



The opportunities of the Modernisation Fund for the energy transition in Central and Eastern Europe

Mihnea Cătuți and Milan Elkerbout

Abstract

As part of the post-2020 reform of the EU Emissions Trading System (ETS) for its fourth trading period, a new fund will be established with the purpose of supporting the modernisation of energy systems in Central and Eastern Europe. The Modernisation Fund represents an instrument for enabling investments in small-scale energy projects, improvements in energy efficiency, and the modernisation of energy systems in lower-income member states with a GDP per capita at market prices less than 60% of the EU average. The fund will be financed through the auction of up to 2% of the total EU ETS allowances (EUAs) for the period 2021-2030 (approx. 310 million with the current size of the EU ETS cap), amounting to a total of between €6.2 billion and €9.3 billion.¹ This paper highlights the opportunities that the EU Modernisation Fund can represent for the transition to low-carbon energy systems in Central and Eastern Europe by stimulating investments in renewable energy, energy efficiency (including in transport, buildings, agriculture and waste), energy storage, interconnections and just transition in carbon-dependent regions. If used correctly, this instrument can represent a key source of financing for large-scale investments that are necessary in a long-term decarbonisation perspective. In order to simplify the management of ETS financing mechanisms and to increase the potential benefits of the Modernisation Fund, beneficiary member states could consider increasing its size by transferring their allocated allowances to the Article 10c derogation and/or distributed for the purposes of solidarity, growth and interconnections (Article 10(2)(b) of the ETS Directive).

¹ Estimation based on prices of €20/EUA and €30/EUA.



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The EU transition to low-carbon energy systems and the long-term decarbonisation challenge

With the purpose of establishing a more secure, sustainable, competitive, and affordable energy for every European,² the Energy Union is one of the 10 priorities of the 2015-2019 European Commission. The Commission recognises the key role that energy plays in many areas, such as the economy, security, the environment, social cohesion, local development, and European solidarity more broadly. Moreover, the Energy Union is also in line with the EU's commitment towards the decarbonisation of energy systems and the wider economy.

The recent Regulation on the Governance of the Energy Union³ puts forward even more ambitious targets for renewable energy and energy efficiency than the 2030 EU Climate and Energy Framework.⁴ The European Parliament and the Council of the EU have agreed to a binding target of increasing the share of renewable energy by at least 32% and an energy efficiency target of at least 32.5%. The long-term climate strategy released by the European Commission in late 2018 also highlights the need for reducing greenhouse gas emissions across the economy towards net-zero.⁵

These new ambitious goals, backed up by a plethora of legislative acts that ensure their implementation, are part of the EU's wider efforts for the transition to low-carbon energy systems and economy. The Paris Agreement, IPCC, and the recent 2050 Strategy released by the European Commission make it clear that the energy systems of all countries require a radical transformation to carbon-neutrality by 2050, 2060 and beyond. In some cases, this will require breakthrough technology (e.g. to address energy use in industry), while in other cases it requires large-scale deployment of existing technology (e.g. wind and solar). Significant infrastructure investment will be necessary for many sectors (e.g. grid strengthening, district heating network renovation or carbon capture and storage for industry). It will also require very large energy efficiency improvements and more generally, the modernisation of the overall economy.

In line with these decarbonisation efforts, significant changes are required in the power sector, which is the most significant sector in terms of emissions, with over 800 MtCO₂e per year. In addition, the trend of increasing electrification of the economy means that policy measures designed for the power sector can indirectly contribute to the reduction of emissions in other sectors as well. Generally, it is assumed that relative to total energy demand, the share of electricity, all of which will need to be low-carbon by 2050, will more than double from the

² European Commission (2015), 'Energy Union: secure, sustainable, competitive, affordable energy for every European', Press Release IP/15/4497, Brussels, 25 February 2015.

³ Part of the Clean Energy for All Europeans Package.

⁴ As agreed in the Conclusions of the 23/24 October 2014 meeting of the European Council, available at <http://data.consilium.europa.eu/doc/document/ST-169-2014-INIT/en/pdf>.

⁵ European Commission (2018), 'A Clean Planet for all' A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy', COM(2018) 773 final, Brussels, 28 November 2018.

current 30% to 60% or 70%.⁶ This is particularly relevant to buildings and heating, as well as road transport with the shift to electric mobility. The price signals of the revised EU ETS can play an important role in promoting emissions reductions in the power sector, while also discouraging carbon-intensive production more broadly. Yet, modernisation will require investment.

The Modernisation Fund, which will be an integral part of the fourth phase of trading of the EU ETS 2021-2030, represents a new tool that can unlock significant opportunities for financing this transition. Its application will lead to investments consistent with the long-term climate objectives mentioned above. In order to increase the relevance of this instrument, its size can be increased by each beneficiary member state by transferring allowances of the Article 10c derogation and distributed for the purposes of solidarity, growth and interconnections (Article 10(2)(b) of the ETS Directive). This option is further analysed in the third section of this report.

