compared with 2005). This is split into sub-targets:

- An overall reduction of **21%** for the **EU-27** compared to 2005, in **EU ETS sector** emissions;
- A reduction of **10%** compared to 2005 for the sector **not** covered by the **EU ETS, divided into national targets** and to be achieved individually by each Member State.

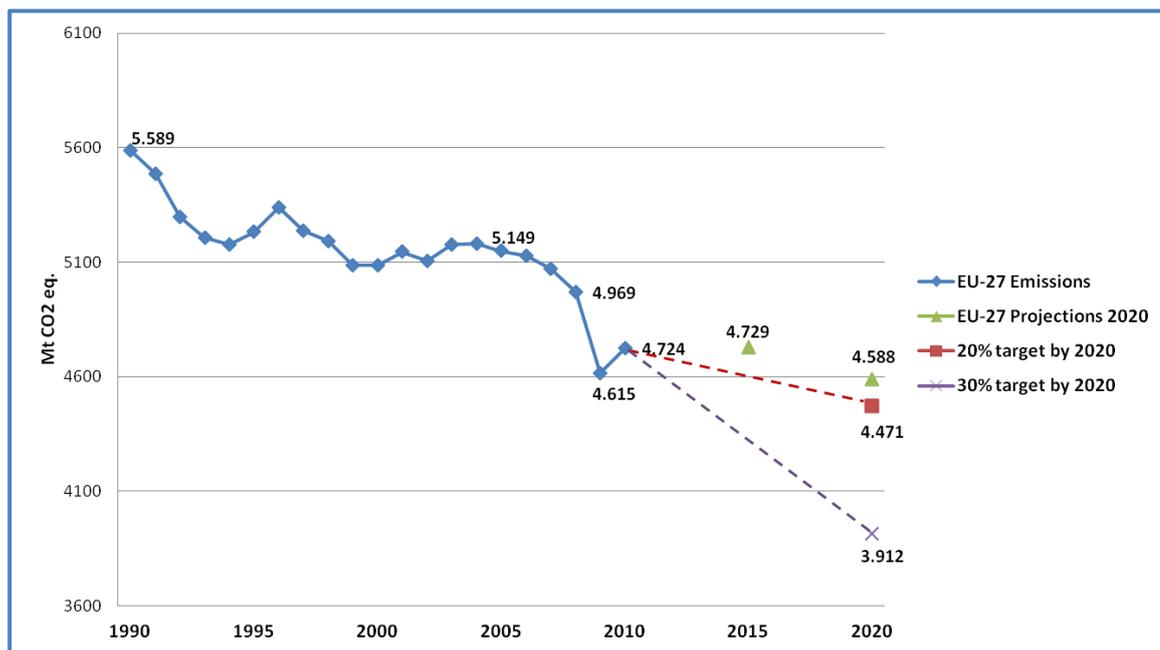
As stated in a recent EEA Technical Report, there will be an EU-wide cap on emissions from ETS installations (instead of national allocation plans under Kyoto) from 2013, and national targets for the non-trading sectors.<sup>12</sup> Auctioning will play a

<sup>12</sup> EEA Technical Report No 11/2011, *Approximated EU GHG inventory: Early estimates for 2010*, European Environment Agency, 7 October 2011

much greater role than in the past, while the share of the free allocations will decline over time. As with Kyoto, meeting the 2020 national targets will be determined by how countries reduce emissions in the non-trading sectors. But, as pointed out before, the non-ETS sectors have been the least affected by the crisis. So, the real success of the EU-27 in improving its emissions reduction needs to be analysed.

Based on recent EEA estimations, following a significant drop in 2009 due to the economic recession, total EU-27 GHG emissions rose in 2010, to stand at approximately 15.5% below their 1990 levels.<sup>13</sup> However, 2010 emissions did stabilize at 5% below 2008 levels (**Figure 4**). EU-27 emission projections for 2020 show that, with existing national measures in place, they will be around 18% below 1990 levels, which is just short of European 20% reduction target.<sup>14</sup> The gap of 2 percentage points could be filled if additional measures currently planned by Member States are implemented; in particular in the non-ETS sectors, such as in the residential, transport or agricultural sectors. Indeed, looking at the 30% target by 2020, projections of EU-27 total emissions indicate that existing and currently planned measures are likely to be insufficient to bring the EU onto the right path towards this pledge, leaving a 12 percentage point gap.

