Sharing the Burden

EU ETS support to Central and Eastern Europe **March 2016**

In a nutshell

It is in the interest of lower-income Central and Eastern European (CEE) Member States[1] to support stronger climate ambition in the European climate and energy package**. After 2020, CEE countries will be assigned nearly one billion carbon allowances from the Modernisation Fund and continuation of the Article 10c derogation under the EU Emissions Trading Scheme (ETS)**, for the purpose of modernising their energy sectors – compensation not available to the Western European states. Sandbag calculates that, **with every €1/tonne increase in the carbon price, the value of these funds to CEE states increases by about €1 billion** – **and increases their total treasuries' auction revenue income by €1.7 billion**. A high carbon price, from higher European ambition, will increase the financial flows to CEE State whilst continuing free allocation rules will protect manufacturing industries.

Funds flowing from the Modernisation Fund and the derogation should be focused on **financing long-term carbon reductions – which will, in turn, protect the CEE power sectors from the future impact of the declining carbon cap –** an objective that has not been made clear in the current ETS Phase for the Art. 10c derogation. A broad range of zero- and low-carbon technologies are needed, alongside renewables, and comparable incentives should be put in place. Not all Member States are currently willing to incorporate high volumes of renewable capacity in their energy mix.

We encourage the CEE Member States to maximize the real value and effectiveness of the low-carbon funding available to them post-2020 by supporting changes to the EU ETS Directive, in line with the Oct 2014 Council Conclusions:

- ✓ **Increase the ambition of the post-2020 EU ETS policy package to raise the carbon price.**
- ✓ **Ensure the funds target long-term net emissions reductions in the energy sector.**
- ✓ **Reintroduce national investment plans as the best method to design comprehensive long-term investment strategies. Establish technology neutral eligibility criteria at the Directive level to meet the redefined policy objective.**
- ✓ **Enable joint use of both funds under the Member State's governance. The Art. 10c and Modernisation Fund allocation should both be centrally monetised by the EIB, rather than allocated, and transferred to the Member States to increase certainty over available funding.**
- ✓ **Enable institutional assistance at the request of the Member States. The EIB can assist their institutions in due-diligence, investment selection and attracting private funding.**

[1] Member States with the GDP per capita below 60% of the Union's average in 2013, namely Poland, Czech Republic, Romania, Hungary, Slovakia, Bulgaria, Croatia, Estonia, Lithuania, Latvia.

Increasing the value of the low-carbon funds

Sandbag has analysed the impact of the increased carbon price on the EU ETS funded support given to the lower-income Central and Eastern European (CEE) Member States[2] during 2021-2030. **With every €1/t increase in the carbon price, the recipient Member States will receive almost €1 billion euros of additional funding and €1.7 billion of additional treasury revenues.** The free allocation available to the national manufacturing industries will leave them with only a minor shortfall in permits even if they maintain their emissions at the 2014 levels until 2030.

Significant funding is needed to replace the aging energy system infrastructure in the lower-income CEE countries. €202 billion[3] of additional investments will be needed during 2020-2030 even if there were no climate objectives. The investments required by the transition to the low-carbon economy will impose at least **€84 billion of additional investment burden on the CCE economies**.[4]

Recognising the different level of challenge that decarbonisation poses, the EU Council agreed in October 2014 that CEE countries should be supported by both the Modernisation Fund and continuous option of free allocation for the energy sector (the Art. 10c allocation). Together these policy measures represent as much as **one billion allowances, 223 million of which are a net transfer from non-CEE Member States auctions towards the Modernisation Fund**[5].

