

Funding mechanisms under the revised EU ETS and Social Climate Fund



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Table of Contents

1. Executive Summary	4
2. Note to the reader.....	5
2.1. Rationale for the paper	5
2.2. Explanatory note	6
3. Introduction	6
4. Fit for 55 Package and funding mechanisms	7
4.1. The Innovation Fund (IF)	7
4.1.1. What is new?.....	7
4.2.2. Innovation Fund: Results assessment of the first call for large-scale projects (LSPs) and small-scale projects (SSPs).....	8
4.2. Modernization Fund (MF).....	12
4.2.1. What is new?.....	12
4.2.2. Modernization Fund: Assessment of the positive disbursement decision.....	13
4.3. The Social Climate Fund (SCF)	14
4.4. Main changes concerning the Fit for 55 Package funding mechanisms proposed by the European Commission, and ENVI position on 17 May.....	14
5. Policy recommendations	16
ANNEX I - Overview of granted LSPs following the 1st call of proposals	18
ANNEX II: Overview of LSPs awarded PDA following the 1st call for proposals	19
ANNEX III: Overview of the granted SSPs following the 1st call for proposals	20
Annex IV: Overview of the SSPs awarded PDA following the 1st call for proposals.....	24
Annex V: Overview of the disbursement of the Modernisation Fund revenues in 2021.....	25

INDEX OF FIGURES

FIGURE 1, LSP OVERVIEW	8
FIGURE 2, LSP TECHNOLOGICAL SCOPE.....	8
FIGURE 3: GEOGRAPHICAL DISTRIBUTION OF SELECTED PROPOSALS AND PROJECTS AWARDED PDA FOR LSPs.....	9
FIGURE 4: SSPs OVERVIEW	10
FIGURE 5: SSPs TECHNOLOGICAL SCOPE	10
FIGURE 6: GEOGRAPHICAL DISTRIBUTION OF SELECTED PROPOSALS AND PROJECTS AWARDED PDA FOR SSPs.	11
FIGURE 7 ESTIMATION OF AUCTIONING VOLUMES PER MEMBER STATE AND PER SOURCE (IN MILLION EUAs) 2021-2030	13
FIGURE 8 DISBURSEMENT OVERVIEW MODERNISATION FUND	13

INDEX OF TABLES

TABLE 1 EP AND EC FUNDING MECHANISMS COMPARISON	14
TABLE 2 OVERVIEW OF GRANTED LSPs 1ST CALL OF PROPOSALS	18
TABLE 3: LIST OF PROJECTS AWARDED PDA	19
TABLE 4 OVERVIEW OF GRANTED SSPs 1ST CALL FOR PROPOSALS	20
TABLE 5 TABLE X. LIST OF SMALL-SCALE PROJECTS AWARDED PROJECT DEVELOPMENT ASSISTANCE FOLLOWING THE 1ST CALL FOR PROPOSALS.....	24
TABLE 6 DISBURSEMENT OF THE MODERNISATION FUND REVENUES IN 2021.....	25
TABLE 7 ESTIMATION OF MEMBER STATES AUCTIONING VOLUMES PER MEMBER STATE PER SOURCE IN MILLION EUAs DURING PHASE IV.....	27

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1. Executive Summary

The European Union Emissions Trading System (EU ETS) is one of the main pillars of EU's climate and energy policy and its revision is crucial to the Fit for 55 Package, adopted by the European Commission (EC) in July 2021.

In this paper, ERCST and CEEP provide an overview of the size and functioning of the funding mechanisms which are part of the revised EU ETS and the Fit for 55 Package, i.e., the Social Climate Fund. It also puts forward some recommendations in light of the ongoing legislative process. Finally, it compares the ENVI draft report on the ETS funding mechanisms with the EC proposal providing a summary of the current and upcoming political debate.

The Environmental Council will meet on 28th June, aiming to achieve a Council position on the Fit for 55 Package, including the EU ETS Directive, while the European Parliament will vote its position in June. The beginning of trilogue negotiations between Parliament and Council under the supervision of the EC is envisaged for September.

Some of the main takeaways of this paper can be found below:

I. Innovation fund:

- **What is new?** In the EC proposal, both the overall endowment and the scope of the Innovation Fund have been increased. The EC proposes an increase of the Innovation Fund from 450 to 650 million allowances, of which 150 million will come from the new ETS for the road transport and building sectors. In addition, the revenues from the allowances which have previously been allocated for free to those industry sectors which will now be covered by the Carbon Border Adjustment Mechanism (CBAM) will be added on top, from 2026 to 2030.
- **Innovation Fund Large Scale Projects¹:** out of 311 proposals, 7 top-ranked projects² were selected for a grant with a budget of over €1.1 billion for breakthrough technologies in energy-intensive industries, renewables, energy storage, carbon capture, use, and storage. Those projects have the potential to avoid the release of 72.8 MtCO₂e over the first 10 years of operation and will be located in Belgium, Finland, France, Italy, Spain, and Sweden. 15 proposals were awarded PDA (Project Development Assistance).
- **Innovation Fund Small Scale Projects:** Out of 232 proposals, 30 projects located in 13 Member States were awarded by December 2021 under the first call for SSPs with a budget of € 109 million. 15 proposals were awarded PDA.
- **REPowerEU:** To unlock industrial investment, the Commission aims to double the funding available for the 2022 Large Scale Call of the Innovation Fund this autumn to around € 3 billion.

II. Modernization Fund:

- **What is new?** The EC proposes to increase the size of the Modernization Fund by auctioning an additional 2.5% of the cap to cater to additional funding needs related to the increased EU climate ambition. The beneficiary Member States for this number of allowances will be the Member States with a GDP per capita at market prices below 65 % of the Union average during the period 2016 to 2018. In practical terms, this

¹ Projects are considered large-scale if they have a capital expenditure above EUR 7.5 million while small-scale projects are projects with a total capital costs between EUR 2.5 and 7.5 million.

² European Commission (2021): Large-scale projects. DG CLIMA website. Available at: https://ec.europa.eu/clima/eu-action/funding-climate-action/innovation-fund/large-scale-projects_en (Accessed on 24 May 2022)

means that 2 additional countries (Portugal and Greece) will benefit from the extension of the current provisions. Furthermore, the EC proposal would ensure that investments through the Modernization Fund will not harm the objectives of the European Green Deal by prohibiting the fund from supporting investments in any type of fossil fuel, while also increasing the percentage of the fund that needs to go to priority investments to 80%.

- **Disbursement decision under the Modernization Fund:** The Modernization Fund made available €898.43 million to 8 beneficiary countries in the first year of operation. The highest funding, amounting to €346.40 million, was allocated to Poland and Czechia with €320 million, whereas Croatia received the lowest amount of €2.16 million.³

III. Social Climate Fund (SCF):

- The SCF aims to compensate those in society who are impacted by a potential extension of carbon pricing to buildings and road transport. Unlike the previous funding mechanisms, which already existed before and have been subject to different modifications, the EC has proposed the creation of this new fund which intends to provide dedicated funding to support individuals at risk of energy or mobility poverty.

2. Note to the reader

2.1. Rationale for the paper

ERCST and CEEP have been working together on this topic for the last few years with the aim of:

- facilitating a debate on how to successfully operationalize and utilize the EU-ETS funding mechanisms,
- deepening the understanding of the regional financing needs and priorities, and
- providing regular updates on the state of play of the funding mechanisms to stakeholders through papers and workshops.

In 2018, ERCST and CEEP published a first paper⁴ where further information was provided on the funding mechanism's functioning, eligibility criteria, governance, and scale.

Over the course of 2019, several workshops were organised in beneficiary Member States and a stakeholder sentiment analysis was conducted. The main takeaways of this analysis were captured in a second paper⁵, which shed light on the preliminary decisions made by beneficiary Member States regarding the use of Article 10c Derogation and the flexibility mechanism.

³ A third disbursement decision under the modernisation fund was published on 08/06/2022 which has not been subject to consideration in this paper. https://ec.europa.eu/clima/system/files/2022-06/c_2022_3496_annexe_en.pdf

⁴ Marcu A., Caneill J.Y., Stoefs W., Vangenechten D., Jakubik M., Dlugosz M. (2018): *Funding Mechanisms in the fourth phase of the EU ETS: exploring what is known and identifying issues for clarification and discussion*. ICTSD, ERCST, CEEP. September. Available at: <https://www.ceep.be/www/wp-content/uploads/2018/10/Funding-Mechanisms-in-the-fourth-phase-of-the-EU-ETS.pdf> [Accessed on March 14 2022]

⁵ Marcu A., Jakubic M., Vangenechten D., Dlugosz M. (2019). *Implementation of the funding mechanisms in the fourth phase of the EU ETS: state of play*. ERCST & CEEP. October. Available at: <https://ercst.org/wp-content/uploads/2021/08/Funding-mechanisms-EUETS-ERCST-CEEP-2019-1.pdf> [Accessed on March 14 2022]

One year later, ERCST and CEEP published a third paper⁶ which provided an overview of previous developments and regulatory decisions made in 2020 and looked at the size of EU-ETS funding mechanisms under different scenarios following Brexit and an increase in the 2030 target. In the prelude to the Fit for 55 Package and the revision of the EU-ETS Directive, ERCST and CEEP put forward a set of recommendations⁷ aimed at enriching the debate by providing insightful ideas.