**Figure 4 Trends and projections of EU-27 total emissions in meeting the 2020 target (excluding LULUCF) Mt CO<sub>2</sub> eq. (Calculated from EEA data)**

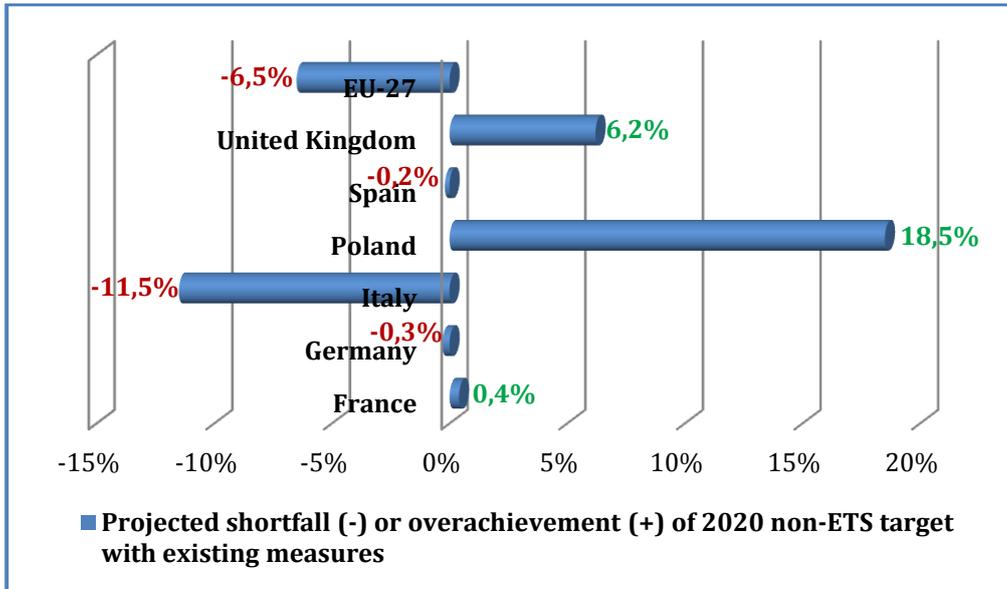


**At the national level**, projections reveal that only **three of the selected Member States** (France, Poland and the United Kingdom) **could meet their national 2020 target** in the sectors **not covered by EU ETS**, on the basis of existing measures; while Germany, Spain and Italy could achieve their targets through the implementation of additional measures (**Figure 5 and Table 2**). Globally, **the EU-27**

<sup>13</sup> EEA Report No 4/2011, Greenhouse gas emission trends and projections in Europe 2011, Cit., p. 4  
<sup>14</sup> Emission projections have been calculated on the basis of the trend which GHG emissions followed over the period 1990-2010 (excluding LULUCF). Projections calculated from EEA data.

is set to register a 6.5 percentage point **shortfall** on its **10% target** by 2020. Nevertheless, these projections only concern 2020, and do not take into account the fact that, during the period 2013-2020, Member States could still reallocate (through the use of flexibilities) the share of their emission allowance exceeding their annual GHG emissions for the following year, until the year 2020. This means that Member States could still achieve their national 2020 targets even though their non-ETS emissions in 2020 are higher than their national target.

**Figure 5 Projected gaps between 2020 GHG emissions and national targets in the sectors not covered by the EU ETS (Calculated from EEA data)**



**Table 2 Calculation of projected progress towards 2020 targets**

Member State	2005 non ETS emissions estimate	2020 European Sharing Decision target	2020 non ETS projections	GAP	
	(Mt CO2 eq.)	%	(Mt CO2 eq.)	(Mt CO2 eq.)	% of 2005 non-ETS
France	413	-14	355	1,5	0,4
Germany	488	-14	420	-1,4	-0,3
Italy	329	-13	287	-38	-11,5
Poland	171	14	195	31,7	18,5
Spain	231	-10	208	-0,6	-0,2
United Kingdom	374	-16	314	23	6
EU-27	5149	-10	4634	-335	-6,5