The actual value of these low-carbon funds will depend on the average carbon price after 2020. Every €1 increase in the carbon price could **increase the real value of the funds by nearly €1 billion.** In addition, every €1 increase in the carbon price will provide **additional revenues of €1.7 billion** to CEE treasuries after subtracting the 10c allocation volume. **These can compensate any indirect costs to the manufacturers.**

Table. 1 The value of low-carbon funding sensitivity to each €1 carbon price increase (2021-2030)

Country	Modernisation Fund (million t)	Art. 10c allocation (million t)	Low-carbon funds sensitivity* (million €)	All other auctions sensitivity* (million €)
Poland	134.6	293.4	428.0	730.9
Czech Republic	48.3	119.7	168.0	273.9
Romania	37.1	98.4	135.5	280.3
Bulgaria	18.1	55.4	73.5	157.8
Hungary	22.1	37.2	59.3	82.2
Slovakia	19	35.5	54.5	90.2
Estonia	8.6	18.9	27.5	48.5
Croatia	9.7	12.6	22.3	18.9
Lithuania	8	9	17.0	24.1
Latvia	4.5	4.1	8.6	11.9
TOTAL	**310.1**	**684.2**	**994.3**	**1,718.7**

Source: Sandbag calculations based on split of Phase 4 cap. The all other auctions sensitivity does not include the potential revenue from auctioning the Art. 10c derogation entitlement and assumes no Market Stability Reserve adjustment during Phase 4.

** Change in the value of funds and treasuries' income for every €1 increase in the carbon price.*

[2] Member States with the GDP per capita lower than 60% of the Union's average in 2013, namely Poland, Czech Republic, Romania, Hungary, Slovakia, Bulgaria, Croatia, Estonia, Lithuania, Latvia.

[3] Excluding the transport sector, including energy efficiency measures. See the 2015 Commission's Impact Assessment (p. 208), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.

[4] Excluding the transport sector, including energy efficiency measures. See the 2015 Commission's Impact Assessment (p. 208), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.

[5] The proposed split of the EU ETS cap for Phase 4. Modernisation Fund is made of the 2% share of the auctionable allowances before redistribution to Member States' auctions.

The actual volume of auctions over Phase 4 is likely to vary from the volumes depicted here because of the Market Stability Reserve (MSR). The MSR removes allowances from auctions when the total allowances in circulation exceed 833 million and releases them to auctions when supply falls below 400 million. At present, **the MSR does not affect the absolute supply of allowances available to Member States but simply the timing**. In the medium term the MSR will increase the value of any carbon allowances auctioned by Member States, by constraining the supply.

The Commission estimates that the low-carbon funds **could be worth as much as €25.6 billion**, based on an estimated average carbon allowance price of €25.80 during Phase 4.[6] Without further reform, Sandbag does not expect the carbon price will rise to that level even with the introduction of the Market Stability Reserve in 2019, as we estimate that the surplus of carbon allowances will grow to 4.4 billion by 2020.[7] The real carbon price is **today below €5/tonne**[8] **– already significantly below analysts' projections for 2016 as polled by Carbon Pulse.**[9] New analysis published by Barclays estimates that the carbon price will average only €5 across 2021-2030.[10]

The **October 2014 Council Conclusions left the door open to increased EU ETS ambition by agreeing a European target to reduce overall carbon emissions by "at least" 40% by 2030**. While the Council Conclusions already specify a new trajectory for the EU ETS cap (a 2.2% Linear Reduction Factor), and a new ETS target (-43% vs. 2005 levels), this "at least" opens the possibility that a more stringent cap might be agreed in the Trialogue process following on from the Paris Agreement. This creates an opportunity that would increase the carbon price, hence increasing the value of low-carbon funds and potential auction revenues to CEE Member States.

The Council, however, sought to **minimize any cost impact this would have on industrial sectors by extending the free allocation of allowances and carbon leakage protections until 2030**. Below we provide our projected free allocation for each country's manufacturing sector at today's emissions levels.