Building on previous work, this paper intends to help the reader understand what the main proposed changes are and how these will affect the size and functioning of some of the EU-ETS funding mechanisms. It also puts forward some recommendations in light of the ongoing legislative process.

2.2. Explanatory note

For simplification, the use of the term ‘funding mechanisms’ refers not only to the Modernisation and Innovation Funds, but also to Article 10c Derogation and Solidarity Provision.

Beyond the EU-ETS funding mechanisms, this paper will also delve into two additional funds which are in direct connection to the EU-ETS but were not included in the revision of the EU-ETS Directive, namely the Social Climate Fund (SCF) and the Ocean Fund. The Social Climate Fund was proposed in a separate legislative proposal as part of the Fit for 55 Package. The creation of an Ocean Climate Fund⁸ has been suggested by ENVI’s report in the current legislative process.

The overview on the awarded projects and developments related to the Innovation Fund and information concerning the positive disbursement decision for the Modernization Fund, is based on EC public information sources.

Data in relation to the comparison between the EC proposals and the EP draft reports stem from EC and EP sources.

3. Introduction

The EU-ETS is one of the main pillars of the EU’s climate & energy policy and its revision is crucial to the Fit for 55 Package. After the invasion of Ukraine, the access to affordable energy and commodities for industry and consumers has been even more constrained by geopolitical circumstances. While in the long term, the EU climate ambition is seen as a key part of the solution, in the short term the political focus has been recently shifted to energy security related issues.

In an EU context of geopolitical instability, carbon prices in the EU ETS crashed dramatically, from €95 on 23 February to €58 the day before the invasion (7th March), recovering to €78 on 14th March. Moreover, the economic sanctions imposed by the EC will impact Europe's energy transition. Gas has been expected to play an important role in the EU energy transition, serving as a bridging solution between coal and other forms of decarbonized energy production in some Member States.

⁶ Marcu A., Kawnik M., Vangenechten D., Bartosik A. (2020): *The role of the EU ETS funding mechanism in delivering the European Green Deal*. CEEP & ERCST. Available at: <https://ercst.org/wp-content/uploads/2021/08/20201116-ERCST-CEEP-Final-Funding-mechanisms-ETS-update-paper-2020-2.pdf> [Accessed on March 14 2022]

⁷ Marcu, A., Vangenechten D., Bartosik, A. (2021): *Recommendations of funding mechanisms in the revised EU ETS*. ERCST & CEEP. April 2021. Available at: <https://ercst.org/wp-content/uploads/2021/08/Recommendations-on-Funding-Mechanisms-in-the-Revised-EU-ETS.pdf> [Accessed on March 14 2022].

⁸ European Parliament (2022), Draft Report on the EU-ETS revision. 24 January. Available at: https://www.europarl.europa.eu/doceo/document/ENVI-PR-703068_EN.html (Accessed on 24 May 2022)

However, the gas consumed in the EU is essentially imported (to 90%) and Russia has a 40 % stake in the market. Because of the latter, the EU has been forced to accelerate its move towards alternative energy sources. The skyrocketing energy prices also create social problems that should be addressed with a wide range of solutions.

In the light of the ambitious, green, and fair transition towards carbon neutrality by 2050, adequate financial support for low-carbon investments as well as for social purposes is needed. The EU-ETS funding mechanisms aim to help lower-income Member States to modernize their energy sectors and finance their transition to a low-carbon economy as well as to foster the trial of low-carbon technologies across the EU.

4. Fit for 55 Package and funding mechanisms

4.1. The Innovation Fund (IF)

The Innovation Fund was established by Article 10a(8) of Directive 2003/87/EC to support innovation in low-carbon technologies and processes across all Member States. The different calls for proposals have shown that there is a large interest from project developers as well as a high need for support that can be provided through the Innovation Fund. All calls have been oversubscribed.

4.1.1. What is new?

In the Commission proposal, the size of the Innovation Fund has been increased from 450 to 650 million allowances, of which 150 million will come from the new ETS for road transport and building sectors. In addition, the revenues from the allowances otherwise allocated for free to those industrial sectors which will now be covered by the Carbon Border Adjustment Mechanism (CBAM) will be added on top, from 2026 to 2030.

Regarding its scope, the EC proposes to extend it to support innovation in low-carbon technologies and processes that concern the consumption of fuels in the sectors of building and road transport and to support investments to decarbonise the maritime transport sector, by expanding the technological scope to renewable hydrogen and ammonia as well as zero-emission propulsion technologies like wind technologies.

Moreover, competitive tendering mechanisms such as Carbon Contracts for Differences (CCfDs) have been mentioned as one possible solution to foster the uptake of low-carbon technologies, with up to 100% of the relevant costs of the projects eligible for support. Although the political direction has been set, there are still several questions that deserve further discussion, ranging from key design elements to fundamental implementation features.

There is a broad consensus in the EU to speed up decarbonisation and reinforce the system through which carbon pricing delivers the biggest chunk of emission reductions. Certain low-carbon technologies require a high carbon price and current EU ETS prices are not yet high enough to trigger this switch in hard-to-abate sectors.

Ocean Fund

The ENVI Committee of the European Parliament has proposed the creation of a specific fund to address the CO₂ emitted by maritime activities. 75% of the revenues generated from the auctioning of allowances with respect to maritime transport activities under the EU ETS should go towards funding this new Ocean Fund.

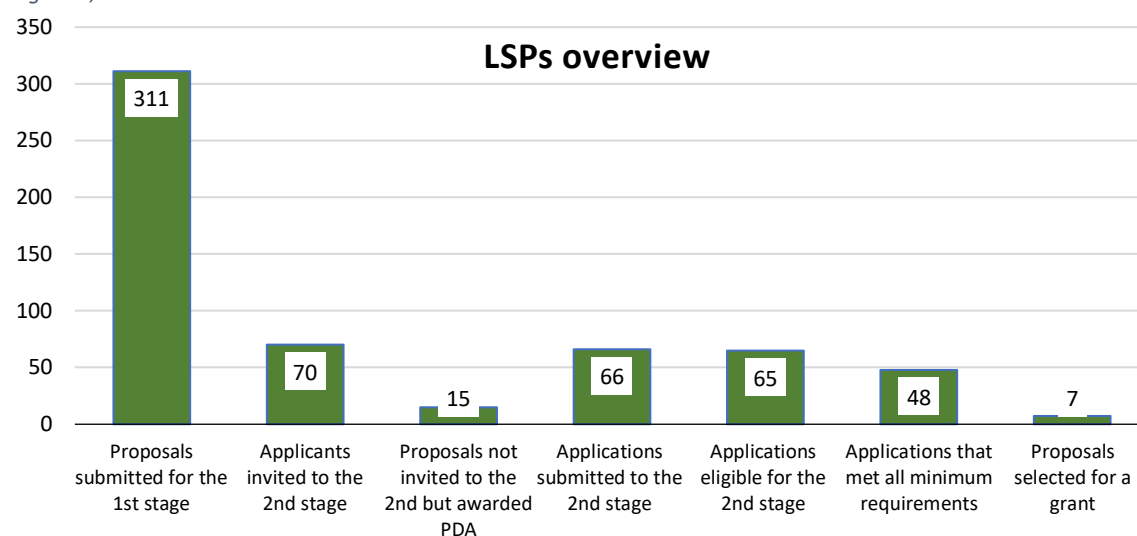
The fund will aim at investing in innovative technologies, alternative fuels, and cleaner ports. The proposal suggests having a similar governance structure as the Innovation Fund and central management through a Union body.

This can be partially explained by the fact that the ETS price signal first gives an incentive to deploy solutions that are already close to the market or undergo certain fuel-switching. The EU ETS is designed to stimulate the lowest-cost emission reductions first. Therefore, its price signal is less likely to directly support pre-commercial trials of promising technologies. CCfDs aim to support this goal by compensating forerunners leading the implementation of low-carbon technologies.

