The contribution of EU spending plans to ambitious NECPs

Comparing funds mobilised vs. climate investment needs to 2030

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ON CLIMATE ACTION

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INTRODUCTION

In 2020, the EU increased its 2030 climate target from 40% emission reductions to at least 55% net emission cuts (compared to 1990 levels). To back it up, in 2021 the European Commission has revamped its entire climate and energy framework under the 'Fit for 55' package, which is gradually making its way through the various legislative processes at EU level. While at the time of writing the ESR, RED and EED are still being negotiated, their ambition will increase to align all individual pieces of legislation with the net 55% emissions reduction target which is enshrined in the EU Climate Law. The new targets proposed by the European Commission aim at reducing ETS emissions by 61% and ESR emissions by 40% by 2030. Finally, the recent 'REPowerEU' strategy sets even more ambitious targets as well as the need to frontload investments for achieving a fast phase out of the EU's dependence on Russian fossil gas.

Consequently, National Energy and Climate Plans (NECPs) will need to be revamped between 2022 and 2023 as they fall short to achieve the new EU targets of a 55% emissions reduction by 2030, let alone a 65% emissions reduction target by 2030 that would be aligned with Paris Agreement commitment[i]. Beyond 2030 targets, NECPs are also crucial for Member States to ensure energy security and energy justice. As the European Commission flagged in its ''REPowerEU'' package, NECPs can provide a powerful "framework for planning and encouraging the reduction of use of fossil fuels". Member States should use NECPs as a tool to ensure coherence and consistency across concrete plans to wean off Russian gas imports as soon as possible, to stop using fossil fuels overall, as well as to ambitiously curb energy demand, ramp up sustainable renewables and roll out flexibility options.

Meeting ambitious targets through revised national contributions and ensuring a swift transition away from fossil fuels to tackle the current energy crisis, will in turn require a significant mobilisation of climate and energy transition investments, to meet additional investment needs. Given the crucial contribution of EU funds to public investment in several Member States, the extent to which (a) National Recovery and Resilience Plans (NRRPs), which detail how Member States intend to spend funds from the Recovery and Resilience Facility, and (b) Partnership Agreements (PAs) and Operational Programmes (OPs), which detail how Member States will spend funds from the Cohesion Policy, will contribute to achieving more ambitious climate targets is central.

Indeed, as evidenced in this report, the RRF and Cohesion Policy funds combined make up for a very large fraction of dedicated EU funds that can be mobilised for financing climate and energy transition related investments.

As such, through an empirical assessment of investment plans in NRRPs and OPs respectively, the present report provides a preliminary quantification of their contribution to 2030 targets for a sample of 7 Member States that are significant recipients of EU funds. **To what extent are investments mobilised via NRRPs and OPs sufficient to meet climate and energy related investment needs for achieving ambitious 2030 climate targets, and address the need to phase out the EU's reliance on fossil fuels?**

Although previous reports have assessed the contribution of EU funds to filling climate and energy transition investment needs, those have relied on assumed spending shares for those investments. The present report is instead based on actual spending plans. Further, it focuses specifically on climate and energy transition related investments that are directly targeting emissions reduction, and not a comprehensive assessment of all environmental dimensions of spending plans (e.g. climate adaptation and biodiversity). A broader assessment of recovery plans can be found in a previous CAN Europe and Bankwatch report[ii].

Finally, the findings of the present report should be treated as preliminary as several Operational Programmes are still at a draft stage, or incomplete regarding the information disclosed. As such, the present analysis will be complemented as more information becomes available and the totality of plans finalised.

Notwithstanding caveats, the main conclusions of this preliminary report are that:

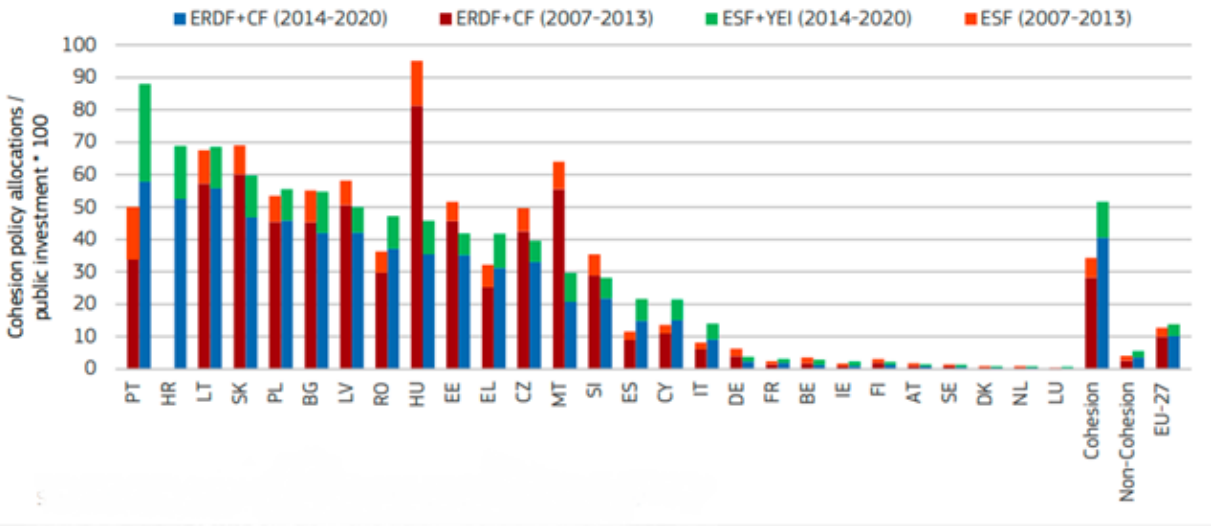
- The total funds mobilised by a sample of Member States through the most important EU funds for financing climate and energy transition investments represent a limited fraction of total investment needs for achieving 2030 targets.
- There are significant variations among Member States in terms of how much funding is mobilised for the climate and energy transition related investments in respective NRRPs (for what concerns the use of RRF funds) and OPs (for what concerns the use of European Structural and Investment Funds). This equally suggests there is significant room for improving spending plans, notably given the new impetus of 'REPowerEU'.
- Despite variations, there is a very substantial investment gap remaining for achieving a 55% emissions reduction target let alone a Paris Agreement Compatible 65% emissions reduction target by 2030
- A combination of measures is required for filling the investment gap remaining. These measures range from spending plans-specific adjustments, such as redirecting climate harmful spending lines that remain in respective plans, to more systemic reforms for catalysing additional public investment both at the national and the EU levels.

1. WHY EU FUNDS MATTER TO ACHIEVE CLIMATE TARGETS

Importance of EU funds

The new EU target of achieving a 55% emissions reduction by 2030, coupled with 'REPowerEU' to phase out faster the EU's dependence on fossil fuels, presupposes a significant increase of investments for decarbonising the EU's energy, transport, and industrial sectors – investments which need to be covered through a mix of public expenditures at a Member State level, EU funds, and private sources. Indeed, by 2030 Member States will need to reduce their emissions three times faster than they have done over the previous decade. Although the mix of financial sources vary across Member States, for several countries with lower national level fiscal capabilities EU funds have historically represented a large fraction of public investments.