Table 2 Additional EUAs needed by the CEE heavy industry under the carbon leakage rules (2021-2030)

Country	Emissions (million t)	Free allocation (million t)	Balance (million t)
Poland	424.3	322.5	-101.7
Czech Republic	177.1	127.8	-49.3
Romania	177.2	143.9	-33.3
Bulgaria	63.4	45.0	-18.4
Hungary	76.1	72.1	-4.0
Slovakia	159.4	122.1	-37.3
Estonia	12.5	9.5	-3.0
Croatia	62.3	14.2	-48.1
Lithuania	54.5	40.5	-13.9
Latvia	10.4	17.2	6.8
TOTAL	**1,217.1**	**914.9**	**-302.3**

Source: EUTL database. Sandbag calculations using the current emissions growth scenario and year-on-year 1% downfall adjustment for the technology benchmark.

[6] See the 2015 Commission's Impact Assessment (p. 82), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf
[7] For detail see our previous briefing The eternal surplus of the spineless market, https://sandbag.org.uk/site_media/pdfs/reports/The_Eternal_Surplus.pdf.
[8] € 4.99 per tonne on ICE Futures Europe, 10/03/2016.
[9] See Carbon Pulse price pol from 9/2/2016, http://carbon-pulse.com/15315/
[10] Barclays analyst report, for details see Carbon Pulse, http://carbon-pulse.com/16673/.

Positive balances indicate there is no need to purchases allowances, leading to windfall profits from free allocation for heavy industry in some CEE countries. It also **indicates that for every €1/t increase in the carbon price the value of the permits the companies need to buy for compliance will rise only about €300 million or less if their current emission level decrease**s. Latvian industry will benefit from a 6.8 million surplus allowances under the carbon leakage provisions which it will be able to sell, leading to windfall profits.

Sandbag have proposed several options by which the EU could step up its economy-wide climate targets via the ETS. We explore these in our report "Harder, better, faster, stronger" from July 2015.[11] In that report we recommend that the CEE Member States should support changes that:

- **Introduce five-year budget periods for the ETS (and the ESD) to incrementally increase ambition,**
- **Adopt a 25% emissions reduction target by 2020 through cancelling allowances from the Market Stability Reserve,**
- **Adopt a 50% target in 2030 through a tighter ETS cap on allowances.**

[11] See our briefing „Harder, better, faster, stronger: The easy route to increased EU climate ambition", https://sandbag.org.uk/site_media/pdfs/reports/Harder_better_faster_stronger_-_The_easy_route_to_increased_EU_climate_ambition_2.pdf.

Encouraging the effective design of the national investment strategies

The Art. 10c derogation and the Modernisation Fund are indispensable policy measures for spreading the decarbonisation burden consistently across the European Member States. To achieve this, we recommend that the primary policy objective behind both low-carbon funding measures should be long-term net emissions reductions under the EU ETS cap.

The average yearly volume of the low-carbon funding across Phase 4 would equal 35% of the CEE power sectors' emissions at the 2014 levels. These allowances will be used only in exchange for investments in modernisation of the energy sector. Unless such investments lead to reductions in the net carbon emissions from the sector compared to current levels, the increased carbon price will have a negative impact on utilities' revenues.

Table 3: Volume of low-carbon funding vs. CEE power sector emissions 2021-2030 (at a 2014 level).

Country	2014 power sector emissions (million t)	Average number of allowances for modernisation during 2021-2030 (million t)
Poland	154.45	42.8
Czech Republic	48.99	16.8
Romania	24.85	13.55
Bulgaria	27.96	7.35
Hungary	11.21	5.93
Slovakia	4.97	5.45
Estonia	13.7	2.75
Croatia	2.16	2.23
Lithuania	1.406	1.7
Latvia	1.31	0.86
TOTAL	**291.01**	**99.43**

Source: EUTL database. Sandbag calculations using the current emissions growth scenario for power sectors.

In order to maximise the benefit derived from the low-carbon funds, recipient **Member States should devise comprehensive decarbonisation strategies that could support European targets to cut emissions by 80-95% by 2050**. The ETS Directive should continue the use of the national investment plans used under the Art. 10c derogation as the only measure fit for such long-term planning. **Member States should be allowed to deliver the long-term net emissions reductions from their energy sectors through deployment of technologies best suited to their national energy strategies**. At the same time, Member States need to be aware that due to the average 20-40 year life-cycle of investments this means the required emissions reductions will not be achieved by means of incremental emissions intensity improvements.