4.2.2. Innovation Fund: Results assessment of the first call for large-scale projects (LSPs) and small-scale projects (SSPs)

Large scale projects (LSPs)

Figure 1, LSP overview

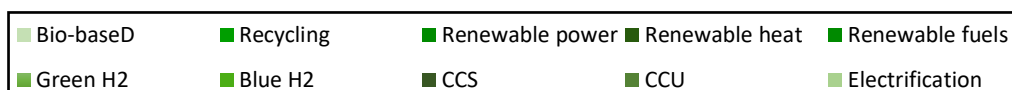
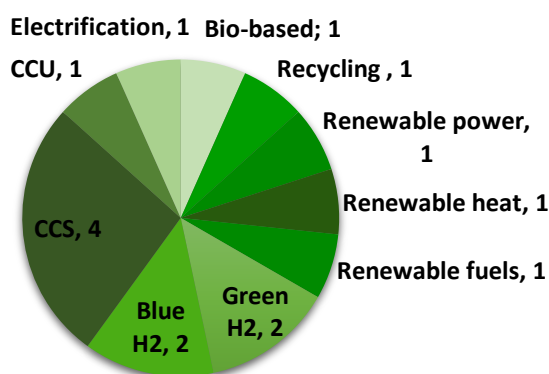


ERCST, CEEP own elaboration with data from the European Commission

Figure 2, LSP technological scope

* The number of technologies does not exactly match the number of awarded projects as some projects cover more than 1 technology.

Technological scope



9

ERCST own elaboration based on data from the European Commission

The Commission launched the first call for LSPs on 3 July 2020:

- 311 proposals were submitted for the first stage call in October 2020.
- While only 70 best-ranked proposals were invited to the 2nd stage in March 2021, 15 proposals out of those that were not selected for the 2nd stage were invited to project development assistance (PDA).
- 66 proposals were submitted to the 2nd stage in June 2021:
 - o 1 proposal was inadmissible at 2nd stage due to significant changes compared to the first stage.
 - o 17 proposals were rejected because of a manifest error on the GHG Emissions Avoidance (e.g., wrong product reference, wrong emission factor, inclusion of negative emissions, failure to use); or Cost Efficiency Criteria (e.g., inclusion of project costs beyond ten years of plant operations, wrong methodology without proper justification, wrong CAPEX included in the reference, inconsistent assumptions, the inclusion of a terminal value, omission of price premia); or both.
 - o 48 proposals met all requirements. Nevertheless, due to the limited budget of the Innovation Fund, 41 of these projects could not be funded.

7 top-ranked projects were selected for a grant with a budget of over €1.1 billion for breakthrough technologies in energy-intensive industries, renewables, energy storage, carbon capture, use, and storage. Those projects have the potential to avoid the release of 72.8 MtCO₂e over the first 10 years of operation and will be located in Belgium, Finland, France, Italy, Spain, and Sweden.

None of the awarded projects will be located in the Central and Eastern Europe (CEE) region as quite few proposals fell beyond the budget threshold. Lithuania, with only 2 proposals, was among the CEE countries with the lowest number of eligible proposals, followed by Slovakia (3), Slovenia (4), Hungary (4), Croatia (4), Romania (5), and Estonia (5). Poland and Czechia had the highest number of eligible proposals, respectively 7 and 8. Surprisingly, Latvia did not submit any eligible proposals.

Figure 3: Geographical distribution of selected proposals and projects awarded PDA for LSPs.



Source: European Commission (2021)

In addition, rejected proposals that met minimum requirements and had the strongest potential to improve their maturity were offered PDA. 15 large-scale projects amounting to a total sum of a maximum of €4.4 million were selected for PDA, out of which 2 will be located in the CEE region, namely:

- The GraviStore project in Czechia will deploy at the commercial scale a grid-scale electrical energy storage system;
- The VerBioChem, a cross border project located in Hungary and in Germany, will provide renewable carbon for the European Green Economy through the first Ethenolysis production plant.

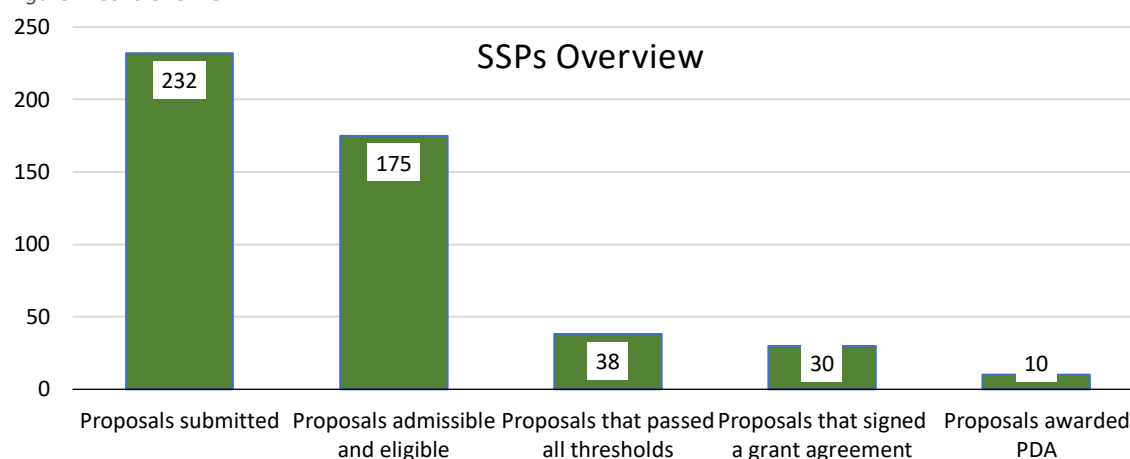
The full list of proposals selected for a grant and PDA can be found in Table 1 and Table 2 in the Annex.

Following the invasion of Ukraine, the EC published a set of measures to reduce EU dependence on Russia's fossil fuels. As part of these, the EC proposed to double the funding available for the 2022 Large Scale Call of the Innovation Fund this autumn to around € 3 billion. A specific REPowerEU window will support:

- innovative electrification and hydrogen applications in industry,
- innovative clean tech manufacturing (such as electrolyzers and fuel cells, innovative renewable equipment, energy storage or heat pumps for industrial uses)
- mid-sized pilot projects for validating, testing and optimizing highly innovative solutions.

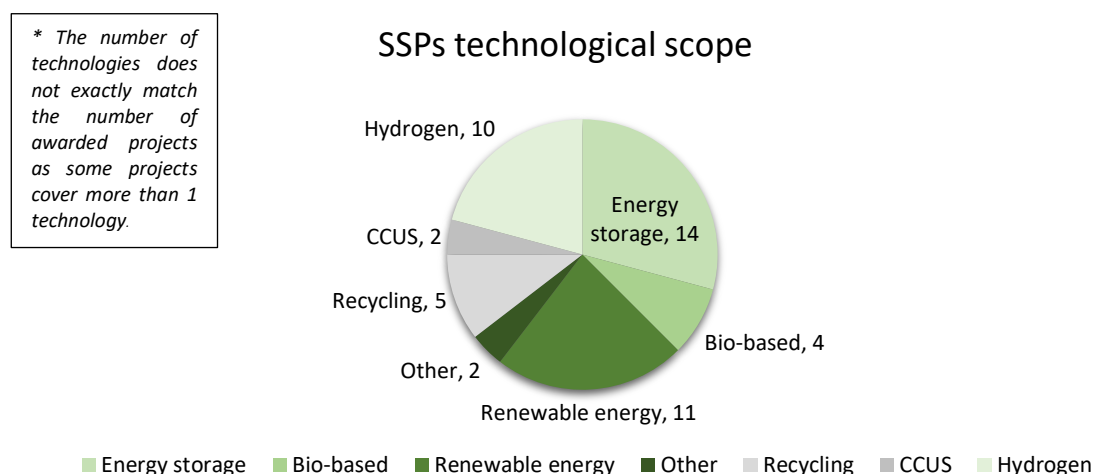
Small Scale Projects (SSPs)

Figure 4: SSPs Overview



ERCST, CEEP own elaboration with data from the European Commission

Figure 5: SSPs technological scope



ERCST, CEEP own elaboration with data from the European Commission

By December 2021, 30 projects located in 13 Member States were awarded under the first call for SSPs which had a budget of € 109 million. The EC received 232 applications with capital expenditure between € 2.5 and € 7.5 million, where:

- about 125 applications were related to the energy-intensive industries, including CCSU;
- about 60 applications were related to the renewable electricity and heat sector;
- about 50 applications for the energy storage sector.

On 26th October, the Commission launched the second call for LSPs receiving 138 applications¹⁰ from different sectors. This time, the budget, amounted to €1.5 billion, which represents a 50% increase compared to the previous call. Also compared to the first call, the application process was simplified to only one stage and the application documents were improved. The evaluation results are expected in the third quarter of 2022, while the award of grants and PDA are expected in the fourth quarter of 2022. Out of 175 proposals that were deemed admissible and eligible, 38 proposals passed all thresholds, and 32 proposals located in 12 Member States (plus Norway and Iceland) and covering 14 sectors were selected, with a total grant value of € 118.4 million. Of these, 30 proposals ended up signing the grant agreement, thereby requesting € 109 million with the potential to avoid 4.5 MtCO₂e over 10 years.