Figure 1: Cohesion policy funding relative to public investment in Member States



Source: European Commission[iii]

As such, for countries with weaker capabilities to mobilise domestic funds for public investment, the extent to which EU funds are harnessed to deliver the necessary investments for the climate and energy transition is a crucial question for achieving ambitious climate targets.

To ensure this is the case, the European Commission has introduced new climate mainstreaming targets in EU budget instruments as well as instruments outside the EU budget, meaning the proportion of investments financed through EU funds that need to contribute to climate and environmental targets. Climate mainstreaming targets vary across individual EU funds, ranging from 30% for instruments such as the European Regional Development Fund to 37% for the Recovery and Resilience Facility and 60% for the Connecting Europe Facility. For the 2021-27 EU budget as a whole, a minimum of 30% needs to be spent for climate targets.

Table 1: Notional minimum climate spending share of selected EU instrument

Instrument	Climate spending share
European Regional Development Fund	30%
Cohesion Fund	37%
Recovery and Resilience Facility	37%
Just Transition Fund	40%
Horizon Europe	35%
Connecting Europe Facility	60%
InvestEU	30%
LIFE programme	61%
European Social Fund	30%
Modernisation Fund	70%

Source: European Commission and individual funds

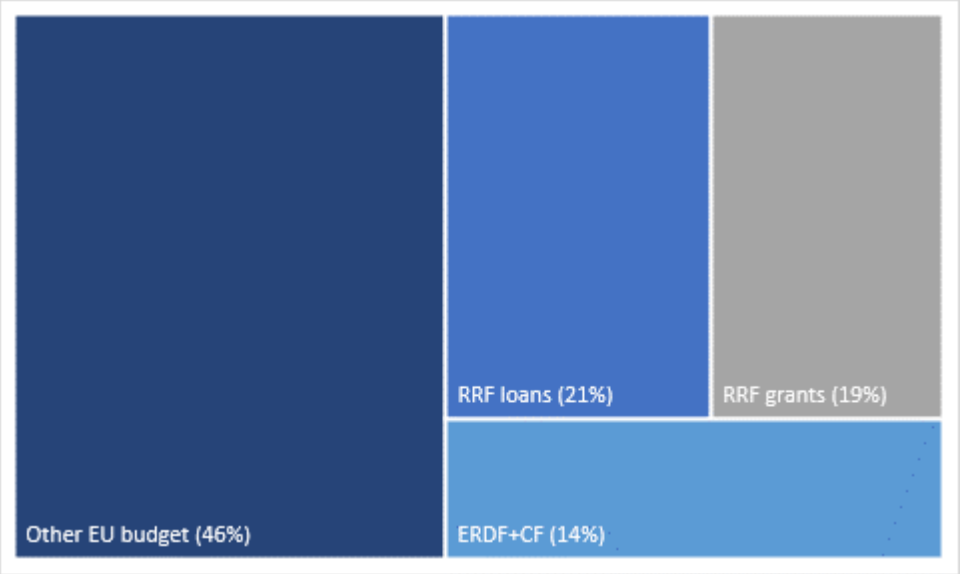
However, these notional minimum climate spending shares are not necessarily reflecting actual spending for climate mitigation specifically: this is notably because the methodologies used to define climate-related investments (so called “adjusted rio markers”) encompass investments for a broader range of important environmental objectives – ranging from climate adaptation to circular economy and biodiversity. Although some of those objectives are linked to climate mitigation (e.g. circular economy contributing to emissions reduction, and biodiversity protection contributing to “carbon sinks”) they are not directly targeting climate and energy transition investment needs. Further, as analysed both by the European Court of Auditors[iv] and the European Parliament[v], these methodologies are greenwashing a number of investment lines, as such overstating the share of climate related and broader environmental spending shares. In short, they are not necessarily reflective of *actual spending* for specifically achieving emissions reduction targets, as already evidenced by previous CAN Europe reports[vi].

To gauge the genuine amounts of investments mobilised an empirical approach, assessing specific spending plans submitted by Member States and approved by the European Commission, is necessary.

Materiality of funding instruments

Although the combination of the regular MFF and NGEU funds include a plethora of financial instruments that can be mobilised for investing in the climate transition (see table 1 above), two instruments in particular make up for about half of available EU funds for the period 2021-27: the Recovery and Resilience Facility (RRF) and European Structural Investment Funds (ESIF) are expected to mobilise close to €1 trillion out of the €1.8 trillion mobilised via the EU budget over the same period.

Figure 2: proportion of funds mobilised by the RRF, ERDF and CF, 2021-27



Source: CAN Europe synthesis based on European Commission

The crucial importance of these respective funds for investments in the decarbonisation of the EU's energy transport, and industrial sectors is even more manifest if subtracting from the EU budget non-relevant budget lines such as the Common Agriculture Policy (€378 billion), external and neighbourhood policy (€110 billion), EU public administration costs (€82 billion), and border management and security (€41 billion). Once these are subtracted, the combination of the RRF and Cohesion Policy funds represent more than 70% of EU funds available for the climate and energy transition. In short, the way these instruments are mobilised for decarbonisation investments is crucial to the implementation of the fit for 55 package and the achievement of 2030 climate targets.

To access those instruments, Member States needed to submit Recovery and Resilience Plans (RRPs) and Operational Programmes (OPs) to, and obtain approval from, the European Commission.

A comparative assessment of those spending plans is crucial for (a) gauging whether and to what extent those plans are genuinely contributing to the investments needed for achieving EU 2030 targets in respective Member States, (b) identifying areas of improvements, (c) proposing adjustments, and (d) gauging additional funding instruments that can be mobilised to complement those funds.

To this date, the contribution of respective instruments to climate targets have been either analysed in isolation or based on assumed proportions of climate spending shares as per the EU's minimum climate spending requirements that are not reflecting actual investments in the climate and energy transition.

Consequently, the present report fills a gap by analysing the combined contribution of both instruments in a sample of Member States, based on information provided in RRPs and OPs. Further, it evidences the proportion of the climate investment gap that remains once accounting for the contribution of respective plans before providing recommendations.