Did you know?

*Contributing to the decrease in carbon emissions is not enough. To receive low-carbon funding in Phase 3 the Member States could choose to measure the investments' impact on cutting GHG emissions with the use of an emissions intensity factor for already existing high-carbon infrastructure. In Phase 4 the impact of investments on emissions from energy sector should be measured against compliance indicators that target the long-term net emissions reduction.**

**See the Guidance document on the optional application of Article 10c of Directive 2003/87/E ANNEX VIII for the types of compliance indicators.*

The ETS Directive should establish basic eligibility criteria for the projects to ensure investments comply with our recommended refined policy objectives for the low carbon funds. The October 2014 Council Conclusions recognised that **emissions reductions in the energy sector can be achieved in ways not exclusive to investments in low or zero-carbon power generation capacity; energy efficiency should be prioritised too**. Such developments are welcomed – countries like Poland would need to spend an additional € 55 billion or more to achieve 30% emissions reductions from their energy sector – a significant reduction below the economy wide target.[12] When faced with options with similar decarbonisation potential, the EU ETS Directive should encourage investments in energy efficiency and projects with other co-benefits that are advancing the project of Energy Union[13].

To ensure that the low-carbon funds drive technology neutral investments in the long-term and drive net decarbonisation of the energy sectors in recipient Member States, we recommend making the following changes to the Directive:

- **Establish a clear policy objective behind the Modernisation Fund and the Art. 10c derogation that targets long-term net emissions reductions from the energy sector,**
- **Reinstate national investment plans as the main policy measure to plan for long-term emissions reductions from the energy sector.**
- **Establish basic eligibility criteria for investments at the Directive level according to the refined policy objective.**

[12] Possible emissions reductions scenario used by the Polish Energy Association for costs modelling. See the Ernst and Young assessment for the Polish Electricity Association (p. 4), https://sandbag.org.uk/site_media/uploads/PKEE_ETS.pptx.

[13] See the Commission's website on the state of Energy Union, https://ec.europa.eu/priorities/energy-union-and-climate_en.

Enabling the joint use of the low-carbon funds

To address the scale of the decarbonisation challenge in the lower-income Central and Eastern European (CEE) countries[14] we recommend that the low-carbon funds should be used jointly. Member States need to have more certainty over the actual value of the low-carbon funds and adequate assistance in implementing these policy measures, if they wish to increase their national institutions' capacity.

The value of the low-carbon funding should be known to Member States in advance of implementing their investment strategies. **In Phase 3 the Commission recommended that the CEE countries should use the model-based projections of European carbon prices of 14.5 EUR during 2010-2014 and 20 EUR during 2015-2019 as a reference when devising their national investment plans**.[15] An actual average carbon price during 2010-2014 was €9.13[16] and the one projected for the 2015-2020 period will be €10.24[17].

Power companies have been forced to cancel their investment plans due to discrepancies between expected and available funding. Only in 2013 about 12% of allowances available in exchange for investments realised during 2009- 2013 under the Art. 10c derogation remained unused[18]. In Sandbag's conservative scenario, not accounting for the likely increase in investments cancellations, the gap between available allocation and actually claimed allocation will grow. The **volume of the Art. 10c allocation unused for modernisation of the energy sector in Phase 3 can increase to 136.9 million (20%) of the total available Art. 10c allocation.**[19] The timing of unused 10c allowances being auctioned by the Member States will determine their negative impact on the carbon market in the coming years[20].

We recommend that the **European Investment Bank (IEB) should monetise the Art. 10c and Modernisation Fund allowances centrally twice during the 2021-2030 period, drawing on their experience from the NER300**. Central monetising of the permits before award decisions avoids the risk to project sponsors of a fluctuating carbon price and the negative impact on the carbon price of the one-off auction[21]. We recommend that establishing two 5 year budgets will help to secure the highest possible revenue and

Did you know?