34 projects were deemed non-admissible, as documentation was missing or was incorrect (i.e. feasibility study, business plan, detailed calculations of GHG emission avoidance, and/or of relevant costs). 21 projects were deemed non-eligible, failing to meet all call conditions/requirements (i.e. monitoring and reporting period, scope and capital expenditure limits).

Figure 6: Geographical distribution of selected proposals and projects awarded PDA for SSPs.



Source: European Commission (2021)

Spain and Italy, followed by Germany and France, were among the countries with the highest number of eligible projects. From the CEE region, Poland submitted 9 eligible proposals, followed by Romania and Estonia (6), Czechia (5), Bulgaria and Croatia (4), Slovenia (3) and Latvia (2). Hungary was among the countries with the lowest number of eligible proposals, submitting only 1 proposal, while Lithuania and Slovakia did not submit any eligible proposal. Finally, 4 out of 30 proposals were awarded a grant, with two projects each from Croatia and Poland:

- One of the projects located in Croatia (CCGeo) will seek to generate CO₂-free heat and power by using a novel combination of existing technologies from other industries to exploit geothermal energy and dissolved natural gas from the same source. The second one (DMC) will decarbonise the malt industry via the construction of both a solar heat plant and storage facility for the purpose of supplying renewable heat to (pre)heat hot air for drying the malt.

¹⁰ DG CLIMA (2022): €1.5 billion for clean tech: 138 projects apply to the EU Innovation Fund's second call for large-scale projects. 11 March 2022. Available at: https://ec.europa.eu/clima/news-your-voice/news/eu15-billion-clean-tech-138-projects-apply-eu-innovation-funds-second-call-large-scale-projects-2022-03-11_en (Accessed on 14 March 2022)

- In Poland, ZE PAK green H2 project will aim to build a pilot water electrolysis system to produce green hydrogen for use in the transport sector, while Nortflex located jointly in Sweden and Poland, will aim to de-carbonize temporary power and flexible storage.

In addition, 10 proposals were awarded PDA following the 1st call for proposals. One of the projects, will be located in Latvia. The project ZERO CARBON GYPSUM aims to facilitate a transition of an energy-intensive gypsum plaster board manufacturing site from natural gas use to renewable on-site generated synthesis gas (syngas) using solid waste biomass as a feedstock. In the Annex of this paper, you will find the entire list of successful projects.

The second call for small-scale projects was launched on 31 March with a budget of € 100 million. For projects with capital expenditure between € 2.5 and 7.5 million located in the EU Member States Iceland and Norway the call remains open for five months (until 31st of August), and the application process is similar to the first call. The results are expected in February 2023 (for PDA in Q2 2023) and the signature of the grants in May 2023.

4.2. Modernization Fund (MF)

The Modernization Fund was introduced to help finance the modernisation of the energy systems of Member States with a GDP per capita at market prices below 60% of the EU average. Currently, Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia can benefit from funding. The initial size of the Modernization Fund was estimated to cover 3-9% of additional investment needs associated with the 2030 climate and energy framework. The total initial size of the Modernization Fund is 2% of the total quantity of allowances between 2021 and 2030¹¹.

While the Modernization Fund cannot be expected to be solely responsible to ensure the modernization of the energy system in the eligible Member States, the increased overall ambition of the EU, including the updated 2030 target, warrants an increase of the current size to help facilitate and speed up the modernization process. It also shows solidarity with those Member States where the transition is especially challenging.

4.2.1. What is new?

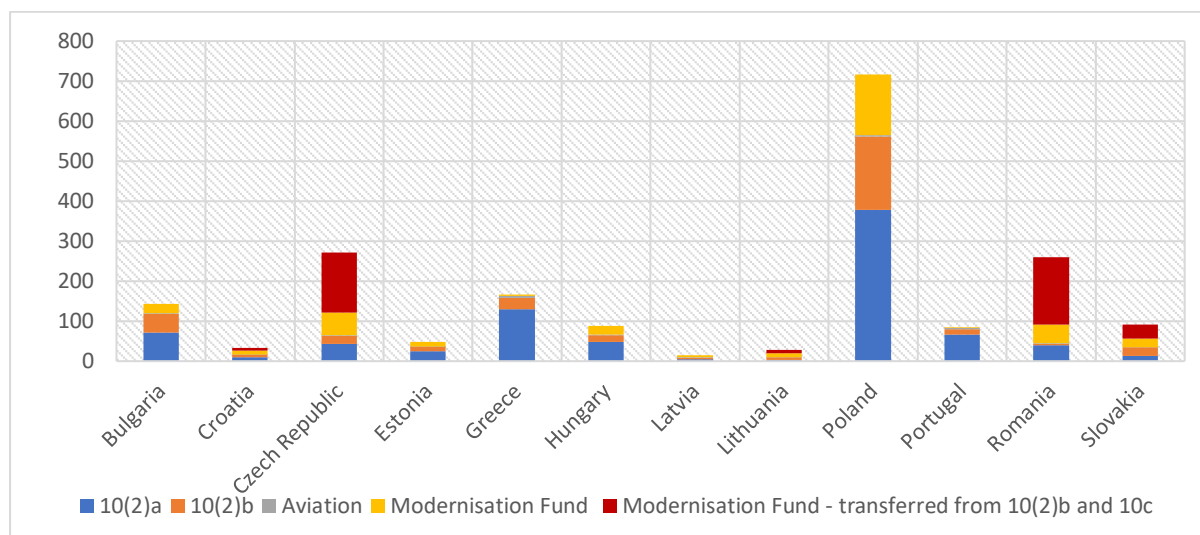
The EC proposed to increase the size of the Modernisation Fund by auctioning an additional 2.5% of the cap to cater for additional funding needs related to the increased EU climate ambition. The beneficiary Member States will be the Member States with a GDP per capita at market prices below 65 % of the Union average during the period 2016 to 2018. In practical terms, this means that 2 additional countries (Portugal and Greece) will benefit from the extension of the current provisions. Furthermore, the EC proposal would ensure that investments through the Modernization Fund will not harm the objectives of the European Green Deal by prohibiting the fund from supporting investments in any type of fossil fuel, while also increasing the percentage of the fund that need to go to priority investments to 80%. Moreover, energy efficiency and support for households to address energy poverty should be included within the scope of priority investments.

As mentioned, at least 80% of the fund must be spent on priority investments under Article 10d (2) with less strict spending rules applying to the remaining 20%. This can be problematic if that 20% goes to investments that are not aligned with the EU targets, or worse, work against them.

¹¹ Directive 2003/87/EC of The European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC (Text with EEA relevance)). Article 10.

Figure 7 provides an overview of the estimated EU ETS auctioning volume per Member State for the period 2021-2030. The data stems from the ClimaAct dataset (Annex IV)¹², which was used to assess the impact of the Commission's proposal presented in July 2021. The figure below provides an estimation of the final auctioning volumes under the Modernization Fund. It considers the estimated auctioning under the current EU-ETS framework as applying until 2023. From 2024, the chart takes into account the proposal of the EC for the revision of the EU-ETS Directive.

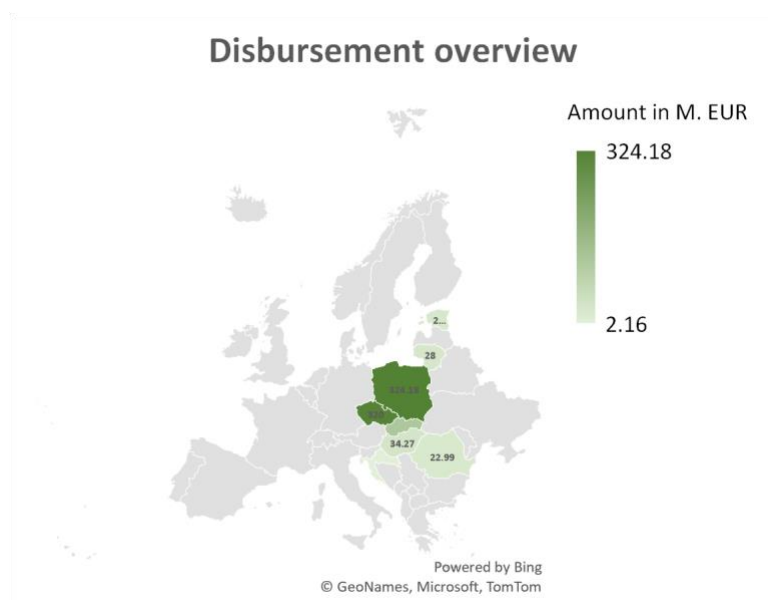
Figure 7 Estimation of auctioning volumes per Member State and per source (in million EUAs) 2021-2030



Source: Own elaboration based on ClimAct 2022 Data

4.2.2. Modernization Fund: Assessment of the positive disbursement decision

Figure 8 Disbursement overview Modernisation Fund



The Modernization Fund made available €898.43 million to 8 beneficiary countries in the first year of operation. The highest funds, amounting to €346.40 million, were allocated to Poland, and the second highest to Czechia with €320 million, whereas Croatia received the lowest amount with €2.16 million. In total, 26 proposals regarding electricity generation from renewable sources in industry, building, transport, and agriculture received support. In 2021, funding was likewise disbursed to Slovakia (€120 million), Hungary (€34.28 million), Lithuania (€28 million), Romania (€22.99 million), and Estonia (€24.59 million).