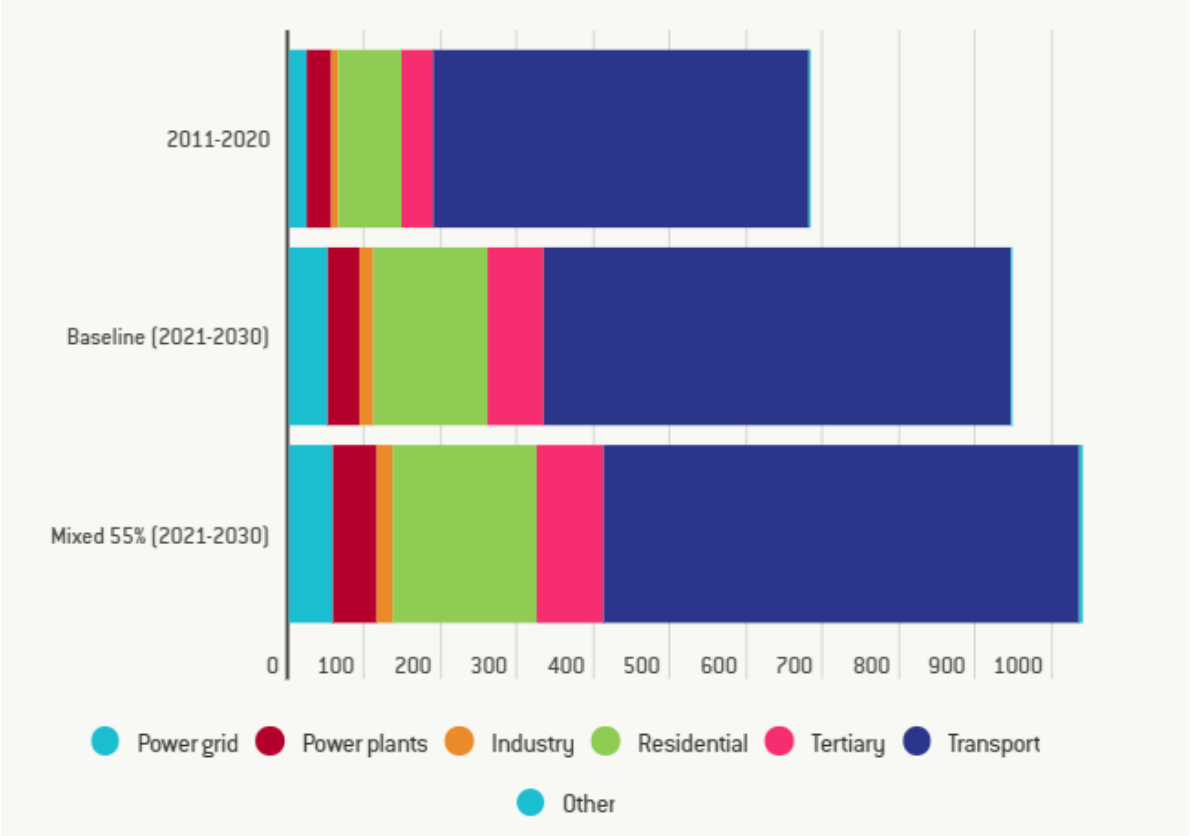
2. STATE OF PLAY: THE CURRENT INVESTMENT GAP

Investment needs to 2030

There is no single methodology for estimating neither gross nor additional investment needs to 2030. However, all available estimations point to a need of significantly increasing the investment rate in climate mitigation and energy transition related investments.

The European Commission estimates that to achieve a 55% emissions reduction target by 2030, €360 billion of additional investments are needed, on average, compared to the 2011-2020 period. It is important to note that for achieving a Paris-aligned emissions reduction target of a 60% reduction as per CAN Europe's Paris Agreement Compatible scenario, more investments would be needed. Similarly, the European Commission estimates that to deliver the objectives of 'REPowerEU' an additional €215 billion would be needed by 2030, placing total investment needs to €1.4 trillion for the EU as a whole. As a share of EU GDP, this is an increase from 5.3% to more than 7.0%, according to European Commission figures. These figures do not include investment needs for achieving other EU environmental targets, including climate adaptation, biodiversity and circular economy targets. They equally do not include investment needs for emission reductions in agriculture. As such, they underestimate the total investment needs of the green transition, and the EU Green Deal, as a whole.

Figure 3: Annual average investment needs to reduce emissions by 55% by 2030, compared to previous baseline targets and historical investments.



Source: Bruegel institute based on European Commission[vii]

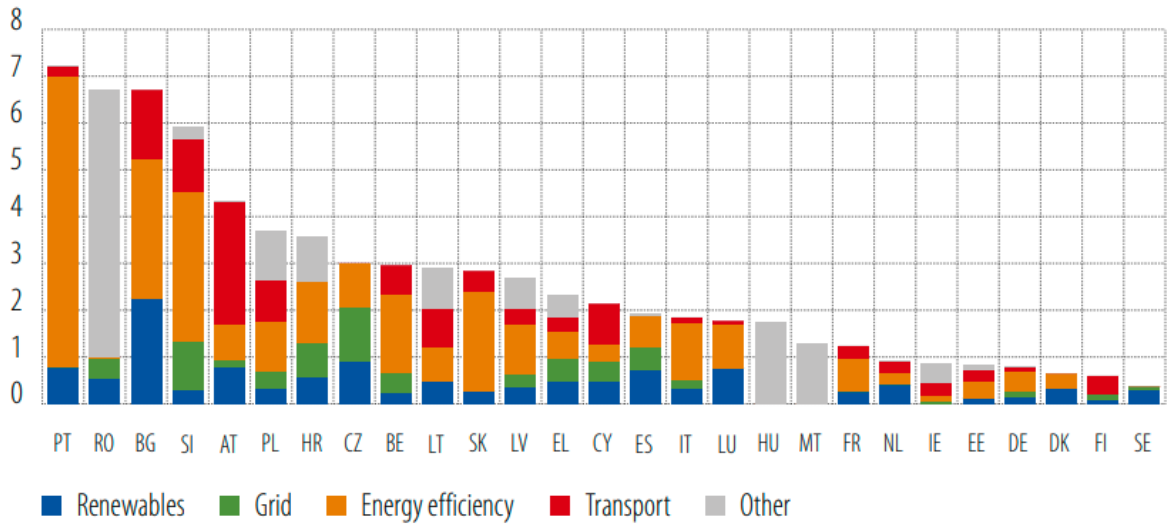
Other estimates put investment needs higher. For example, an Agora Energiewende report places climate investment needs to €2.4 trillion over the 2021-2030 period, for the buildings, transport, power and industry sectors[viii], while delivering 'REPowerEU' could imply additional investment needs of €100 billion[ix].

Although all respective estimates are based on a combination of public and private investment needs, filling the investment gap will require an increase of public investment in the energy and climate transition. The EIB reports an unweighted average public share in the EU of 45% i.e. about 45% of climate investments across the EU would need to be funded through public finance[x]. The figure is lower in richer Member States and higher in CEE and Southern Europe but the tole of public funding remains crucial for all of them.

Estimations of investment needs at a Member State level are less precise and rely on the estimations provided by Member States themselves in their respective National Energy and Climate Plans (NECPs). These estimates have not followed a common methodology and have been, as such, subjected to criticism notably from the European Court of Auditors[xi].

Nonetheless, based on respective NECPs, the European Investment Bank has provided a comparative estimation of investment needs across Member States. To some extent, the discrepancies can be explained by a lack of common methodology but equally reflect the different starting points of Member States.

Figure 4: climate investment needs of existing NECPs, for a 40% emissions reduction target (% of GDP)



Source: European Investment Bank[xii]

These figures reflect investment needs of national contributions for achieving pre-climate law EU climate targets and will consequently need to be adjusted in the context of NECPs revision over the course of 2022 and 2023. Further, they do not reflect investment needs for achieving a Paris-aligned target of a 65% emissions reduction to 2030, and do not factor in the new 'REPowerEU' strategy, which entails both more ambitious targets on for several energy transition related investments and the need to frontload investments in energy efficiency, renewables, and broader electricity infrastructure. As such, they underestimate investment needs.

The overall conclusion both at EU and Member States levels is that **the investment rate in climate and energy transition investments will require a huge effort if ambitious 2030 targets are to be achieved, and that a substantial fraction of this effort will rely on the mobilisation of public investment via EU or national resources.**

Lessons from the climate performance of the 2014-20 MFF

Given the large investment needs to 2030, and the proportion of public investment filled through EU funds, it is crucial to draw lessons from the 2014-20 spending plans whereby, according to the latest available data, only a limited proportion of investments were targeted at the climate and energy transition stricto sensu.

