

March 2014
N°89

A newsletter of CDC Climat Research

European Offset Projects: A tool to rally Poland towards the 2030 Energy Climate Package

The next European Council of head of states, which will take place 20 and 21 March, will have its first debate regarding the communication "A policy framework for climate and energy in the period from 2020 to 2030" published in January 2014 by the European Commission. Finding a compromise between the Member States on this package is a challenge after Poland's veto on the "energy" and "towards a low-carbon economy by 2050" roadmaps. This compromise, if there is one, will constitute the EU's contribution to the preparation of the climate conference in Paris in 2015.

The debate opens on the Commission's proposition of reducing greenhouse gas (GHG) emissions by 40% in 2030 compared to 1990 levels. In its first written reaction, Poland emphasizes the possibility of having access to carbon offsetting and more specifically to European offset projects.

If unconditional access to CDM and JI project mechanisms seems politically unacceptable, the private demand for offsets generated on European territory would merit being resuscitated within the EU ETS. Economically, domestic European projects contribute towards four objectives: they would increase compliance options for installations; extend the carbon price to other economic sectors (household energy efficiency, urban heating, agriculture etc.); proceed with resource transfer between sectors and geographic zones on the basis of verified emissions; and help induce new sources of emission reductions and reveal information about these sources.

Furthermore, European offset projects respond to three major criticisms levelled at CDM and JI projects outside Europe. Firstly, they don't modify the level of ambition on European territory. Secondly, they don't finance foreign competitors of industrial installations in the EU ETS. And finally, they represent a negligible mass of credits in the supply-demand equilibrium of the EU ETS: at their peak in 2012, JI projects developed in Europe avoided emitting 30 million tonnes of CO₂ per year, of which two thirds were in Eastern Europe.

This instrument has proven useful for public finance as well: it functions on private financing, through the demand coming from the EU ETS. Let's also note that the EU is the only region in the world to not dedicate one part of its demand for credits to domestic projects. All other existing systems of carbon pricing (California, RGGI, China, South Korea etc.) either do so or plan to do so.

This instrument has also proven its usefulness in inducing new ideas and improving regulation. Profitable projects for the private sector emerge on the basis of mitigation capabilities that are unanticipated by public authorities. The transaction costs and the rent capture by the private sector associated with this tool then lead to prefer other public policies once innovations in emissions reductions have been revealed and consolidated in a particular sector. This implies submitting the sector to personalised norms or policies (EU ETS, tax or subsidy). This is the path already followed by N₂O emissions associated with the manufacture of fertilisers¹ and the emissions of HFC associated with the manufacture of coolants².

However, European offset projects should not be thought of as a tool intrinsically linked to the EU ETS, but instead as a burden sharing tool that can be mobilised by all energy climate policies. This of course includes the EU ETS, but also those applying to other sectors that could be different according to the sector and the country. If Poland's support is subject an efficient burden sharing mechanism in the 2030 energy climate package, the introduction of European offset projects has many reasons in favour.

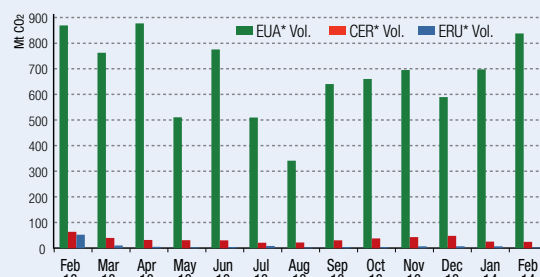
Valentin Bellassen and Emilie Alberola - CDC Climat Research

1. Shishlov, I., Bellassen, V., 2014. Moving from the CDM to "various approaches" (No. 34), *Climate Brief*. CDC Climat Research, Paris, France.
2. Shishlov, I., Bellassen, V., Leguet, B., 2012. Joint Implementation: a frontier mechanism within the borders of an emissions cap (*Climate Report* No. 33). CDC Climat Research.