Member States also submitted investment proposals for the upcoming disbursement cycle by 27 January 2022, for non-priority proposals and 24 February 2022, for priority proposals.

¹² ClimaAct (2021) Is the EU ETS proposal fit for 55%?. Open-source simulation model. 21 January. Available at: <https://climact.com/en/is-the-eu-ets-proposal-fit-for-55/> (Accessed on 24 May 2022)

4.3. The Social Climate Fund (SCF)

On 14th July, the EC proposed to extend emission trading to buildings and road transport through a separate upstream system. The EC's proposal is an attempt to reduce direct emissions of buildings and road transport, that today represent more than 30% of total GHGs emissions in the EU¹³. This new ETS (frequently referred to as "ETS 2") will operate as a trading scheme independent of the current EU ETS, launched in 2005.

4.3. Social Climate Fund (SCF)

The SCF aims to compensate the segment of society particularly impacted by the potential extension of carbon pricing to buildings and road transport. Unlike the previous funding mechanisms, which already existed before and have been subject to different modifications, the EC has proposed the creation of this new fund.

This new fund intends to provide dedicated funding to support those at risk of energy or mobility poverty. Article 30d of the EU ETS Directive (as proposed by the EC) explicitly recognises that Member States shall use part of their auction revenues to address social aspects of the emission trading for buildings and road transport, with a specific emphasis on vulnerable households, micro-enterprises and transport users.

To provide enough resources to this fund, the EC proposes to dedicate 25% of the expected revenues from the newly proposed EU-ETS for road transport and building and will provide €72.2bn of funding for the period 2025-2032. The proposal aims to combine this with a national contribution of at least 50%, taking the fund to €144.4bn.

The SCF fund would be articulated based on social climate plans that each Member State should prepare and that will guide its implementation. It would start operating in 2025.

4.4. Main changes concerning the Fit for 55 Package funding mechanisms proposed by the European Commission, and ENVI position on 17 May

Table 1 EP and EC funding mechanisms comparison

Core elements	ENVI final report	Amendment	Commission proposal
Innovation Fund (IF)/ Climate Investment Fund	– Renamed as Climate Investment Fund. – Frontloaded during the first 5 years of implementation of the ETS Directive. – Ocean Fund for maritime. – Should not support nuclear. – Should support CO₂ for unavoidable industrial process emissions, and the direct capture of CO₂ from the atmosphere (DACs). – Should support emission reductions in the waste sector.	10 12 27 B	– 200 million allowances added, 150 from ETS 2. – Scope includes project support via CCfDs.

¹³ DG CLIMA (2021): *Fit for 55 Package. Delivering our 2030 climate target. 24 November*. 12th EU ETS Compliance Conference. Slide 10.

	– At least 12% for the deployment of renewable energy sources. – At least 10% for railway systems and local public transport.		
Modernisation Fund (MF)	– Additional 2% of cap is auctioned to increase MF from the year of entry into force of the ETS Directive. – Other 0.5% shall go to the IF. – Member States may use transitional free allowances (Art 10c), not being allocated to operators by 31 December 2023, to support investments within the framework of the MF (10d). – Should not support nuclear. – Shall consider ‘do no significant harm’ criteria¹⁴. – Only to MS that have adopted legally binding targets for achieving climate neutrality by 2050. – 100 % of the financial resources from the MF shall be used to support investments of Article 10d.	10 13 27 A	– Additional 2.5% of the cap is auctioned to increase MF as from the year of entry into force of the ETS Directive. – MF cannot finance investments in any type of FF. – 80 % of the financial resources from the MF shall be used to support investments of Article 10d.
Social Climate Fund	– 150 million ETS 2 Allowances auctioned for Social Climate Fund (instead of IF). – The Rapporteurs seeks to establish an EU definition of energy poverty and introduce a definition for transport poverty. – Social Climate Plans: The Commission should provide guidance on the Plans to ensure the highest added value and cost-effectiveness. Involvement of social partners is essential. – Direct income measures should not exceed 25% of the total estimated costs of the Plan and should be limited to a three-year transition period. – Support from the Fund must respect the principle of ‘do no significant harm’ of the EU Taxonomy. – MS Climate neutrality commitment. – Link between SCF and Rule of Law. – Any EU-revenue from the new emissions trading system should go to the SCF. When carbon prices increase, the Fund should also increase proportionally.		– 25 % of the expected revenues from new emission trading (road building and transport) in 2026-2032. – Social Climate Plans: MSs shall be required to draft Social Climate Plans and submit them to the EC in line with NECPs

¹⁴ For environmental objectives as set in Article 17 of the Regulation (EU) 2020/852.

5. Policy recommendations

Ensure an adequately increased Modernization Fund

ERCST and CEEP believe that the size of the Modernisation Fund should be increased to help facilitate and speed up the modernization process and to show solidarity with those Member States where the transition is especially challenging due to higher emission reduction targets.

Fossil fuels will have to be phased out in the energy sector; however, the speed of this process should consider the different circumstances in different Member States. The Modernization Fund still plays a key role in supporting the transition of the most carbon dependent regions. In some parts of the EU, investments in natural gas generation are crucial to phase out coal, especially in the heating sector. It should be allowed to finance switches from coal to gas investments, where no other cost-effective option is available. To enable a sustainable transition of the heating sector, investments from the Modernization Fund in efficient CHP plants should be allowed.

Another important issue is the role of nuclear energy in the transition. It should be considered that nuclear energy does not produce direct carbon dioxide emissions. We believe nuclear energy could help to reconcile the conflicting needs of reducing emissions, offer affordable prices to consumers and increase security of supply. We support maintaining trust and stability by keeping the rules for the Modernization Fund unchanged until the 2024 review, so it does not negatively impact the transition.

Currently, the Modernization Fund is split among eligible Member States according to their share of GDP in 2013 (50%) and share of verified emissions (50%). ERCST and CEEP believe that this allocation key is not fit for purpose and should be adapted, at least for the additional allowances that will go to the Modernization Fund.

The Modernization Fund may be an efficient tool to address the transformation of the energy system in some specific Member States (i.e., those with a GDP per capita below 65% of the EU average in 2013). It shall work in parallel with the Innovation Fund, aiming to support specific projects across the EU on an equal basis for all Member States. The role of the Modernization Fund shall not be undermined either in terms of activities coverage or in terms of auctioning participation. Funding for energy efficiency increase at industry facilities should be further emphasised.

Ensure sufficient revenues for the Social Climate Fund

Increased financial support will be needed to mitigate the impact of the ETS 2. This will help to mitigate the impact on vulnerable households and micro-enterprises. Maintaining growth and jobs while decarbonising should be done in a social and efficient way. An increased share of revenues will have a higher direct impact on consumers than the currently proposed 25%.

Ensure more revenues, cohesion, and transparency under the Innovation Fund's support

Given the interest from project developers, we believe that the size of the Innovation Fund should increase ensuring a balanced representation across the EU. Also, special attention should be given for cross-border projects and for those sectors of the economy which are more vulnerable vis-à-vis the energy and climate transition and have demonstrated their compromise to the EU climate goals.

The innovation Fund should not just cover 1st of a kind projects. This approach risks that by only compensating frontrunners leading the implementation of low carbon technologies, other technologies, which are still not mature enough, will not receive the stimulus to decarbonize.

In these cases, a project may not be eligible for funding if it has not been the first implementing an innovative technology. This may be the case for DRI-EAF/SAF¹⁵ that must be rolled out in several plants in parallel and may not be eligible if one company in the EU has already done something similar.

The ETS Innovation Fund application procedure and methodology should be simplified. Preparation time for large-scale projects (currently 4 months between the deadline of the call and the submission of applications) should also be extended for upcoming calls.

We also remain cautious regarding the request by ENVI to link the fund with the ‘do no significant harm’ principle. If this is the case, the criteria to benefit from the fund will be stricter (i.e., a need of full life cycle assessment of the economic activity may be required to receive funding) and may generate a contradiction between the environmental and climate objectives, thus going further than the scope of the EU ETS Directive.