The Cohesion Policy legislation for the 2014-2020 cycle required Member States to earmark a certain percentage of their European Regional Development Funds (ERDF) and Cohesion Funds (CF) for climate action. More developed regions had to reserve 20%, transition regions 15% and less developed regions 12% of their EU funds to spend under an objective called 'shift to the low-carbon economy. Despite these notional targets, a previous CAN Europe report showed that, as of Spring 2020, less than 10% of the ERDF's and the CF's financial resources were mobilised for accelerating the deployment of renewable energy, renovations of the housing stock and energy efficiency of industry, electricity infrastructure, and climate-related R&D[xiii].

Based on the detailed datasets on cohesion policy for the 2014-20 period, table 2 updates these figures, and adds into the equation investments related to the decarbonisation of the transport sector. The disaggregated statistical data provided by the European Commission allows to synthesize the total amount of investments dedicated to:

- Renewable energy
- Energy efficiency
- Electricity transmission and grid
- Electricity storage
- Research and development tagged as "climate contributing"
- Transport related investments tagged as "climate contributing"

Similarly, the data allows to isolate climate negative, fossil fuel related investments in respective spending plans for the period 2014-20.

Even when accounting for those additional dimensions, strict climate and energy transition related investments still represented only 12% of total amounts mobilised through the ERDF and the CF, with figures varying considerably across Member States. Similarly, figures suggest that some proportion of Member States dedicated more resources to fossil gas-related infrastructure than climate mitigation related budget lines. For example, Greece dedicated more resources to fossil gas related projects than the deployment of renewables, and Romania almost as much. Similarly, Poland investment more in fossil gas related infrastructure than in electricity infrastructure, including both distribution and storage infrastructure. Only 10% of total transport investments across Member States targeted emissions reduction from transport.

Table 2: EU funds 2014-2020 planned financial allocations in relation to climate mitigation and energy in million euros (M€)

	Electricity infrastructure	R&D	RES	Energy efficiency	Transport emissions	Share in total	Fossil gas infra.	Total ERDF/CF funding
AT	-	10	-	68	2	15%	-	536
BE	-	27	13	72	11	13%	-	953
BG	-	-	-	340	201	9%	36	5,846
CY	-	-	-	45	23	12%	-	594
CZ	165	120	85	1,459	564	13%	-	18,084
DE	19	286	98	1,173	166	16%	-	10,770
DK	-	11	-	93	-	51%	-	206
EE	-	42	10	228	44	11%	-	2,922
ES	10	22	882	1,794	365	15%	-	20,679
FI	2	65	7	61	1	17%	-	791
FR	31	132	487	1,026	281	23%	-	8,421
GR	231	26	64	617	367	11%	156	11,855
HR	20	19	95	320	74	8%	-	6,831
HU	-	-	618	1,166	437	13%	-	16,810
IE	-	-	-	60	1	15%	-	410
IT	344	21	85	1,873	664	14%	-	21,440
LT	90	-	220	517	72	16%	53	5,550
LU	-	0.3	2	4	1.5	41%	-	19
LV	25	-	23	391	117	15%	19	3,750
MT	-	-	14	12	9	6%	-	595
NL	7	79	26	83	-	38%	-	510
PL	691	465	1,476	2,692	1,892	11%	747	63,413
PT	-	261	161	377	246	8%	-	13,638
RO	89	-	154	1,142	599	11%	144	17,511
SE	-	72	3	80	13	18%	-	934
SI	12	57	41	255	10	16%	-	2,330
SK	-	2	136	780	191	8%	-	13,420
Total	1,736	1,719	4,700	16,729	6,366	12%	1,154	258,295

Source: European Commission, Database on European structural and investment funds[xiv].

Beyond the proportion of investments mobilised for the climate and energy transition, the poor absorption rate of EU funds in several Member States suggests that additional climate mitigation investments could have been mobilised without reducing budget lines for other objectives. Indeed, according to European Commission data, only 60% of total planned financial commitments had been spent as of the end of 2021, that is one year after the end of the 2014-20 MFF although expenditures can still happen until the end of 2023[xv].

The overall conclusion we can draw from the experience of the 2014-20 MFF is that **an eventual repetition of the pattern of relatively weak mobilisation of EU funds for climate action to 2030, along with the financing of climate negative fossil fuel investments, could seriously undermine the achievement of ambitious climate targets**, given the large additional investment needs to 2030. Beyond the Commission's notional climate mainstreaming targets, it is incumbent on Member States to fully harness the potential of both the MFF and NGEU funds.

3. A PRELIMINARY ASSESSMENT OF THE CONTRIBUTION OF SPENDING PLANS TO THE ACHIEVEMENT OF 2030 CLIMATE TARGETS

Due to the relative size and importance of the RRF and cohesion policy funds for financing the decarbonisation of the EU economy, we provide a fist assessment of their combined contribution in filling the investment needs of a sample of Member States that are large recipients of EU funds. This assessment is based on an analysis of respective spending plans, namely Recovery and Resilience plans and Operational Programmes, of seven Member States for the 2021-27 period. As several Operational Programmes are still at a draft stage and/or not fully disclosed, the present (preliminary) analysis will be further updated when more details are published, and plans are finalised.

In terms of assessment criteria, we draw information from respective available plans, focusing on their direct climate and energy transition components including:

- Renewable energy
- Energy efficiency
- Electrification infrastructure
- Decarbonisation of transport
- Decarbonisation of industry

Measures having an unclear direct impact on emissions reduction are not included in the present assessment, however important they may be for achieving other environmental targets, including adaptation, biodiversity and circular economy targets.

Several caveats are necessary. First, it has not always been possible to fully disaggregate investment lines, to assess whether specific investments are genuinely climate contributing or not. For example, RES investments sometimes include unsustainable biofuels which can be identified and excluded from investment figures in some plans, but not in others. Second, whereas some plans are already at an advanced stage and thus comprehensive, other plans remain embryonic. For the latter, a number of assumptions were necessary to derive investment figures – providing an upper and a lower bound. All assumptions are detailed in Appendix 1. Third, the stringency of the criteria used to define genuine climate mitigation

contributing investments can affect results. As such, for recovery plans specifically, an upper and a lower bound are used by harnessing two separate assessment criteria for those plans.