Key points

- **EUA supply:** after the approbation of the backloading regulation, the number of auctioned allowances for 2014 will be reduced by 400 million. National allocations plans of all 28 member states for the free allocation of allowances for 2013 have been approved.
- **2030 climate and energy package:** the EU Parliament adopted a non-binding resolution on the 2030 Climate and Energy Framework. On 20-21 March the European Council will meet to discuss this framework.
- **Carbon leakage list for 2015-2019:** industrial stakeholders will be informed at the latest by the end of March 2014 if their sectors are included on the first draft of the new carbon leakage list.

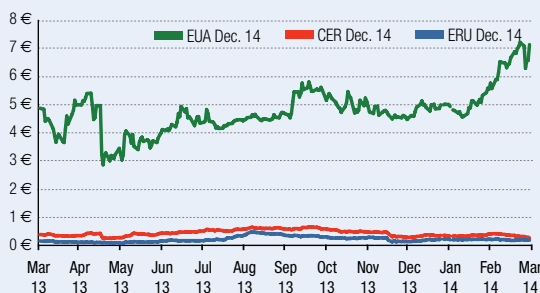
Trading volumes: EUA +20.1%, CER +3.3%, ERU -56.0%



* Spot & futures, exchanges & OTC cleared

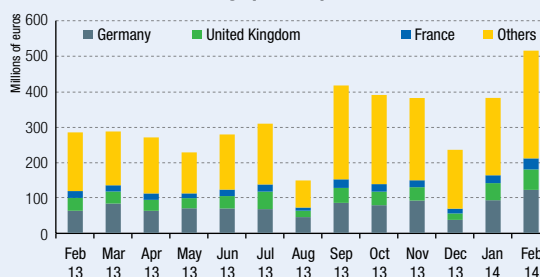
Source: CDC Climat Research calculation, based on data from EEX, ICE Futures Europe, NYMEX, Nasdaq OMX, and LCH Clearnet

Price of the Dec. 14 contract: EUA +30.5%



Source: CDC Climat Research, ICE Futures Europe

Income from Phase 3 auctions: 516 M€ en February (+35%)



Source: CDC Climat Research based on data from ICE Futures Europe, EEX

Energy

Primary energy prices and electricity prices

			Feb. 2014
Coal	API # 2 CIF ARA (First month in USD/t)		78.8 ▼
Natural gas	NBP (spot in €/MWh)		24.4 ▼
	TTF (spot in €/MWh)		23.8 ▼
Crude oil	Brent (First month in USD/b)		108.8 ▲
Electricity	Germany (€/MWh)	Spot	34.8 ▼
		Calendar	36.5 ▲
	United Kingdom (€/MWh)	Spot	54.7 ▼
		Next summer	55.8 ▼
		Next winter	64.7 ▼

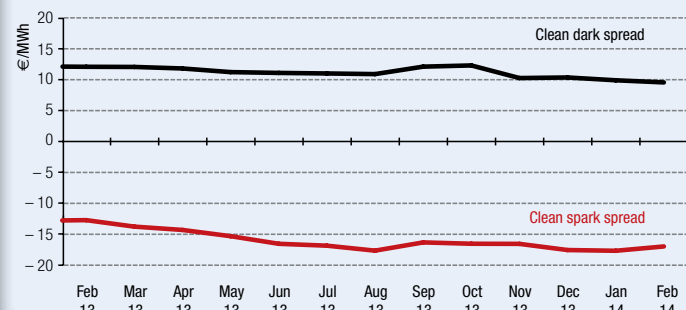
Sources: CDC Climat Research, Thomson Reuters

Clean dark, clean spark spreads and switching price

	Clean spark (€/MWh)		Clean dark (€/MWh)		Switching Price (€/tCO ₂)	
	spot	futures	spot	futures	spot	futures
Germany*	-15.3	-17.0	8.8	9.5	28.4	30.8
United Kingdom*	8.6	2.4	28.0	29.4	28.8	30.1

* Germany, 2015 calendar contract, United Kingdom, summer 2015 contract.