The proposal of ENVI to make the IF and MF part of the multiannual framework also raises questions of acceleration and deployment of the fund in due time to accelerate the decarbonisation of the EU.

CCfDs are not a silver bullet for industrial decarbonization and should be carefully designed

Carbon Contracts for difference (CCfDs) are discussed as one of the most promising alternatives for the decarbonization of EU industry. Current EUA prices are not triggering the switch to less carbon intensive technologies in some industrial sectors.

To allow for low- and zero-carbon technologies to compete with cheaper “high-carbon” alternatives, policies that complement and reinforce the role of carbon pricing are needed. This is needed with urgency as a big share of cement, steel, and steam cracker plants in the EU27 will require major reinvestments by 2030, thus increasing the risk of carbon lock-in if current production methods remain unchanged.

For the time being, at the EU level CCfDs only represent an outlined concept between EU climate and industrial policies whose concrete design and implementation is still being shaped. At a national level, the situation is different, and some countries (specially the wealthiest ones) have already put forward (or are very close to do so) schemes which closely resemble CCfDs.

ERCST and CEEP believe that a common EU approach to CCfDs that guarantees a level playing field between different member states is needed. Different member states have different financial capabilities and therefore the lack of a harmonized EU approach to CCfDs may unequally encourage the industrial development in some member states. We support the introduction of competitive bidding mechanisms, such as CCfDs, under the Modernization Fund by also extending its scope to industrial decarbonization.

¹⁵ Direct reduction, Electric Arc Furnance and Submerged Arc Furnance.

ANNEX I - Overview of granted LSPs following the 1st call of proposals

Table 2 Overview of granted LSPs 1st call of proposals

Project	Location	Project description	GHG emissions avoidance	Amount of the fund grant in million (EUR)
<u>Kairos-at-C</u>	Belgium	Carbon capture from hydrogen, ammonia and ethylene oxide production and storage in the North Sea, innovative shipping	13.96 Mt CO ₂ eq	356.9
<u>TANGO</u>	Italy	Bifacial heterojunction photovoltaic cells production at GW scale	25 Mt CO ₂ eq	117.68
<u>BECCS@STHLM</u>	Sweden	Bio-energy carbon capture at a combined heat and power plant and storage in the North Sea – negative emission	7.8 Mt CO ₂ eq	180
<u>K6 Program</u>	France	CCUS at cement plant with storage in the North Sea and carbon use for K6 concrete production	8.1 MtCO ₂ eq	153.39
<u>SHARC</u>	Finland	Green hydrogen from water electrolysis and blue hydrogen with CCS, storage in the North Sea	4.0 Mt CO ₂ eq	88.29
<u>Hybrit</u>	Sweden	Hydrogen-based direct reduction for steelmaking, including electrolyser	14.3 Mt CO ₂ eq (first 10 years of operation)	143
<u>ECOPLANTA</u>	Spain	Bio-based methanol from non-recyclable municipal waste	3.4 Mt CO ₂ eq	106.38

Source: The European Commission ANNEX to the Commission Decision on the award of grants under the Innovation Fund – first call for large-scale proposals, 10.03.2022

ANNEX II: Overview of LSPs awarded PDA following the 1st call for proposals

Table 3: List of projects awarded PDA

Project	Sector	Location	Project description
SUN2HY	Hydrogen	Spain	The first Photoelectrocatalysis pre-commercial plant in the world with a large production capacity of hydrogen.
BHyPER Community	Solar energy	Portugal	Green hydrogen to a local industrial site backed by photovoltaic generation and a battery system.
Equigy CBP	Other energy storage	Netherland, Germany and Italy	The Crowd Balancing Platform to balance the grid and ensure the security of supply for the energy transition.
ETHOS	Biofuels and biorefineries	Italy	A large-scale 2nd generation bioethanol demonstration plant.
GHG-PU	Other sector(s)	Netherlands	Capturing GHG from end-of-life PU (polyurethane) insulation.
LiSalt	Other energy storage	France	Ultra-pure electrolyte salt to improve batteries safety and charge, for Lithium Ion Batteries in the electric vehicle market.
NEF	Refineries	Norway	The first-of-a-kind industrial-sized Power-to Liquid plant in Norway to enable climate-neutral transportation with a focus on the hard-to-electrify aviation sector.
VerBioChem	Biofuels and biorefineries	Germany and Hungary	Ethenolysis Production Plant providing Renewable Carbon for the European Green Economy.
CESAR	Other energy storage	Germany	Upscaling Curved Graphene synthesis and electrode production technology.
Sun2Store	Intra-day electricity storage	Spain	An innovative pumped heat electricity storage system to store solar PV electricity and feed it back to the grid.
Oxy-combustion	Other sector(s)	Netherlands	The implementation of an Allam Cycle (oxy-combustion) power plant to generate electricity without GHG emissions, with a fully integrated CCS system.
TRISKELION	Chemicals	Spain	Innovative plant to manufacture green methanol produced from renewable hydrogen and CO2 captured from an existing cogeneration plant.
HYDROGEN EUROPA	Hydrogen	Denmark and Norway	Zero-emission vessel powered by a large-scale fuel cell system will exclusively use green hydrogen from renewable sources.
WAVE	Other sector	France	Large sailing cruise ship featuring an innovating wind propulsion technology.
GraviSTORE	Intra-day electricity storage	Czechia	First-of-kind commercial deployment of a grid scale electrical energy storage system using solid weights in an existing mine shaft.

Source: The European Commission, Annex to the Commission Decision on the award of Project Development Assistance under the Innovation fund-first call for large-scale projects, 27.07.2021

ANNEX III: Overview of the granted SSPs following the 1st call for proposals

Table 4 Overview of granted SSPs 1st call for proposals

Project	Sector	Location	Project description	Estimated relevant cost in million EUR	Maximum grant amount in million EUR
AAL SEB	Non-ferrous material	Ireland	This project aims to partially decarbonise the production of highpressure steam used in aluminium refinery, by substituting existing gas-fired boilers with an electric boiler powered during peak renewable production.	7.06	4.24
AGGREGACO2	Glass, ceramics and construction material	Spain	The project involves designing and building a production plant for the manufacture of carbon-negative aggregates by means of the so-called Accelerated Carbonation Technology.	5.28	3.17
Aquilon	Wind energy	Germany	The project aims to cover the passive energy consumption of an underground gas storage site with carbon-neutral electricity. The project will comprise an integrated renewable and storage solution, including an airborne wind energy production at between 100 - 300 kW scale, ca. 300 kWp of solar photovoltaics and a ca. 400 kW kW / 800 kWh redox-flow battery.	3.37	2.02
BCP	Glass, ceramics and construction materia	France	The project will implement and validate an innovative technology that recovers and reuses waste heat from furnace fumes in the float glass production process.	7.24	4.34
CarBatteryReFactory A	Other energy storage	Germany	The project is to develop, build and operate a new site for manufacturing an energy storage system based on second-life electric vehicle batteries.	7.50	4.50
CCGeo	Renewable heating and cooling	Croatia	This project will generate CO ₂ -free heat and power by using a novel combination of existing technologies from other industries to exploit geothermal energy and dissolved natural gas from the same source.	7.50	4.50
CO2-FrAMed	Solar energy	Spain	This project will build approximately 12 stand-alone large-power photovoltaic irrigation systems that do not require back-up batteries	7.26	4.36

			and significantly reduce risks related to the integrity of the water distribution infrastructure.		
DMC	Renewable heating / cooling	Croatia	This project will build a solar thermal heating plant, heat pumps and a storage facility to provide renewable heat to an energy-intensive malt production process in Croatia.	7.50	4.50
DrossOne V2G Parking	Electricity grid services	Italy	The project will demonstrate the feasibility of a largescale, centralized vehicle-to-grid system by using the stationary storage associated with the electric vehicles in the car park of their manufacturer, before being shipped to car dealerships and a stationary storage unit consisting of second-life batteries.	7.50	1.64
EB UV	Iron and steel	France	The aim of the Electron Beam and Ultra Violet project is to deploy a first-of-a-kind full-scale process for curing paint on steel substrates (to avoid presence of moisture) without the use of natural gas.	4.00	2.40
EVVE	Intra-day electricity storage	France	The project aims to demonstrate the innovative vehicle-to-grid technology based on the implementation of a hundred chargers virtual power plant, making it a first-of-a-kind, large-scale demonstration in Europe.	6.32	3.79
FirstBio2Shipping	Biofuels and bio-refineries	Netherlands	This project will develop the first industrial plant converting biogas to renewable, low-carbon bio-liquefied natural gas in a standardised and scalable fashion, with minimal energy usage.	7.23	4.37
Green Foil project	Other energy storage	Sweden	The project is focused on increasing the downstream manufacturing capabilities of a rolling mill to be able to deliver aluminum battery foil, for use as a cathode current collector, which is required as input material when producing electric vehicle battery cells.	4.46	2.68
GREENMOTRIL D	Other energy storage	Spain	This project will transform the seaport of Motril into the first European port to operate off-grid while maintaining its basic services, based on a self-managed energy community that uses renewable energy and storage technologies and can intelligently manage power demand using advanced technologies.	7.25	4.35
GtF	Intra-day electricity storage	Austria	The Green the Flex project aims to open the electricity market to decentralised units and use these units' flexibility to provide load-shifting management service.	4.03	2.42