As reported by the EEA, **nearly 80% of total GHG emissions by the EU-27 are CO<sub>2</sub> emissions**. Within the CO<sub>2</sub> total, around **98% are CO<sub>2</sub> emissions originating from fuel combustion**, which fell by only 4% from 1990 to 2008, and with a similar fall in absolute CO<sub>2</sub> emissions. But, if we consider that one year later, the CO<sub>2</sub>

emissions originating from fuel combustion registered a sharp fall of 11.73%, we can evaluate the impact of the crisis on the fuel use.<sup>15</sup> In fact, as estimated by the approximated EU GHG inventory, **after the start of a partial economic recovery in 2010, the largest absolute increase in GHG emissions occurred in the energy sector** with a growth of 94.4 Mt CO<sub>2</sub> equivalent (2.6%) for the EU-27. This emission increase was carried forward by growth in the gross inland energy consumption of fossil fuel in the EU-27, in 2010.<sup>16</sup> EU-27 natural gas use increased by about 7.4 % in 2010, compared to 2009, rising in almost all Member States. Oil consumption showed a small decrease relative to 2009 in the EU-27 (-1.2 %) and a more pronounced decline in the EU-15. The trend in solid fuel consumption between 2009 and 2010 varied considerably among Member States, with solid fuel use increasing by 3.8 % for EU-27 as a whole (BP, 2011).<sup>17</sup>

An assessment of emission changes with respect to economic growth and energy use<sup>18</sup> can be useful to understand the climate and energy path taken by the EU from 1990 until 2009 (the last year of data available). Therefore, considering:

- GDP growth over time,
- Energy intensity =  $\frac{TPES}{GDP}$ ,
- Carbon intensity of energy use =  $\frac{CO_2 \text{ from fuel combustion}}{TPES}$ ,
- $\frac{CO_2 \text{ emission from fuel combustion}}{GDP}$

With respect to 19 years ago, GDP in the EU only grew by 39.29%. Due to the crisis, the GDP fell by 4.47% between 2008 and 2009. Considering energy intensity (i.e. total primary energy supply divided by GDP), the EU showed a shortfall of 27.35% during the period 1990-2009. This change might have reflected the evolution of the economic structure and a more efficient use of energy.

Moreover, carbon intensity of energy use has continued its downwards trend in the EU, with a decrease of 12.77%. The significant decrease in this value is likely due to a less carbon-intensive energy mix, as well as to the economic recession. Consequently, Europe recorded a decrease of 36% of CO<sub>2</sub> emissions from fuel combustion divided by GDP, in 2009 (**Figure 6**). In looking at the indicator above, over the past nineteen years, whether GDP has increased, there is a clear slowing trend in the energy intensity and carbon intensity, as well as in the CO<sub>2</sub> emissions from fuel use. This has led to a similar declining path of CO<sub>2</sub> emissions from fuel combustion divided by GDP. While these figures did see some improvements in 2009, it would be interesting to check them once economic recovery takes hold, to see whether they result from the recession or from Europe's path to lower carbon emissions.