German baseload – monthly average of Cal. 2015 clean dark and clean spark spreads



Sources: CDC Climat Research, Thomson Reuters

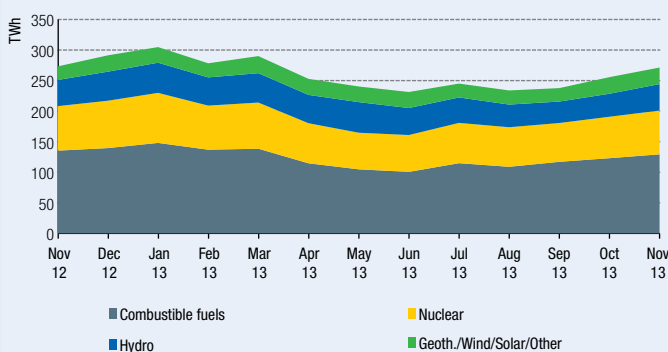
The average monthly price of Brent crude rose by 1.5% in February to 108.8 USD/b primarily because of a tightened market due to supply disruptions in Africa. Mild weather and the resulting low demand continued to exert a bearish pressure on gas prices: NBP prices fell by 9.4% to 24.4€/MWh while TTF prices fell by 9.2% to €23.8/MWh. The return of Drummond's Colombian exports and a weak Chinese Purchasing Manager Index (PMI) depressed coal prices. Electricity prices in both Germany and the UK fell again as mild weather across Europe suppressed demand and windy weather facilitated higher renewable energy generation. While German spot prices fell by 10.5%, calendar 2015 prices remained at the same levels. In the UK, spot prices decreased by 5.1% while winter and summer 2015 prices both fell. As a result, clean dark prices fell in Germany on both the spot and forward markets, while clean spark prices increased. On the other hand, in the UK, clean dark and spark prices fell on both spot and forward markets. The theoretical carbon price that would make switching to natural gas profitable was calculated at around €28-30/tCO₂.

Production

Electricity generation (TWh)

EU 20 (in TWh)	Nov. 13	Jan.-Sep. 13	Year-on-Year (% change)
Production	270.9	2,837.0	-1.5%
of which - Combustible fuels	129.2	1,334.9	-5.9%
- Nuclear	71.5	747.9	-0.4%
- Hydro	43.3	478.0	3.7%
- Geoth./Wind/Solar/Other	27.0	276.1	11.3%

* Gas, coal, oil.

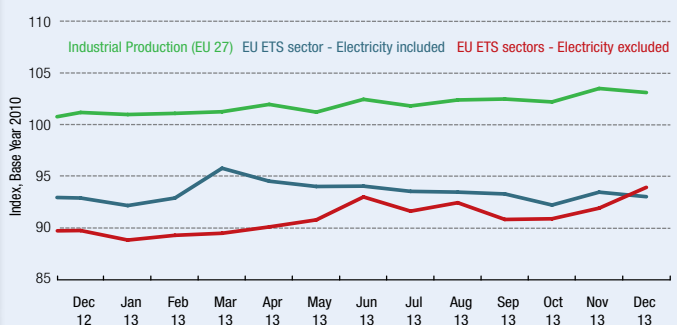


Source: CDC Climat Research, from IEA data

Production indices (Index base year 2010)

EU 27	Dec. 13	Last month (pts)	Year-on-Year (pts)
Indust. Prod. (excl. construction)	103.1	-0.4	1.2
EU ETS sectors production* (incl. electricity)	93.0	-0.4	-0.5
EU ETS sectors production* (excl. electricity)	93.9	2.0	3.2
Electricity, gas and heating	92.5	-1.7	-2.4
Cement	81.2	2.8	3.4
Metallurgy	102.5	1.5	4.7
Oil refinery	93.0	0.2	-1.7

* Index weighted by EU ETS sectors's weight in average total allocation over 2008-2012