Climate and energy transition performance of Recovery and Resilience Plans

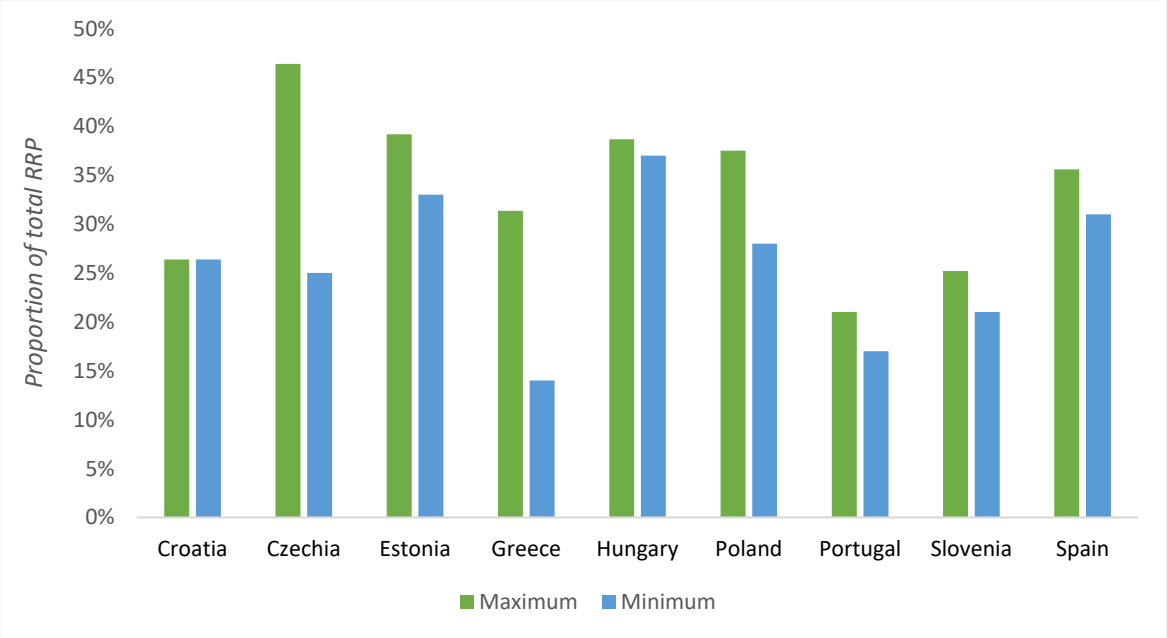
To assess the proportion of climate and energy transition related investments of respective recovery plans we use a range through two approaches.

The first approach is based on an analysis of the budget lines of respective NRRPs, aggregated by strategic objective. The relevant strategic objectives are “Renovate” (energy efficiency) “Power up” (clean technologies and renewables), and “Recharge and refuel” (Sustainable transport and charging stations). This approach however tends to overstate the share of investments dedicated to the energy and climate transition, as some budget lines tagged as climate contributing could have doubtful impacts on emissions reduction. This is combined with the problem that, based on the information disclosed, it often results impossible to exclude possible climate harmful or climate neutral investments from those categories due to a lack of details in published documentation.

The second approach is based on the methodology of the Wuppertal Institute’s and E3G’s Green Recovery Tracker, which uses a more stringent definition of climate mitigation investments through a different (to the European Commission’s) tagging methodology[xvi].

Although neither methodology is perfect, depending on the stringency of criteria for defining investments that are genuine contributors to the climate and energy transition, climate spending shares vary substantially. This is especially the case for Member States posting large discrepancies such as the Czech Republic and Greece.

Figure 5: range of climate mitigation spending shares in NRRPs.

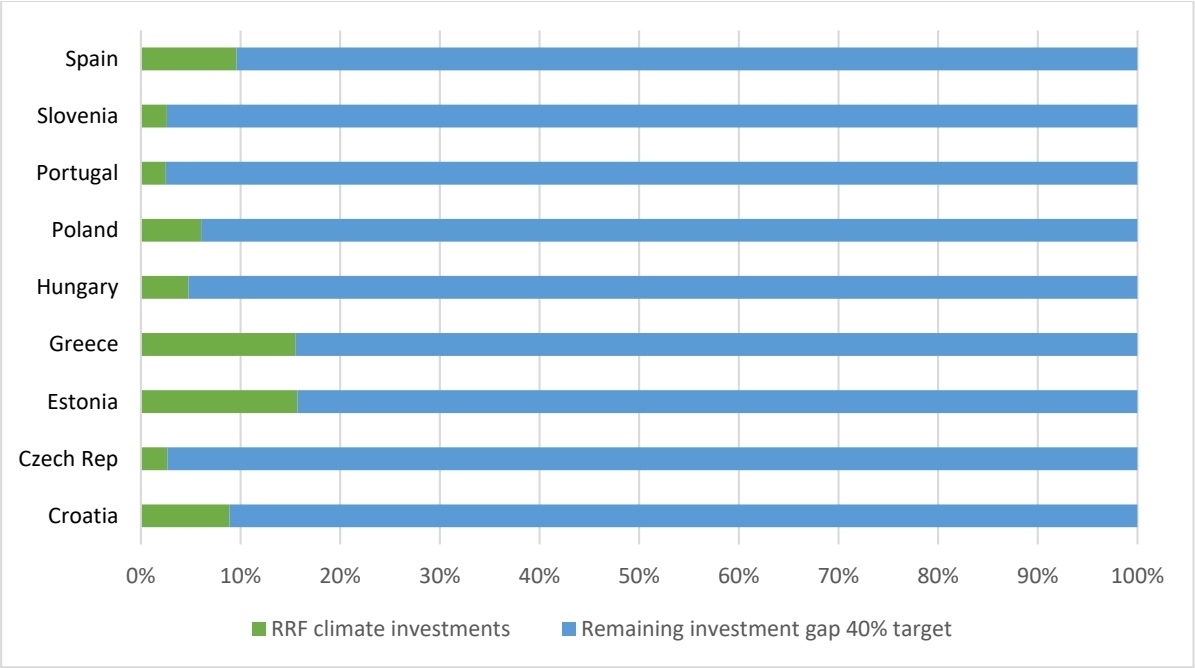


Source: CAN Europe synthesis based on National Recovery and Resilience Plans, Wuppertal Institute and E3G

Using this range of spending shares, we estimate the total amounts mobilised and compare those to investment needs for achieving both existing NECPs (40% emissions reduction target) as well as more ambitious NECPs that are aligned with a 55% net emissions reduction by 2030.

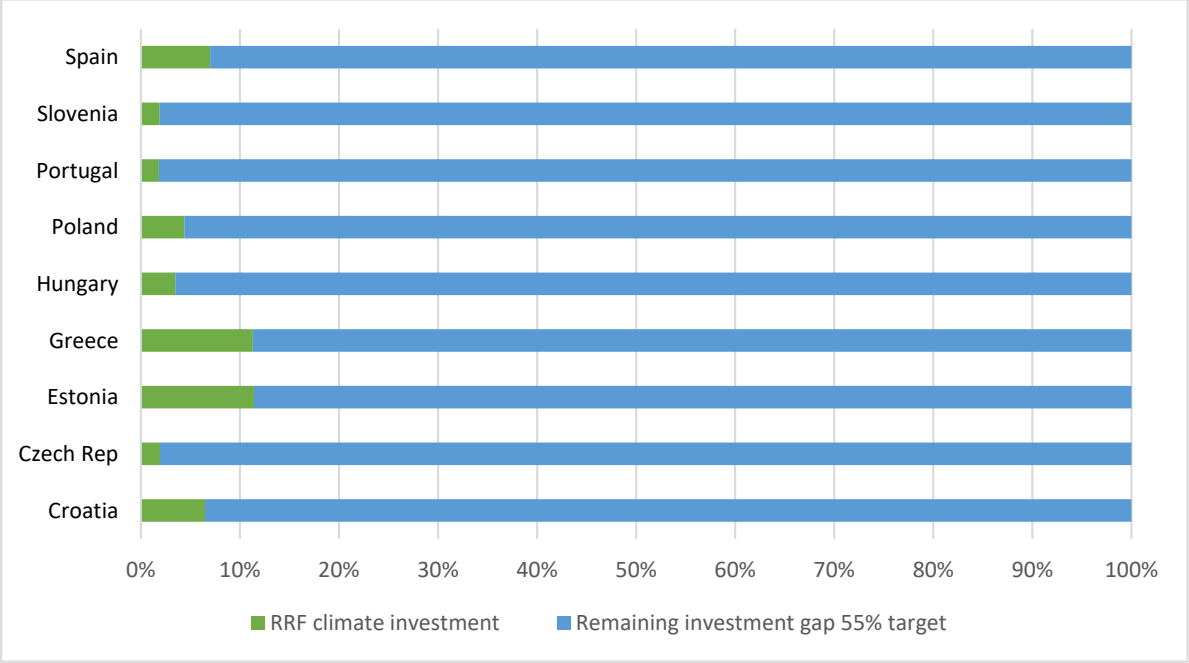
The assumptions used to estimate investment needs for both scenarios are based on NECP estimations, and are detailed in Appendix 1, while acknowledging that the available data remains imperfect and can only be considered indicative. However, it is important to benchmark respective Member States' recovery spending choices against their own investment needs estimations.