H2 Valcamonica	Hydrogen	Italy	This project will produce and store green hydrogen through the implementation of an electrolyser, with the final goal to cover the local demand from both mobility (including rail transport) and energy intensive industries.	7.38	4.43
HELEXIO line	Solar Energy	France	The objective of this project is to develop the first full-scale plant to manufacture a 'ready to plug-in' Building Integrated-Photovoltaic roofing steel envelope for the European non-residential buildings market.	6.22	3.73
HYVALUE	Hydrogen	Spain	The project aims to produce hydrogen, for sale to the transport and energy-intensive industry sectors, based on an innovative production process using municipal solid waste.	7.43	4.46
LK2BM	Pulp and paper	Portugal	The aim of the project is to reduce direct greenhouse gas emissions from the pulp mill's lime kiln.	7.48	4.49
MaxAir	Solar energy	Spain	The Maxeon Air PV modules will be a first-of-a-kind, conformable, lightweight, robust, racking free and fire certified sticky solar panel, enabling its installation in inaccessible places.	7.43	4.46
NAWEP	Wind energy	Norway	The project will build and operate one of the world's first Airborne Wind Energy array, consisting of at least 12 AWE grid-connected devices, which combined will generate 1.2MW of renewable power.	7.45	3.35
NorthFlex	Intra-day electricity storage	Poland, Sweden	The project seeks to scale up a lithium-ion battery energy storage system comprising two units: an individual self-contained, industrial-grade, high energy density battery pack and a central power hub.	7.38	4.43
PIONEER	Intra-day electricity storage	Italy	This project involves the design, construction, start-up and operation of a system made up of second-life batteries from the automotive sector for the storage of excess power produced by a 30MW solar photovoltaic plant.	5.17	3.10
Silverstone	CO ₂ transport and storage	Iceland	The project involves the design, construction, and commissioning of a plant that dissolves CO ₂ in water as it flows into subsurface basalt rocks, where it is fixed into stable carbonates: a process known as carbon capture and mineral storage.	6.45	3.87
SKFOAAS	Refineries	Spain	The objective of the project is to install and operate a first-of-a-kind, stand-alone processing plant for regenerating industrial oils.	2.70	1.62

SUN2HY	Hydrogen	Spain	The aim of this project is to design, implement and validate a pre-commercial stage production plant to generate green hydrogen via photoelectrocatalysis, an innovative technology which directly converts solar energy to chemical energy by splitting water into hydrogen and oxygen with no external energy input.	7.47	4.48
TFFFTP	Pulp and paper	Sweden	The project involves the replacement of fossil fuel-derived liquified natural gas, which has been used to date to dry paper, with a new on-site gasification plant that uses wood waste to generate bio-syngas.	7.00	4.20
TLP	Chemicals	Sweden	The project involves the construction of a biorefinery producing a biomaterial that is renewable and which is used in the manufacturing process of packaging films (i.e., wrapping plastics and plastic bags.	7.31	4.39
W4W	Biofuels and biorefineries	Spain	This project aims at producing cost competitive and grid-compliant biomethane from landfill gas using the WAGABOX technology.	7.36	2.45
WH	Renewable heating/ cooling	France	The Water Horizon project will develop at commercial scale an innovative thermal storage technology, the mobile thermal battery.	4.09	2.46
ZE PAK	Hydrogen	Poland	The ZE PAK project aims to build a 5MW pilot water electrolysis system to produce green hydrogen for the public bus transport sector in Poland.	7.43	4.46

Annex IV: Overview of the SSPs awarded PDA following the 1st call for proposals

Table 5 Table x. List of small-scale projects awarded project development assistance following the 1st call for proposals

Project	Sector	Location	Project description
ALGA3HER O	Biofuels and biorefineries	Portugal	Low cost and sustainable biofuel and biofertilizer, which use municipal and industrial wastewater as raw material, with water reuse as a side product
FRFS	Iron&Steel	Spain, Italy, Sweden, Germany, Finland	New modular sand regeneration unit for individual foundries for in-house recycling of waste sand
Hiisi I BIOCHAR	Other	Finland	An industry-leading biochar production facility. Biochar is the product of heating lignocellulosic biomass to a high temperature which fixes the carbon into a stable, functional material. This stores carbon that would otherwise be released via decomposition.
ZERO CARBON GYPSUM	Glass, Ceramics & construction material	Latvia	An energy-intensive gypsum plasterboard manufacturing site from natural gas use to renewable on-site generated synthesis gas (syngas) using solid waste biomass as a feedstock.
GreenHyseO	Hydrogen	Italy	The first Italian “Hydrogen Valley”. FNM Group has purchased a green hydrogen-powered fleet of 14 trains (40 hydrogen powered buses are scheduled by 2025) and is now working at the SENSITIVE 2 construction of 3 green hydrogen production plants, including distribution and refuelling station.
CO2ncrEAT	Cement & lime	Belgium	Integrated solution to convert calcium-rich slags into a green building product with a negative carbon footprint, adding industrial CO ₂ as a binder instead of cement.
GreenTissue	Pulp and Paper	Sweden	Renewable syngas from biomass feedstock that is compliant with the quality requirements for heat generation in industrial processes.
CO2Made	Chemicals	Germany	An energy-efficient conversion of CO ₂ from any source into CO that can be used to produce high-value products.
TRUCK2WI ND	Intra-day electricity storage	Spain	A highly innovative small-scale project based on the hybridisation of first and second-life batteries to efficiently store electricity produced by a wind farm.
HyPush	Hydrogen	France	A first-of-kind implementation and operation of a pusher vessel combining a battery and a fuel cell in freight transport.

Source: The EC, the List of small-scale projects awarded project development assistance following the 1st call for proposals

Annex V: Overview of the disbursement of the Modernisation Fund revenues in 2021

Table 6 Disbursement of the Modernisation Fund revenues in 2021

Country	Name of the project	Amount to be disbursed in million (EUR)
Priority investments confirmed by the EIB		
Czechia	Support for photovoltaic power plants with installed capacity up to 1 MW of the “RES+” Programme (New renewable energy sources)	97
	Support for photovoltaic power plants with installed capacity above 1 MW of the “RES+” Programme (New renewable energy sources)	163
	Modernisation of energy sources priority investments of the Programme HEAT	30
	Modernisation of energy production priority investments of the Programme ENER ETS	30
Estonia	Programme for improvement of energy efficiency and renewable energy use in public sector buildings	15.53
	Energy-efficient low-emission public transport programme	9.06
Croatia	Energy efficiency improvement and generation of electricity from renewable sources of the Dilj production plants'	2. 16
Lithuania	Increase in energy efficiency in agriculture	8
	Renovation (modernization) of public buildings owned by municipalities, increasing energy efficiency in them	20
Hungary	Development of Energy Communities	11.42
	The modernisation and development of renewable energy-based district heating systems	14.28
	Development of Energy Communities	8.57
Poland	Smart energy infrastructure	44
	Renovation with a guarantee of savings	25
	Development of the power grid for future electric car charging stations	22
	Support for the use of storages and other devices for network stabilization - a scheme for DSOs	44.44
	Cogeneration for Energy and Industry	44 .44
	Cogeneration for District Heating	66. 6
	The use of alternative fuels for energy purposes	44. 4
	Digitisation of heating networks	33. 3
Romania	Building a new 400 kV OHL double circuit Constanța Nord - Medgidia Sud (one circuit equipped)	22.99

Slovakia	State Aid Scheme to support the production of electricity from renewable energy sources from the Modernization Fund	20
	State Aid Scheme to support the investments to modernise energy systems, including energy storage and energy efficiency improvement from the Modernisation Fund: high-efficiency cogenerations	35
	State aid scheme to support the investments to modernise energy systems, including energy storage and energy efficiency improvement from the Modernisation Fund – DHC	65
Non-priority investments recommended for the financing by the Investment Committee		
Poland	My heating (Previous name: RES based heating for single-family houses)	22.22

Source: Annexes to the Commission decision on disbursement of revenues of the Modernisation Fund under Directive 2003/87/EC of the European Parliament and of the Council from 6.12.2021 and 28.07.2021