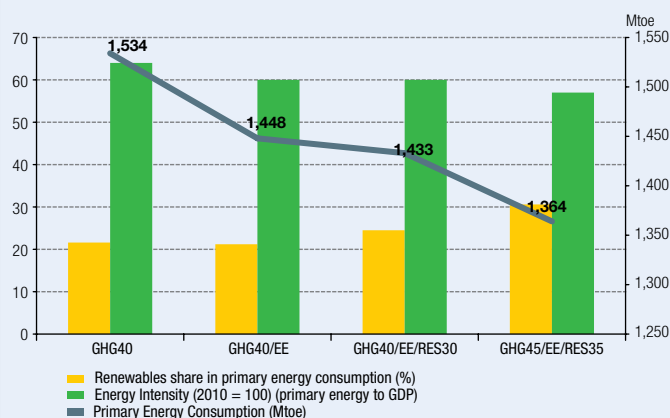


Source: CDC Climat Research from Eurostat data

Figures released in early February indicated that EU industrial output slipped in November 2013 falling by 0.7% after a corresponding increase of 1.5% in November. However, the Eurozone Purchasing Managers Index (PMI) rose to 53.3 in February compared to 52.9 in January, suggesting continued economic recovery in the early months of 2014. The EU-27 business climate index increased to a three year high to 0.37 in February. Our EU ETS sector production index fell by 0.4 points in December due to a decrease of 1.7 points in electricity production. It was still recorded to be only 0.4 points below its 2012 level. The cumulative electricity generation for EU-27 between January and October 2013 was 2 837 TWh, which represents a 1.5% decrease over the same period last year. This decrease in cumulative electricity generation was accompanied by an increase of renewable energy (+11.3%) and hydroelectric energy (+3.7%) and a decline in the use of fossil fuels (-65.9%) and nuclear energy (0.4%).

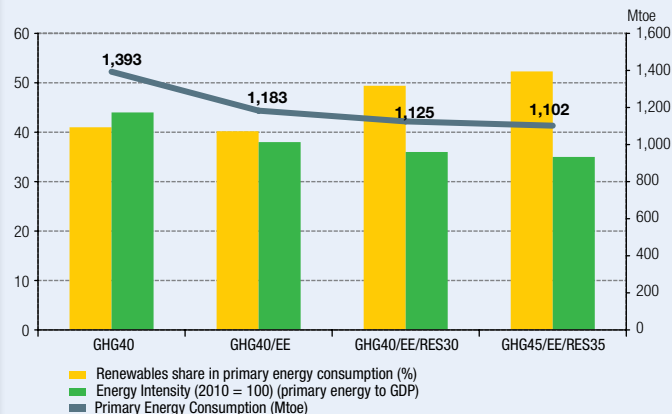
Coordination with the 20-20-20 policies

Assessment of 2030 scenarios: Primary energy consumption, energy efficiency and renewable share



Source: European Commission, Impact Assessment, 2030 Energy-Climate Package, 2014

Assessment of 2050 scenarios: Primary energy consumption, energy efficiency and renewable share



Source: European Commission, Impact Assessment, 2030 Energy-Climate Package, 2014

Note: GHG40 refers to the scenario with only a 40% GHG target, GHG40/EE refers to the one with additional ambitious energy efficiency (EE) policies, GHG40/EE/RES30 refers to the one with an additional 30% EU level renewable energy target and GHG45/EE/RES35 refers to the one with a 45% GHG target with additional ambitious EE policies and a 35% EU level renewable energy target.

On February 5th, the EU Parliament adopted a non-binding resolution on the 2030 Climate and Energy Framework. A majority of MEPs supports three binding targets for the EU's 2030 package for GHG emission reductions, renewable energy and energy efficiency. On 20-21 March the European Council will meet to discuss the 2030 framework. On February 3rd, the DG Energy launched a public consultation on "Progress towards the 2020 energy efficiency objective and a 2030 energy efficiency policy framework". This consultation runs until April 28th. In July 2014, the EU Commission is expected to release an assessment report on the progress made to achieve the 2020 energy efficiency target. On February 19th, the DG Energy released technical guidance on financing the energy renovation of buildings with Cohesion policy funding. During 2014-2020, Cohesion Policy funds will play a major role in the refurbishment of buildings with the allocation of a minimum of €23bn for investments in the shift towards to a low-carbon economy.