The EU ETS revision and the Modernisation Fund

Following a 2015 European Commission proposal⁷ on revising the EU Emissions Trading System, an agreement between the EU legislators was reached in late 2017. The Commission proposal was based on the political guidance set out in the October 2014 European Council Conclusions, which had already referred to the establishment of the Innovation and Modernisation Funds. The revision took place against the background of a continued surplus of EUAs in the system, which in turn distorted the carbon price signal. With this revision, the system has been strengthened by enhancing the supply mechanism – the Market Stability Reserve – and by allowing for invalidation of allowances.

The amendment of Directive 2003/87/EC also brings about a number of crucial changes for the free allocation of allowances during the upcoming trading period (2021-2030), as well as on the funding mechanisms that will be financed through this scheme. The Modernisation Fund will be created by ring-fencing a number of allowances and using the revenues from their auctioning. The beneficiaries are member states with a GDP per capita at market prices of less than 60% of the 2013 EU average, namely Poland, the Czech Republic, Hungary, Croatia, Slovakia, Estonia, Lithuania, Latvia, Bulgaria and Romania.

The Modernisation Fund will be financed through the auction of up to 2% of the total EU ETS allowances for the period 2021-2030 (approx. 310 million with the current size of the EU ETS cap, estimated to be worth between €6.2 billion and €9.3 billion).⁸ The fund may also be increased by a potential maximum of 0.5% of the total number of allowances, based on the

⁶ European Commission (2018), 'In-depth analysis in support of the Commission communication COM(2018) 77, Brussels, 28 November 2018, available at https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf.

⁷ European Commission (2015), 'Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments', COM(2015) 337 final, Brussels, 15 July 2015.

⁸ See footnote 1.

reduction in the number of allowances to be auctioned that has been used to avoid the application of the cross-sectoral correction factor. Table 1 shows the estimated value of each country's share of the 2% allocated for the Modernisation Fund.⁹

Table 1. Estimation of funds available for each member state for the 2021-2020 period

	Share of Modernisation Fund (% of the 2% allocated) ¹⁰	Share of Modernisation Fund (million EUA) ¹¹	Value of funds available at €25/EUA (million €) ¹²	Electricity sector GHG emissions (MtCO ₂ e)
Bulgaria	5.84	18.10	452.60	16.02
Czech Republic	15.59	48.33	1208.23	9.65
Estonia	2.78	8.62	215.45	11.38
Croatia	3.14	9.73	243.35	2.76
Latvia	1.44	4.46	111.60	0.88
Lithuania	2.57	7.97	199.18	0.38
Hungary	7.12	22.07	551.80	8.41
Poland	43.41	134.57	3364.28	114.34
Romania	11.98	37.14	928.45	19.08
Slovakia	6.13	19.00	475.08	3.12
TOTAL	100	310	7750	220.67

Source: Directive (EU) 2018/410; Own calculations.¹³

The Modernisation Fund is a parallel instrument to the already existing 'Article 10c derogation' provision¹⁴ that allows those member states to grant free allowances to the power sector for the purpose of modernisation, diversification and sustainable transformation of the energy sector. The allowances that member states use for this free allocation will be deducted from the number of allowances that particular country has available for auction. According to the revised ETS Directive, member states can transfer (entirely or partially) their Article 10c derogation allowances and/or the allowances distributed for the purposes of solidarity, growth and interconnections (Article 10(2)(b) of the ETS Directive) to the Modernisation Fund. The choice for such a transfer and its associated trade-offs are further discussed in the next section of this paper.

⁹ As previously mentioned, the number of allowances of the Modernisation Fund may be increased.

¹⁰ Annex IIb of Directive (EU) 2018/410.

¹¹ The shares are calculated based on 310 million allowances, representing 2% of the total quantity of allowances between 2021-2030.

¹² 25€ was chosen as it represents the upper bound of the recent trading range in late 2018 to early 2019.

¹³ Similar calculations were made in Marcu *et al.* (2018) using values of €20/EUA and €30/EUA.

¹⁴ See Article 10c of the ETS Directive (provision on transitional free allocation).

The Modernisation Fund has been designed for enabling investments related to modernising energy systems. No support from the Modernisation Fund can be given to energy generation facilities that use solid fossil fuels. There is an exception for countries with a GDP per capita at market prices lower than 30% of the EU average, i.e. Bulgaria and Romania, where the fund can finance refurbishments of existing coal power plants used for district heating.

The European Investment Bank (EIB) will be responsible for auctioning the allowances of the Modernisation Fund, managing the revenues and contributing to the selection process of eligible projects. At the same time, the beneficiaries are responsible for the operation of the fund. Before deciding to use part of their share of the fund for a project, member states must send proposals to the EIB and to the investment committee¹⁵ of the Modernisation Fund. The EIB has to confirm if a project falls into the list of priority areas of the Modernisation Fund or not.

Priority projects, for which at least 70% of the fund will be allocated, are investments in renewable energy, energy efficiency (including in transport, buildings, agriculture and waste), energy storage, interconnections and just transition in carbon-dependent regions. Such projects can be financed up to 100%, if the EIB confirms that a proposal qualifies for this category.