Figure 6: Contribution of NRRPs climate and energy transition investments to 2030 investment needs of current NECPs



Source: CAN Europe synthesis (see Appendix 1)

Figure 7: Contribution of NRRPs climate and energy transition investments to 2030 investment needs for a 55% net emissions reduction target



Source: CAN Europe synthesis (see Appendix 1)

These preliminary findings suggest that **spending plans for the RRF, the largest EU fund for the 2021-27 period, only contribute to filling between about 2% and 11% of total climate mitigation investment needs to 2030** for the sample of Member States analysed.

Beyond climate positive investments, it is crucial to note that NRRPs equally entail climate harmful investment lines. For example, it is estimated that 16% of total energy investments in recovery plans are dedicated to fossil gas infrastructure, such as distribution and gas boilers[xvii]. Furthermore, approximately 20% of total Member States' investments in transport are dedicated to road transport infrastructure that perpetuate a business-as-usual transport model[xviii]. These infrastructures can lock the EU's energy and transport models into a high emissions pathway, undermining the achievement of more ambitious targets in revised NECPs. Problematic investments identified by respective national CSOs as well as recommendations are available in a previous CAN Europe and Bankwatch Network report[xix].

Finally, the absorption problem that characterised the 2014-20 MFF equally seems present in the RRF. As of August 2022, only 5% of reforms and investments that Member States committed to in their NRRPs had been achieved, and only 23% of grants and 8.5% of loans had respectively been disbursed[xx]. Given the tight timeframe of the RRF a significant acceleration of absorption is necessary over the coming years.

Climate and energy transition performance of Operational Programmes

Through an empirical assessment of available Operational Programmes (OPs) and Partnership Agreements (PAs) by respective national level civil society organisations, table 3 provides a first assessment of the financial contribution of spending plans to energy efficiency, renewables, clean mobility, electricity infrastructure and other spending items contributing to emissions reduction. The majority of these investments concern funds mobilised via the ERDF and the CF.

Table 3: Preliminary estimation of climate and energy transition investments in Operational Programmes and Partnership agreements

Member State	Notional minimum climate spending requirement (€ billion)	Preliminary estimation of climate mitigation investments (€ billion)
Croatia	2.3	0.4
Czech Republic	5.7	1.8
Estonia	1.13	1.0
Greece	5.1	4.2
Hungary	5.7	4.6
Poland	20.2	20.6
Portugal	5.2	2.7
Slovenia	0.7	0.7
Spain	8.6	4.3

Source: CAN Europe synthesis, see Appendix 2

This assessment is preliminary, and the level of detail and breadth varies across selected Member States. First, not all Member States have finalised and published their OPs, or the totality of their OPs. As such the results presented in Table 3 represent, in some cases, the actual spending share of a subset of Operational Programmes. Details are provided in Appendix 2. Second, whilst some PAs provide relatively detailed budget lines, allowing to distinguish between climate and energy transition related investments and other environmental budget lines (adaptation, biodiversity, waste management and circular economy) this is not always the case.

With these caveats in mind, the detailed assessment of existing information suggests that, expectedly, **actual investments dedicated to the energy and climate transition are only a fraction of notional climate spending targets of the European Commission**, as the latter encompass a broader range of environmental expenditures. In some cases, however, Member States' plans go over and above minimum notional spending requirements by dedicating substantial resources to climate investments.

Like NRRPs, and beyond climate and energy transition contributing investments, OPs and PAs also entail potential climate harmful investments which could undermine the achievement of ambitious revised NECPs. For example, Poland plans to spend 0,8 bln EUR in the development of its gas network with about 1000 km of gas pipelines planned to be built; and with an allocation of 7,5 bln EUR road construction is the second largest spending item. Problematic investments identified by respective national CSOs as well as recommendations are available in Appendix 2.

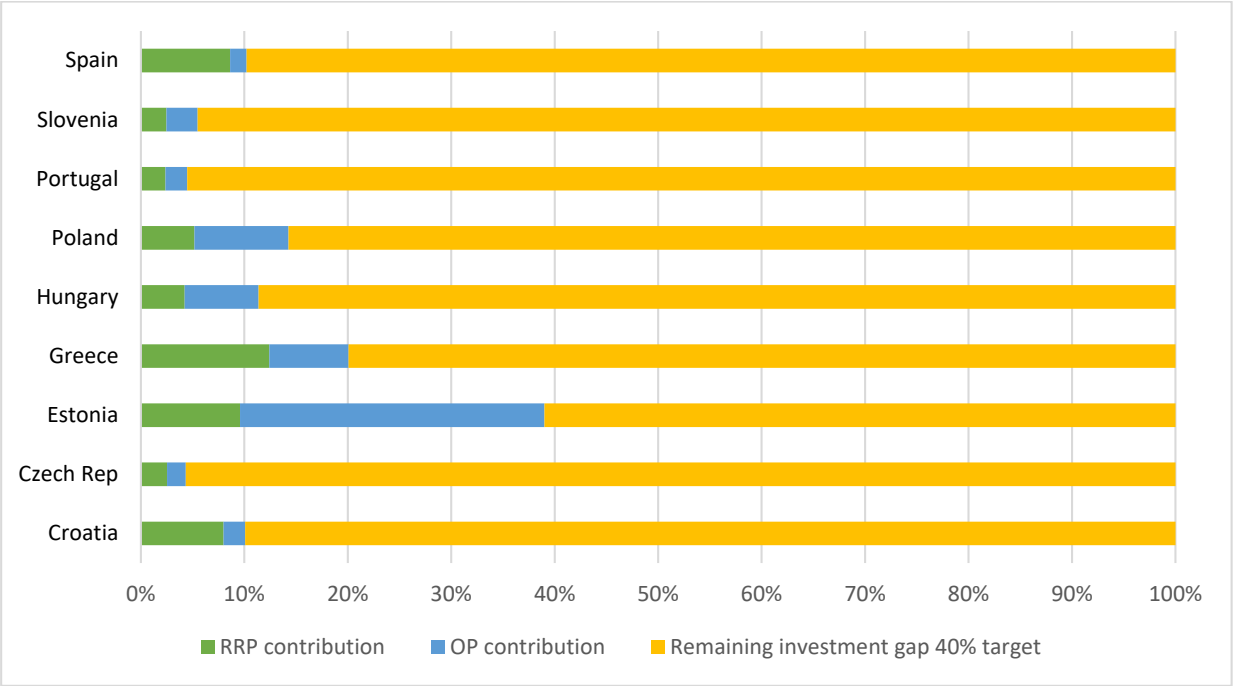
Combined contribution to climate and energy transition investments

Our overall assessment is that even when combining the total resources mobilised for the climate and energy transition through the RRF, the ERDF and the CF, the investment gap remains large even for fulfilling Member States' stated investment needs for current (unambitious) NECPs to 2030 (Figure 8). When contrasting existing spending plans with investment needs for reaching the new, more ambitious, 2030 EU climate targets (Figure 9) spending plans manage to cover from 3.3% to 30% in Estonia, with the majority of Member States falling within a 5% to 15% range. Given that the figures account for the largest EU funds dedicating substantial resources for energy efficiency, renewables, transport and broader relevant infrastructure, this finding is worrying.