In Phase 3 Hungary decided to claim their 10c allowances only once in 2013 and required the eligible installations to transfer the financial value of the allowances to the dedicated Monitoring Authority. The collected funds were used to finance two large national scale investments in smart meter network and interconnections. This allowed Hungary to use the Art 10c derogation as an element of a complex national energy modernization programme drawing on different source of funding, including the EU ETS auctions revenues.*

** See the Commission's decision concerning Hungarian application for the Art 10c derogation and the English version of the revised Hungarian national investment plan (p. 6).*

[14] Member States with the GDP per capita lower than 60% of the Union's average in 2013, namely Poland, Czech Republic, Romania, Hungary, Slovakia, Bulgaria, Croatia, Estonia, Lithuania, Latvia.
[15] Most of the Member States made use of that model according to the 2015 Commission's Impact Assessment (p. 134). See the Guidance document on the optional application of Article 10c of Directive 2003/87/E ANNEX VI for detail on the price estimates.
[16] Sandbag's calculation of average price based on the ICE Futures closing EUAs prices during these years, https://sandbag.org.uk/price/.
[17] Sandbag's calculation based on the average price based on the ICE Futures closing EUAs prices during 2015 and the average of 12 carbon market analysts' individual projections gathered 9/2/2016, http://carbon-pulse.com/15315/.
[18] Under the Art. 10c allocation allowances in 2013 were allocated ex-post in exchange for investments realised during 2009-2013 in most of the recipient countries. See the 2015 Commission's Impact Assessment (p. 133), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.
[19] Estimate based on actuals and Sandbag's projection based on the Commission's Status table on transitional free allocation to power generators for 2013 and 2014, and Commission's Memo on Commission rules on temporary free allowances for power plants in Poland.
[20] See the 2015 Commission's Impact Assessment (p. 133), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.
[21] See the 2015 Commission's Impact Assessment (p. 127), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.

monetising allowances in advance of the budgetary periods will support implementation of the national investment plans with the certainty over available funds.

The 2014 October Council Conclusions present an opportunity to divide the auctions into two 5 year instalments. This is because **the Council Conclusions have pre-established the volumes available under the Modernisation Fund and the Article 10c derogation as a share of the Phase 4 cap** rather than relating the allocation volumes to particular installations in the EU ETS system (as used to be the case for the Article 10c derogation). The Commission has explored an option of joint use by considering the transfer of the Article 10c derogation entitlement to the Modernisation Fund[22]. For Member States to be able to devise comprehensive decarbonisation strategies, however, the funds should be managed by the recipient Member States.

Recipient Member States should establish dedicated institutions to manage the low-carbon funds, preferably drawing on their experience with management of the European Structural and Investment Funds (ESIF) in the period 2013-2020[23]. A portion of these funds have been already dedicated to environmental action.[24] We recommend that **the European Investment Bank (EIB) should, if requested, support these in due-diligence, investment selection, and projects administration**. In Phase 3 larger Member States, Romania in particular, have found it challenging to realise investments due to the lack of in-house technical and financial capacity[25]. Smaller Member States have complained about the negative balance between the administrative effort and the amount of received funding. Two countries chose not to make use of the low-carbon funding in Phase 3 altogether[26].