Meanwhile, projects which do not fall under the list of priority projects, may still be considered for a second category of non-priority projects. All such projects must be in line with the EU 2030 Climate and Energy Policy Framework and with the long-term objectives as expressed in the Paris Agreement. In this case, there are two possible scenarios. If the representative of the EIB endorses a project for this category, the investment committee can decide by simple majority to recommend the financing of up to 70% of the project, provided that remaining costs are financed by private legal entities. However, if the EIB does not endorse the proposal, two thirds of the investment committee must vote in favour of the project for it to be recommended for funding. For this particular case, the beneficiary member state and the EIB are not entitled to a vote. Before deciding, the investment committee must assess the technical and financial viability of the project including emission reductions. Moreover, the committee also must ensure that a potential investment in district heating using solid fossil fuels achieves substantial improvements in energy efficiency and emission reductions. If financing is granted, member states will report annually on the implementation on all projects of the Modernisation Fund.

The Modernisation Fund versus Article 10c derogation

Member states eligible for funding from the Modernisation Fund will still be able to make use of other mechanisms such as the Article 10c free derogation. A question facing member states is to what degree to streamline the different funds or to set up two different sets of rules for similar purposes. Crucially, the Article 10c derogation is optional: member states have the

¹⁵ The investment committee includes representatives from the ten beneficiary member states, the European Commission, the EIB and three representatives from other member states.

discretion not to use it, or to transfer the allowances available under it to the Modernisation Fund to streamline and increase investment.¹⁶ The same is possible for allowances made available through the solidarity provision,¹⁷ which can also be moved either in part or full to the Modernisation Fund.

There are a number of trade-offs associated with a potential transfer of allowances to the Modernisation Fund. While more familiar to beneficiary member states, the Article 10c derogation has substantially changed, for example with the requirement for the competitive bidding process for investments over €12.5 million, where up to 70% is covered by Article 10c.

There are some important differences between the two mechanisms in how the funding can be provided. With the Article 10c derogation, the state aid comes in the form of allowances whose value is subject to the vagaries of the carbon market. Funding through the Article 10c derogation also means that the support can only be channelled through the electricity generating installations under the EU ETS. This limits flexibility. Meanwhile, the Modernisation Fund has a lighter governance system that allows for more discretionary spending by beneficiary member states.

There are also many similarities. The areas at which the investments can be targeted are largely shared between the two instruments: district heating, electricity grids, renewables, energy efficiency. But when it comes to funding intensity, the Modernisation Fund provides more opportunity for priority projects as it is not constrained by the 70% financing limit of Article 10c derogation. As previously mentioned, proposals deemed priority projects can be financed up to 100% through the Modernisation Fund. The Modernisation Fund would therefore foster larger investments, as well as those that are only profitable over a longer term as there is no need attract private capital, which may be more risk-averse or looking for a faster return. Conversely, the governance of the Modernisation Fund does entail the close involvement of the EIB, which likewise tends to be risk-averse. At the same time, EIB approval can make it easier to attract private co-financing at later stages. Merging the two funding instruments into the Modernisation Fund would also enable the funding of more large-scale projects than running two parallel mechanisms.

Therefore, a transfer of allowances from Article 10c and/or solidarity allowances to the Modernisation Fund could further improve the relevance and operability of ETS financing for the low-carbon transition in Central and Eastern European energy systems. Several member states are considering this and the Czech Republic has already decided on a transfer.

¹⁶ Beneficiary member states must decide and inform the European Commission in this regard by 30 September 2019.

¹⁷ In the fourth ETS trading phase, 10% of the total quantity of allowances are allocated to the 'Solidarity Provision', (Article 10(2)(b) of the ETS Directive). This will be distributed among member states with a GDP per capita below 90% of EU average in 2013. Therefore, all member states that are eligible for the Modernisation Fund will also receive allowances under the Solidarity Provision.

Outlook

Funding generated by the Modernisation Fund will only constitute a part of total investment needs in the energy systems of beneficiary member states. There is a plethora of other funding sources that are likewise aimed at the energy sector. These range from the Connecting Europe Facility (for infrastructure), to the SET-plan (for low-carbon technology), to cohesion funds more generally. The Modernisation Fund would have the greatest impact if its size were increased and its investments targeted at those aspects that are compatible with long-term climate policy objectives, and not just at incremental energy system improvements that are only compatible with shorter term climate targets.

It is easy to identify some investments that are compatible with the types of project foreseen and that also contribute to long-term climate and energy targets. For example, in the case of renewable energy, this could be investments that would equip the electricity grid to handle higher shares of renewables. This could include both storage and interconnections. Investments in energy efficiency targeted at non-ETS sectors will help achieve the national Effort Sharing targets, with buildings being particularly important in an energy efficiency context. Meanwhile, various skills-related investments can form a crucial complement to EU policies that strengthen the disincentives for carbon-intensive energy use.

A next step is now to finalise the rulebook for the Modernisation Fund. This rulebook will take the form of an implementing act,¹⁸ which the Commission is due to produce in 2020.¹⁹

¹⁸ See Art 291(2) TFEU – implementing acts are the prerogative of the Commission, with member states providing oversight through the comitology process.

¹⁹ See Annex 6 of the European Commission's 2018 Report on the Functioning of the European Carbon Market.



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