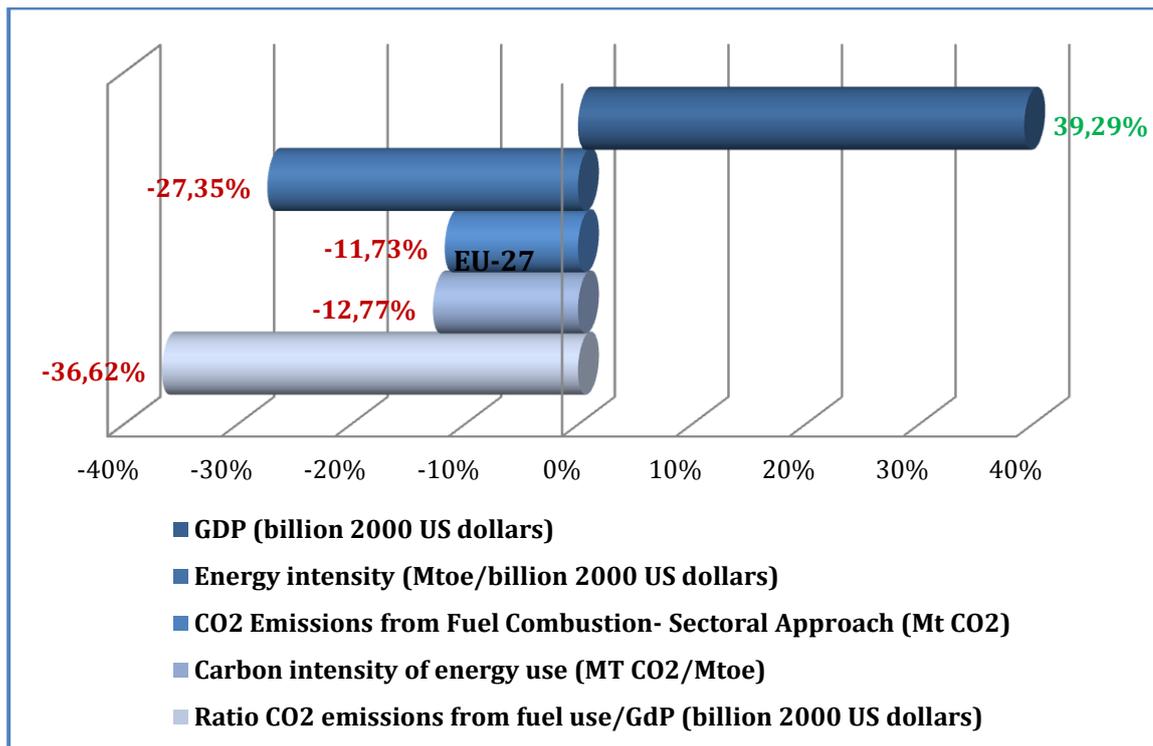
<sup>15</sup> Cf. Maïté Jauréguy-Naudin, "Getting Carbon Out: Tougher than It Looks. An assessment of EU, US & Chinese pledges", *Note de l'Ifri*, February 2010.

<sup>16</sup> EEA Technical Report No 11/2011, *Approximated EU GHG inventory*

<sup>17</sup> BP, 2011, *BP Statistical Review of World Energy 2011*

<sup>18</sup> See also Christoph Meyer, "Carbon Dioxide Emissions: 17 Years and Still Talking...", *Ifri Actuelles*, August 2010.

Figure 6 EU-27 Carbon intensity of energy use and energy intensity 1990-2009 change (%)<sup>19</sup>



For different scenarios, projections of the above values provide (not such) unexpected results (Table 3).

In its current policies scenario (H1), the International Energy Agency's World Energy Outlook (WEO) 2011 calculates that in 2020 EU-27 energy intensity and carbon intensity of energy use will be of 0.15 Mtoe/US\$2000 of GDP and 2.05 MtCO<sub>2</sub>/Mtoe respectively.<sup>20</sup> Although we must bear in mind that the time frame is different, the WEO scenario implies a slight shortfall in energy intensity (-15.2%), carbon intensity (-5.1%) and mainly in CO<sub>2</sub> emissions from fuel use (-1.2%) between 2009-2020 than the trends observed between 1990-2009.

In the light of the trend in EU-27 emissions between 1990-2009, it may be asked what CO<sub>2</sub> emissions from fuel combustion will be in 2020. Assuming that the energy and carbon intensity improves at the same rate for 2009-2020 as for 1990-2009 (H2), this translates into 3,816 MtCO<sub>2</sub> emissions from fuel combustion, which is higher than the WEO scenario (3,533 MtCO<sub>2</sub>), but still on the track towards the 2020 objective. The European Union should therefore be able to achieve its 2020 target.

It may be observed that energy and carbon intensity values have decreased since

<sup>19</sup> Elaborated on data extrapolated from the International Energy Agency (IEA) World Energy Outlook WEO 2011 database and the Climate Analysis Indicators Tool (CAIT) database.

<sup>20</sup> According to the IEA WEO 2011, "the Current Policies Scenario (called the Reference Scenario prior to WEO-2010) shows how the future might look on the basis of the perpetuation, without change, of the government policies and measures that had been enacted or adopted by mid-2011". International Energy Agency, World Energy Outlook (WEO) 2011. For Total annual Energy Supply the data source is the WEO 2009 Reference Scenario.