Annex VI: Estimation of Member States Auctioning volumes per Member State per source (in million EUA's) during Phase IV

Table 7 Estimation of Member States Auctioning volumes Per Member State per source in million EUA's during phase IV

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bulgaria	17,0	15,6	16,1	14,5	14,9	16,5	15,5	13,0	10,9	10,0
10(2)a	8,2	7,0	7,7	6,3	7,3	9,0	8,4	6,8	5,5	5,0
10(2)b	7,0	6,8	6,6	5,3	4,9	4,3	4,0	3,3	2,6	2,4
Aviation	0,0	0,0	0,0	0,1	0,1	0,2	0,2	0,1	0,1	0,1
Modernisation Fund - part 1	1,8	1,8	1,7	1,6	1,5	2,1	2,0	1,9	1,8	1,7
Modernisation Fund - part 2	0,0	0,0	0,0	1,1	1,1	1,0	0,9	0,9	0,8	0,7
Croatia	3,6	3,3	3,4	3,1	3,3	4,0	3,7	3,3	2,8	2,6
10(2)a	1,2	1,0	1,1	0,8	1,1	1,5	1,4	1,0	0,8	0,7
10(2)b	0,8	0,8	0,8	0,6	0,6	0,5	0,5	0,4	0,3	0,3
Aviation	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Modernisation Fund - part 1	1,0	1,0	0,9	0,9	0,8	1,1	1,1	1,0	1,0	0,9
Modernisation Fund - part 2	0,0	0,0	0,0	0,2	0,2	0,1	0,1	0,1	0,1	0,1
Transferred from 10(2)b and 10c	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6
Czech Republic	29,9	27,3	28,8	25,8	27,3	32,0	30,4	26,2	22,5	21,1
10(2)a	5,0	2,8	4,6	2,1	4,4	8,4	7,5	4,5	2,0	1,3
10(2)b	4,4	4,3	4,2	2,7	2,2	1,6	1,4	0,5	-0,1	-0,3
Aviation	0,0	0,0	0,0	0,1	0,2	0,2	0,2	0,2	0,2	0,2
Modernisation Fund - part 1	4,9	4,8	4,6	4,2	4,0	5,6	5,4	5,1	4,8	4,6
Modernisation Fund - part 2	0,0	0,0	0,0	1,5	1,4	1,3	1,2	1,1	1,0	0,9
Transferred from 10(2)b and 10c	15,6	15,4	15,3	15,2	15,1	15,0	14,8	14,7	14,6	14,5
Estonia	5,6	5,1	5,2	4,7	4,8	5,5	5,2	4,4	3,7	3,4
10(2)a	2,8	2,4	2,6	2,2	2,5	3,1	2,9	2,3	1,9	1,7
10(2)b	1,9	1,8	1,8	1,4	1,3	1,2	1,1	0,9	0,7	0,6
Aviation	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Modernisation Fund - part 1	0,9	0,8	0,8	0,8	0,7	1,0	1,0	0,9	0,9	0,8
Modernisation Fund - part 2	0,0	0,0	0,0	0,3	0,3	0,3	0,3	0,2	0,2	0,2
Greece	19,2	16,9	18,0	15,8	17,5	20,3	19,0	15,7	12,9	11,7
10(2)a	14,9	12,8	14,0	11,6	13,3	16,3	15,3	12,5	10,1	9,2
10(2)b	4,1	4,0	3,9	3,1	2,9	2,5	2,3	1,9	1,5	1,4
Aviation	0,2	0,2	0,2	0,4	0,7	0,9	0,8	0,8	0,7	0,7
Modernisation Fund - part 2	0,0	0,0	0,0	0,7	0,7	0,6	0,6	0,5	0,5	0,5
Hungary	10,2	9,3	9,7	8,4	8,8	10,5	9,8	8,4	7,2	6,6
10(2)a	5,5	4,7	5,2	4,3	4,9	6,0	5,6	4,6	3,7	3,4
10(2)b	2,5	2,4	2,3	1,9	1,7	1,5	1,4	1,2	0,9	0,9
Aviation	0,0	0,0	0,0	0,1	0,1	0,2	0,2	0,2	0,1	0,1
Modernisation Fund - part 1	2,2	2,2	2,1	1,9	1,8	2,6	2,4	2,3	2,2	2,1
Modernisation Fund - part 2	0,0	0,0	0,0	0,2	0,2	0,2	0,2	0,2	0,2	0,1
Latvia	1,6	1,5	1,5	1,5	1,5	1,8	1,6	1,4	1,3	1,2
10(2)a	0,6	0,5	0,6	0,5	0,5	0,7	0,6	0,5	0,4	0,4
10(2)b	0,5	0,5	0,5	0,4	0,4	0,3	0,3	0,3	0,2	0,2
Aviation	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1
Modernisation Fund - part 1	0,5	0,4	0,4	0,4	0,4	0,5	0,5	0,5	0,4	0,4
Modernisation Fund - part 2	0,0	0,0	0,0	0,2	0,2	0,1	0,1	0,1	0,1	0,1
Lithuania	3,1	2,9	3,0	2,8	2,9	3,3	3,2	2,8	2,4	2,3
10(2)a	0,4	0,2	0,4	0,2	0,3	0,7	0,6	0,4	0,2	0,1
10(2)b	1,0	1,0	1,0	0,8	0,7	0,6	0,6	0,5	0,4	0,4
Aviation	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Modernisation Fund - part 1	0,8	0,8	0,8	0,7	0,7	0,9	0,9	0,8	0,8	0,8
Modernisation Fund - part 2	0,0	0,0	0,0	0,2	0,2	0,2	0,2	0,2	0,2	0,2
Modernisation Fund - transferred from 10(2)b and 10c	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9
Poland	84,3	77,0	79,5	69,9	72,2	83,1	78,1	66,1	55,7	51,2

10(2)a	43,4	37,2	40,8	33,6	38,6	47,4	44,4	36,3	29,3	26,7
10(2)b	27,3	26,5	25,8	20,8	19,1	16,6	15,6	12,7	10,3	9,3
Aviation	0,1	0,1	0,1	0,2	0,3	0,4	0,4	0,4	0,3	0,3
Modernisation Fund - part 1	13,6	13,3	12,9	11,8	11,1	15,7	14,9	14,2	13,4	12,7
Modernisation Fund - part 2	0,0	0,0	0,0	3,4	3,2	3,0	2,8	2,5	2,3	2,1
Portugal	9,7	8,5	9,1	7,8	8,7	10,2	9,6	7,9	6,5	5,9
10(2)a	7,6	6,5	7,2	5,9	6,8	8,3	7,8	6,4	5,1	4,7
10(2)b	2,0	1,9	1,9	1,5	1,4	1,2	1,1	0,9	0,7	0,7
Aviation	0,1	0,1	0,1	0,2	0,4	0,5	0,5	0,5	0,4	0,4
Modernisation Fund - part 2	0,0	0,0	0,0	0,2	0,2	0,2	0,2	0,1	0,1	0,1
Romania	29,6	27,3	28,4	25,7	26,5	29,9	28,3	24,2	20,7	19,3
10(2)a	4,7	2,9	4,4	2,3	4,2	7,4	6,7	4,2	2,2	1,6
10(2)b	3,1	3,0	2,9	0,9	0,4	-0,5	-0,7	-1,7	-2,6	-2,8
Aviation	0,1	0,0	0,0	0,1	0,2	0,3	0,3	0,3	0,2	0,2
Modernisation Fund - part 1	3,8	3,7	3,6	3,3	3,1	4,3	4,1	3,9	3,7	3,5
Modernisation Fund - part 2	0,0	0,0	0,0	1,9	1,8	1,7	1,5	1,4	1,3	1,2
Transferred from 10(2)b and 10c	17,9	17,7	17,4	17,2	16,9	16,6	16,4	16,1	15,9	15,6
Slovakia	10,2	9,4	9,8	8,7	9,1	10,5	10,0	8,6	7,4	7,0
10(2)a	1,5	0,8	1,4	0,6	1,3	2,5	2,2	1,3	0,6	0,4
10(2)b	3,3	3,2	3,1	2,5	2,3	1,9	1,8	1,5	1,2	1,0
Aviation	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Modernisation Fund - part 1	1,9	1,9	1,8	1,7	1,6	2,2	2,1	2,0	1,9	1,8
Modernisation Fund - part 2	0,0	0,0	0,0	0,4	0,4	0,4	0,3	0,3	0,3	0,3
Transferred from 10(2)b and 10c	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5

Source: ClimaAct 2021 <https://climact.com/en/eu-ets-how-would-the-different-reports-under-discussion-in-the-european-parliament-affect-the-eu-carbon-market/>