Institutional environment

Phase 3 supply balance table

	2013	2014*
Auctions (MtCO₂)	804	157*
Free allocation (MtCO₂)	579	499

*till February 2014

2013 Free allocation status table

EU Member State	Number of allowances according to the NAT Decision (MtCO ₂)	Number of allowances allocated (MtCO ₂)
France	84	81
Germany	169	168
United Kingdom	66	66
Others	529	265
TOTAL	848	579

Sources: CDC Climat Research, European Commission, ICE Futures Europe, EEX

CER and ERU supply

	Feb. 14	Last month change
Number of CDM projects	11,112	+12
<i>of which - registered</i>	7,450	+24
<i>with - CER issued</i>	2,553	+14
Cumulative volume of CER issued (Mt)	1,433	+6
CERs available until 2015, EU ETS eligible – CDC Climat Research estimate (Mt)*	2,060	0
Number of JI projects	788	0
<i>of which - registered</i>	604	0
Cumulative volume of ERU issued (Mt)	834.9	+6
<i>via - Track 1</i>	809.6	+6
<i>via - Track 2</i>	25.4	0

* CDC Climat Research's model: <http://www.cdcclimat.com/The-risks-of-CDM-projects-how-did-only-30-of-expected-credits-come-through,900.html?lang=fr>

Sources: CDC Climat Research, UNEP, Rise

On February 26th, the EU Commission announced that it has approved the national allocations plans of all 28 member states for the free allocation of allowances for 2013 amounting to 848 MtCO₂. Some Member states have started allocating 2014 allowances (which are due by February 28). On February 27th, the EU Commission announced that the number of allowances to be auctioned for the remainder of the calendar year 2014 has been reduced by 400 million to reflect the implementation of back-loading. Regarding the market stability reserve, it is expected that the EU Parliament will start deliberating the proposal after the EU elections, but it is possible that meetings or hearings take place beforehand. Finally, the Commission updated its FAQs on inclusion of aviation in the EU ETS. The proposal of the European Regional Airspace Approach is expected to be adopted in April (week 14-17 April) in the EP plenary, followed by a formal adoption in the Council. Member States will then have until June 2014 to transpose the amendment to the ETS Directive into their national legislation.

Carbon markets dashboard

Primary market - EUA auctions in Phase 3

		Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
Common Auction Platform + United Kingdom & Germany	Price (€/t)	4.37	4.06	3.85	3.40	4.23	4.16	4.40	5.19	4.83	4.51	4.62	5.00	6.45
	Volume (Mt)	65.03	70.61	70.19	66.45	65.89	76.65	33.65	80.33	80.62	84.53	50.90	76.31	80.33
Auction Revenues (M€)	Germany	62.46	82.86	62.31	69.46	68.98	67.09	44.50	84.82	78.19	91.29	36.66	92.28	121.62
	United Kingdom	36.38	34.23	31.05	28.69	35.06	49.65	18.30	42.33	38.40	37.87	18.27	48.43	57.88
	France	19.37	17.50	18.14	13.58	18.29	20.16	8.76	24.28	21.28	19.65	13.43	22.21	31.21
	Others	166.09	152.26	158.58	116.04	156.10	172.06	76.64	265.65	252.38	232.84	166.63	218.98	304.96
	Total	284.30	286.86	270.07	227.66	278.43	308.96	148.20	417.08	390.25	381.64	235.00	381.89	515.66

Sources: EEX, ICE Futures Europe

Primary market - CER and ERU issued (MtCO₂)

		Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
Cumulative volume of CER issued UNEP-Risoe (Mt)		1,208	1,271	1,308	1,335	1,353	1,362	1,369	1,388	1,400	1,409	1,419	1,428	1,433
Cumulative volume of ERU issued (Mt)	Track 1 (Mt)	600.0	651.3	651.3	714.5	757.0	757.0	785.1	801.5	802.4	803.5	803.7	803.8	809.6
	Track 2 (Mt)	22.7	22.9	22.9	23.9	24.4	24.6	24.7	25.1	26.7	25.4	25.4	25.4	25.4

Sources: UNEP-Risoe, CDC Climat Research

Secondary market - Prices (€/t) and volumes: EUA, CER (ktCO₂)

			Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
ICE Futures Europe	Daily spot	Price EUA phase 3	4.59	4.10	3.88	3.51	4.25	4.22	4.41	5.22	4.91	4.53	4.79	4.98	6.51
		Volume EUA phase 3	19,097	9,452	85,674	14,731	38,427	24,076	5,564	14,672	10,483	7,136	14,965	14,405	21,075
		Price CER	0.15	0.17	0.09	0.39	0.44	0.53	0.62	0.65	0.56	0.42	0.36	0.39	0.36
		Volume CER	1,099	1,541	1,901	0	112	0	57	170	0	47	1,204	80	375
	Dec.14	Price EUA	4.94	4.37	4.11	3.72	4.46	4.39	4.58	5.38	5.07	4.69	4.92	5.07	6.61
		Volume EUA	78,927	79,675	112,934	59,334	95,104	48,690	74,289	93,620	135,862	163,545	240,590	450,338	527,394
		Price CER	0.38	0.37	0.35	0.39	0.48	0.56	0.62	0.62	0.52	0.41	0.35	0.37	0.36
		Volume CER	4,361	2,089	3,885	1,949	8,891	7,134	6,505	12,753	7,949	16,224	20,287	15,305	13,092
	Dec.15	Price EUA	5.15	4.55	4.28	3.88	4.67	4.55	4.75	5.59	5.28	4.89	5.10	5.26	6.91
		Volume EUA	57,190	49,718	61,556	34,689	91,861	41,204	20,176	46,207	57,629	55,672	57,784	102,312	116,329
		Price CER	0.43	0.41	0.38	0.46	0.55	0.64	0.70	0.71	0.60	0.48	0.45	0.48	0.52
		Volume CER	2,767	710	1,706	4,087	6,792	2,617	620	3,184	5,586	4,158	10,987	8,766	7,711
	Dec.16	Price EUA	5.41	4.80	4.47	4.04	4.89	4.75	4.96	5.85	5.54	5.12	5.32	5.49	7.26
		Volume EUA	14,964	22,885	31,151	18,256	27,115	11,902	7,216	26,918	21,449	16,416	17,398	36,721	62,380
		Price CER	0.54	0.54	0.47	0.51	0.60	0.66	0.72	0.74	0.62	0.50	0.46	0.50	0.55
		Volume CER	322	0	0	0	134	1,134	0	0	0	10	0	689	245

Sources: ICE Futures Europe

Emission-to-cap by EU ETS sector and country: difference between distributed allocations of allowances and verified emissions

	2008	2009	2010	2011	2012		2008	2009	2010	2011	2012
Combustion	-253.1	-113.5	-125.8	-76.9	-40.6	Germany	-84.0	-36.6	-54.4	-49.5	-27.8
Oil refining	-1.4	7.6	14.3	16.0	24.2	United Kingdom	-50.8	-15.0	-16.8	2.5	-2.2
Coking plants	1.5	6.8	2.9	3.1	5.7	Italy	-8.5	24.1	8.5	5.3	12.8
Metal ores	4.3	11.0	8.8	8.9	9.8	Poland	-3.1	10.8	5.9	4.2	16.1
Steel production	51.6	89.3	71.4	72.8	74.0	Spain	-9.6	13.7	29.5	18.4	17.4
Cement	20.9	61.4	61.0	62.8	74.1	France	5.5	17.5	23.4	33.9	35.8
Glass	2.5	6.1	5.5	5.4	6.4	Czech Republic	5.2	12.2	10.6	12.2	17.1
Ceramic products	5.3	10.0	10.2	9.6	10.4	The Netherlands	-6.8	2.8	0.1	8.9	10.6
Paper	6.9	11.3	10.0	11.1	12.9	Romania	7.7	24.9	27.7	23.6	26.9
Other activities	0.2	4.3	1.3	-0.7	6.2	Others	-17.0	39.8	25.3	52.7	76.6
Total (Mt)	-161.3	94.2	59.8	112.1	183.2	Total (Mt)	-161.3	94.2	59.8	112.1	183.2

Source: CCTL

Source: CCTL