2000, notably from 2005. Thus, prolonging a shorter, recent period could be more useful to understanding the path towards 2020. **Assuming that energy and carbon intensity improve at the same rate for 2009-2020 as for 2005-2009 (H3)**, then energy intensity will amount to 0.13 Mtoe/US\$2000 of GDP in 2020, and carbon intensity to 1.97 MtCO<sub>2</sub>/Mtoe. These correspond to 2,661 MtCO<sub>2</sub> emissions from fuel combustion which would be far beyond expectations.

What if the crisis had never occurred? **This scenario supposes that the energy and carbon intensity improve at the same rate for 2009-2020 as for 2000-2007 (H4)**. If this were the case, the energy intensity would decrease by 15%, while the carbon intensity would improve by 1% between 2009-2020. These figures then provide a new value for CO<sub>2</sub> emissions from fuel combustion of 4,246 MtCO<sub>2</sub>, i.e. an increase of 18% compared to 2009.<sup>21</sup> This result, though pessimistic, shows realistically how it would have been impossible to attain the 2020 goal domestically, without an economic recession. Corroborating the EEA projections, the last hypothesis points out that, unless the carbon path and energy mix are improved, by implementing additional policies, the European emissions trajectory will likely follow an upwards trend.

**Table 3 EU-27 carbon intensity of energy use and energy intensity 1990-2020**

	GDP (billion 2000 US dollars)*	Total primary energy supply (Mtoe)*	Energy intensity (Mtoe/billion US dollars)	CO2 Emissions from Fuel Combustion - Sectoral Approach (Mt CO2)*	Carbon intensity of energy use (Mt CO2/Mtoe)	Ratio CO2 emissions from fuel use/GDP (billion US dollars)	CO2 emissions (Mt of CO2) WRI: CAIT data**	CO2 / GDP (Mt CO2 per 2000 US dollar)**
1990	6807	1636	0,24	4052	2,48	0,60	4173	0,61
1991	6891	1640	0,24	4034	2,46	0,59	4149	0,60
1992	6955	1602	0,23	3904	2,44	0,56	4011	0,58
1993	6942	1599	0,23	3823	2,39	0,55	3930	0,57
1994	7146	1592	0,22	3806	2,39	0,53	3916	0,55
1995	7342	1637	0,22	3847	2,35	0,52	3954	0,54
1996	7484	1693	0,23	3966	2,34	0,53	4073	0,54
1997	7692	1676	0,22	3879	2,31	0,50	3994	0,52
1998	7923	1687	0,21	3878	2,30	0,49	3997	0,50
1999	8167	1674	0,20	3812	2,28	0,47	3936	0,48
2000	8486	1686	0,20	3831	2,27	0,45	3953	0,47
2001	8654	1725	0,20	3905	2,26	0,45	4026	0,47
2002	8762	1720	0,20	3877	2,25	0,44	3996	0,46
2003	8880	1760	0,20	3994	2,27	0,45	4116	0,46
2004	9102	1778	0,20	4010	2,26	0,44	4131	0,45
2005	9280	1779	0,19	3979	2,24	0,43	4100	0,44
2006	9577	1779	0,19	3996	2,25	0,42	4127	0,43
2007	9858	1757	0,18	3942	2,24	0,40	4072	0,41
2008	9905	1751	0,18	3868	2,21	0,39	3982	0,40
2009	9482	1656	0,17	3577	2,16	0,38		
1990-2009	39,3%	1,2%	-27,3%	-11,7%	-12,8%	-36,6%	-4,6%	-34,4%
H1: 2020 WEO (Current Policies scenario) 2009-2020	11629	1723	0,15	3533	2,05	0,30		
	22,6%	4,1%	-15,2%	-1,2%	-5,1%	-19,5%		
H2: 2020 Prolonging the trend (1990-2009) 2009-2020	11917	1862	0,14	3816	2,02	0,26	4070	0,26
	25,7%	12,5%	-21,9%	6,7%	-6,4%	-32,2%	2,2%	-34,1%
H3: Our scenario (2005-2009) 2009-2020	10573	1387	0,13	2661	1,97	0,23	3516	0,24
	11,5%	-16,2%	-28,3%	-25,6%	-8,7%	-38,0%	-11,7%	-41,2%
H4: Pessimistic scenario (2000-2007) 2009-2020	12216	1938	0,15	4246	2,18	0,32	4391	0,33
	28,8%	17,0%	-15,1%	18,7%	1,1%	-14,9%	10,3%	-17,3%
data source WEO 2009								
*data source: <a href="http://data.iea.org">http://data.iea.org</a>								
**data source 1990-2008: <a href="http://cait.wri.org/cait.php?page=yearly">http://cait.wri.org/cait.php?page=yearly</a>								