Evidently, a key question concerns the extent to which private investments can contribute to fill the remaining investment gap, and consequently how much additional public investment from EU and national sources needs to be mobilised. According to the European Investment Bank, the proportion of total investment needs that need to be filled via public investment ranges from about 20% in Portugal and Spain to more than 70% in the Czech Republic, Poland and Latvia[xxi].

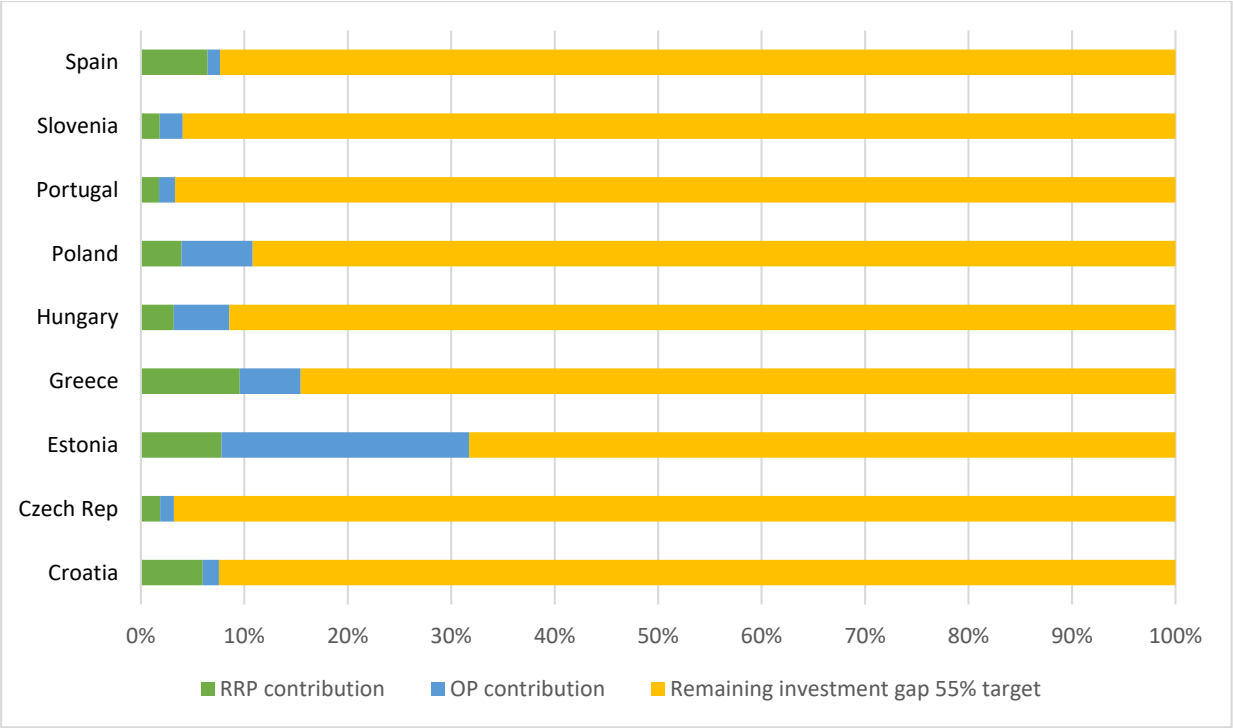
These differences can be explained by the private sector's propensity to invest, credit conditions and broader macroeconomic trends. Even for Member States which state that a substantial proportion of the investment gap can be filled via private investment, this is highly dependent on the macroeconomic and credit conditions, which are currently evolving fast. In short, public to private ratios could shift over the course of the coming decade, rendering climate public investment even more important. Overall, according to McKinsey & Company, half the required €28 trillion necessary investments to be done in the EU before 2030 would not have a positive business case and would require public funding[xxii].

Figure 8: Combined contribution of RRPs and Operational Programmes' climate and energy transition investments to 2030 investment needs of current NECPs



Source: CAN Europe synthesis (see Appendix 1).

Figure 9: Combined contribution of RRPs and Operational Programmes' climate and energy transition investments to 2030 investment needs for a 55% net emissions reduction target



Source: CAN Europe synthesis (see Appendix 1)

4. CONCLUSIONS AND RECOMMENDATIONS

Our findings concerning the mobilisation of climate and energy transition investments in the spending plans of a sample of Member States indicate that the current level of investment through the most important EU funds leaves a substantial gap for aligning investment rates with 2030 EU climate targets. If considering a 65% emissions reduction target to align EU targets with Paris Agreement commitments, as per the PAC scenario model, the investment gap remaining would be substantially larger.

It is evident that part of this investment will partly be filled through the next MFF (2027-33), and that private finance can and will fill part of this gap. However, this finding is very concerning as (a) the EU funds examined constitute by far the largest EU sources of funding for financing climate and energy transition related investments; and (b) there are major doubts around the proportion of climate and energy transition investments that are genuinely "bankable".

Our findings equally suggest wide discrepancies in the level of investments mobilised for the energy and climate transition among Member States. Put plainly, some spending plans manage to mobilise more finance for relevant spending items, suggesting that there is scope for improving existing plans on the one hand while mobilising additional sources of finance on the other.

In terms of recommendations, it should be acknowledged that there is no "silver bullet" solution: filling the investment gap requires multiple actions at multiple levels (EU and national), and range from planning level interventions such as adjusting existing plans, to structural reforms such as phasing out and redirecting fossil fuel subsidies, and finally to more systemic reforms for increasing the fiscal space of Member States for investing more in the climate and energy transition.

Redirecting harmful investments and complementing spending plans

Climate harmful investments included in plans should be redirected to fill part of the investment gap. Indeed, as during the previous MFF investments in fossil gas related and road transport related infrastructure are diverting crucial public resources needed for decarbonising the energy and transport systems (see detailed assessment of respective Member States below).

The new 'REPowerEU' strategy should notably be harnessed for amending existing plans. On the one hand, expanding the fossil gas network is completely at odds with the objective of phasing out Member States' dependence on fossil gas imports from Russia and other economic blocks by 2027 while programmes such as the roll-out of gas boilers would lock households in an expensive and dirty source of energy. On the other hand, expanding oil-based transport modes in a moment of energy crisis is not only fuelling the climate crisis but preventing modal shifts to public transport.

The proposed amendment to the RRF regulation would notably require Member States to draft distinct 'REPowerEU' chapters in their Recovery and Resilience Plans, while providing (albeit limited) additional finance. This opportunity could be harnessed to amend investment lines in fossil fuel related infrastructure in NRRPs and redirect funds to viable alternatives such as the acceleration of energy efficiency the roll-out of heat pumps, and necessary infrastructure for a modal shift in transport[xxiii].