To ensure securing certainty over available funding at the highest price and allow the recipient Member States to develop comprehensive investment strategies we recommend the following changes to the ETS Directive:

- **Introduce five-year budget periods for both mechanisms,**
- **Allow central monetisation of the Art. 10c allocation and the Modernisation Fund allocation in advance of the two five-year long budget periods,**
- **Transfer the financial equivalent of allowances to the Member States' national funds,**
- **Allow the EIB to assist the Member States in the implementation of both policy measures in due-diligence, investment selection and attracting private funding, if requested.**

[22] See the 2015 Commission's Impact Assessment (p. 87), http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf.
[23] See the Polish Electricity Association analysis or detail on the recipients' experience in management of the ESIF funds, https://sandbag.org.uk/site_media/uploads/PKEE_ModernisationFund_EFSI-ESIF.pdf.
[24] E.g. the Cohesion Fund supporting investments in energy efficiency and networks in the Member States whose Gross National Income (GNI) per inhabitant is less than 90% of the EU average, even if one of the indirect effects of such activities is the reduction of greenhouse gas emissions, or if they are listed in the national plan referred to in Directive 2003/87/EC. For detail see the Regulation (EU) on No 1300/2013 on the Cohesion Fund (7), http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1300&from=EN.
[25] See the Romanian Ministry of Energy official response to Sandbag's inquiry (p. 3), https://sandbag.org.uk/site_media/uploads/Raspuns_SANDBAG.pdf.
[26] Malta and Latvia.

Monitoring and Verification

The Commission should ensure that the lower-income Central and Eastern European (CEE) Member States[27] who receive low-carbon funding, select and implement the investment projects in a transparent and compliant manner.

The Council agreed in October 2014 that the manner in which the low-carbon funds are spent during the 2021-2030 period needs to become more transparent. In case of the Article 10c derogation, the Commission called for two public consultations on the new selection process criteria with the results of selection to be presented to the Commission by 30 June 2019. Member States will also report yearly to the Commission on the implementation of the policy measure and the Commission will make such reports public.

For the functioning of the Modernisation Fund, the Commission assumed that the governance structure involving all Member States and the European Investment Bank should ensure transparency of the investment selection process. Additionally, the beneficiary Member States will have to report annually to the management committee on investments financed by the fund, including information on the investments financed per beneficiary Member State and an assessment of the added value in terms of energy efficiency or modernisation of the energy system achieved through the investment. Each year the Commission will review the proposals of investments made by the management committee with a right to make proposals on changes.

The solutions proposed by the Commission in the area of monitoring and verification are likely to lead to an excessive administrative burden on all involved parties, including the Commission.

To simplify the monitoring and verification framework in the 2020-2030 period Sandbag proposes that recipient Member States should:

- **Design the national investment plans as a part of a broader energy sector decarbonisation strategy and submit to the Commission for approval before the beginning of each budgetary period.**
- **Report yearly to the Commission on implementation and address the feedback.**

The Commission should have a right to revoke financial assistance in the second proposed 5-year long budgetary period if the investments made with the use of the low-carbon funds do not comply with the framework established by the Commission.

[27] Member States with the GDP per capita lower than 60% of the Union's average in 2013, namely Poland, Czech Republic, Romania, Hungary, Slovakia, Bulgaria, Croatia, Estonia, Lithuania, Latvia.

Key recommendations for the CEE Member States

To maximize the real value and effectiveness of the low-carbon funding post-2020 we recommend the following changes:

- ✓ **Increase the ambition of the post-2020 EU ETS policy package to raise the carbon price.**
- ✓ **Ensure the funds target long-term net emissions reductions in the energy sector.**
- ✓ **Reintroduce national investment plans as the best method to design comprehensive long-term investment strategies. Establish technology neutral eligibility criteria at the Directive level to meet the redefined policy objective.**
- ✓ **Enable joint use of both funds under the Member State's governance. The Art. 10c and Modernisation Fund allocation should both be centrally monetised by the EIB, rather than allocated, and transferred to the Member States to increase certainty over available funding.**
- ✓ **Enable institutional assistance at the request of the Member States. The EIB can assist their institutions in due-diligence, investment selection and attracting private funding.**

About this briefing

Sandbag is a UK-based not-for-profit thinktank conducting research and campaigning for environmentally effective climate policies. We are grateful to the European Climate Foundation for helping to fund this work. Full information on Sandbag and our funding is available on our website (www.sandbag.org.uk).

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