<sup>21</sup> Maïté Jauréguy-Naudin, *Getting Carbon Out: Tougher than It Looks. An assessment of EU, US & Chinese pledges*, see p.6

## The low-carbon economy Roadmap 2050: Member States (still) at work...

The above analysis indicates that a significant gap remains to be bridged between the mitigation commitments and effective actions put forward by Parties for 2020 and beyond, in line with the objective of keeping global warming below 2° C.<sup>22</sup> Nevertheless, the European "Roadmap for moving to a competitive low-carbon economy in 2050" still leaves many miles uncharted.<sup>23</sup>

In fact, the Environment Council of Friday, 9 March 2012 was a hard time for the Danish Presidency which had put the emissions reduction "roadmap" at the top of the agenda; because Poland repeated its June 2011 veto on any intermediate step beyond the 2020 target, as a stage forward on the EU emissions reduction objective of 80% by 2050.<sup>24</sup> However, the Council unanimously adopted the conclusions on the follow-up to Durban. There was a consensus that the second commitment period should start in 2013 and end in 2020. Moreover, the Council confirmed that by 1 May 2012 the EU and its Member States would send jointly to the UNFCCC Secretariat information on their quantified emission limitations or reduction objectives (QELRO).<sup>25</sup> These would still be provisional and without prejudice to the calculation of the final burden sharing among Member States. Yet, the Presidency recalled that this submission will be based on the 20% target, entailing no changes in Member States' existing pledges, but it will also reflect the EU's conditional offer to take on a 30% commitment.<sup>26</sup>

The Polish position was adamant, claiming that the EU Climate policy is part of world climate policy, and hence the EU should act considering what the other countries have introduced. But when the international community would like to begin the global talks to decide on the third Kyoto Protocol period in 2015, it will likely be too late.

According to the EEA report, projections of Member States' GHG emissions could decrease further until 2030, but still too slowly to allow the EU to reach the drastic cuts in emissions needed in the long term. Projections show that with existing measures, 2030 emissions will be only 26% below 1990 levels, while additional measures will bring 2030 emissions 31% below 1990 levels. With the current set of policies, the EU would remain far from being on a pathway towards its long term objective of reducing emissions by 80%-95% by 2050, as agreed by European Heads of State and governments. As the Roadmap 2050 indicates, cost-effective emissions reductions, enabling the achievement of the long term targets, could result in reducing emissions domestically by about 40%, by 2030. But these milestones call for political will, coherence and critical realism to move forward on climate issues at

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<sup>22</sup> See Council of the European Union, Council conclusions, 3152th Environment Council meeting, Brussels, 9 March 2012

<sup>23</sup> COM(2011) 112 final

<sup>24</sup> Agence Europe No 10572, 13 March 2012

<sup>25</sup> See also SWD (2012)18 final, "Preparing the EU's QELRO based on the EU Climate and Energy Package" and COM (2010)265 final, "Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage".

<sup>26</sup> Council of the European Union, Press Release 7478/12; 3,152<sup>nd</sup> Environment Council meeting, Brussels, 9 March 2012.

the national and international levels.<sup>27</sup> In the run-up to the *Rio+20 Conference* in June 2012, it will be interesting to see which *footprint* the EU pathway will follow towards a sustainable future.<sup>28</sup>

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<sup>27</sup> See Jacques Lesourne, *La lutte contre le changement climatique suppose cohérence et rationalité*, *Edito Energie, Ifri*, November 2010

<sup>28</sup> COM(2011)363 final. See also Ban Ki-moon, *Rio+20 and the future we want*, *International Herald Tribune*, 24<sup>th</sup> May 2012, p.8