Finally, as a number of OPs are still under the process of finalisation in some Member States, the identification of key investment gaps for achieving ambitious NECPs, and 'REPowerEU'

targets, should inform remaining OPs. Beyond 'REPowerEU', key investment items in OPs can be revised accordingly during the EU budget's mid-term review (2023-24).

Mobilising other instruments

The size of the investment gap suggests that a simple redirection of existing budget lines will not be sufficient for achieving a 55% net emissions reduction target, let alone a Paris aligned 65% emissions reduction target by 2030. As such, both EU resources from other instruments as well as national public funds are necessary to complement NRRPs and OPs.

- First, several EU instruments such as the European Investment Bank and InvestEU can be harnessed by Member States for obtaining concessional finance for the climate and energy transition related public and private projects. The EIB aims to invest approximately €30 billion per year in climate action and environmental sustainability projects over the period 2021-2030.
- Second, dedicated instruments outside the EU budget such as the Modernisation Fund already provide significant sources of finance specifically for the energy transition for Member States failing within its scope, and these resources are expected to substantially increase over the coming years.
- Third, at a national level, ETS revenues generate substantial revenues that can complement EU funds to increase domestic climate related public investment. The new EU ETS proposed by the European Commission, which will extend carbon pricing to road transport and buildings, could generate €48 billion additional revenues per annum in 2026-2030[xxiv].
- Fourth, even for Member States with limited fiscal space, phasing out fossil fuel subsidies can and should free up resources for dedicating more resources for accelerating the decarbonisation of the energy, transport and industrial sectors.
- Finally, national budgets lack climate mainstreaming targets that are equivalent to EU climate spending shares (however imperfect these are). The implementation of green budgeting in respective Member States could contribute to identifying climate positive and harmful budget lines, set climate mainstreaming targets, and progressively align domestic public expenditures with ambitious NECPs.

Mobilising additional resources

Ultimately, according to various estimations, even in a scenario of exemplary mobilisation of EU funds, more resources will be needed to increase the investment rate in the climate and energy transition, as well as the green transition more broadly. These measures broadly fall into two categories that are not mutually exclusive but could work in a complementary way:

1. ***Creating more fiscal space at a Member State level for dedicated climate related expenditures, including expenditures for a socially just transformation.***

As extensively analysed in previous CAN Europe reports[xxv] and briefings[xxvi], the current EU fiscal rules are woefully inadequate for catalysing sufficient green transition investments in Member States. With their pro-austerity bias, EU debt and deficit rules are incentivising budget cuts including necessary public investment budget lines for the climate and energy transition. In other terms, these rules have failed on many accounts and are not fit to help achieve the EU's economic, social and environmental goals.

Given the large investment gap for achieving ambitious NECPs and 2030 targets, the upcoming Economic Governance Review should be harnessed for a fundamental reform of EU fiscal rules and economic governance to ensure both: (a) the provision of additional fiscal space for climate

and green transition investments, and (b) that this additional fiscal space will translate into targeted and effective climate action by Member States, with appropriate safeguards.

2. ***Mobilising more resources at the EU level, by increasing dedicated funds via existing instruments or through the creation of a new instrument.***

Beyond the reform of EU economic governance, additional funds could be raised at the EU level to top up existing instruments or creating new dedicated instruments. In the context of 'REPowerEU', for example, some have proposed topping up the RRF by €100 billion to meet additional investment needs in energy efficiency, renewables, and related electricity infrastructure roll-out such as heat pumps, electricity and storage needs[xxvii]. Similarly, others have proposed making the (one off) RRF a permanent instrument with the mandate of addressing climate and broader green transition investment needs. Whilst the mobilisation of additional EU funds may eventually prove necessary in the light of the sizeable climate investment gaps in respective Member States, key issues such as agreeing financial sources for mobilising these additional resources (e.g. raising own resources, higher contributions to the EU budget) remain open and would be the object of significant debates between Member States' governments.

Recommendations on the assessment of investment needs in revised NECPs

As mentioned in Section 1, the methodologies used for assessing investment needs in current NECPs are not consistent nor systematic. To better estimate the investment gap for achieving ambitious 2030 targets, while accelerating the phasing out Member States' reliance on fossil fuels in the context of the war and 'REPowerEU', revised NECPs should be based on a common systematic framework.

In its October 2022 guidelines, the European Commission is expected to develop a thorough common framework for Member States to assess their needs and align them with respective measures and spending plans. As more extensively analysed in a previous CAN Europe report[xxviii], this common framework should propose common robust methodologies for:

- Estimating total investment needs to achieve ambitious 2030
- Breaking down which different sources of finance (public, EU funds and private finance) can finance what sectoral components of ambitious NECPs
- Estimating the "investment gap" as per current available financial sources and proposing ways to filling the investment gaps
- Incorporating spending needs for expenditures aiming to address the current energy crisis because of the invasion of Ukraine, including social measures and measures contributing a just transformation more broadly
- Comprehensively listing (a) all energy subsidies, (b) fossil fuel subsidies, and (c) plans to phase them out, notably in order to liberate "resources for filling the climate and energy transition investment gap.

ANNEXES

Annex 1: Methodology

As mentioned in the main body of the report, we use two distinct sources to measure the share of energy transition and climate mitigation investments in respective NRRPs. The first is based on the stated expenditures for the strategic investment lines “Renovate” (energy efficiency) “Power up” (clean technologies and renewables), and “Recharge and refuel” (Sustainable transport and charging stations) of respective plans[xxix]; while the second is based on in-depth assessments of NRRPs by the Green Recovery Tracker developed by E3G, the Wuppertal Institute and national civil society partners. This dual approach allows us to present a maximum and minimum estimation range of investments mobilised for the energy and climate transition specifically (Table A) in respective recovery plans.

Table A: Estimated contribution of NRRPs to climate mitigation investments

Member State	Total RRF (bn Euros)	Max climate spending share	Min climate spending share	Max total (bn Euros)	Min total (bn Euros)
Croatia	6	26%	n/a	1.69	1.69
Czech Rep	7.1	46%	25%	3.28	1.77
Estonia	1	39%	33%	0.39	0.32
Greece	30	31%	14%	9.41	4.20
Hungary	7	39%	37%	2.78	2.66
Poland	36	38%	28%	13.49	10.07
Portugal	17	21%	17%	3.50	2.83
Slovenia	2	25%	21%	0.63	0.52
Spain	70	36%	31%	24.74	21.55

Estimating the contribution of Operational Programmes for the 2021-27 period is more challenging, as synthesized data is not yet available and some programmes have not yet been officially submitted (are at draft stage). To estimate the climate mitigation investment programmes mobilised through cohesion policy funds, we consequently relied on a detailed assessment of available OPs by CAN Europe’s members, and CAN Europe’s partners in the respective Member States examined. This scanning exercise consisted in identifying the totality of investments in OPs dedicated to energy efficiency, renewables, clean mobility, electricity infrastructure such as grids and storage, and other spending items contributing to emissions reduction (e.g. R&D). In some cases, not all Operational Programmes of individual Member States have been assessed (due to aforementioned constraints) and the analysis will be enriched once further information becomes available.

Table B: Assessment of Operational Programmes

Member State	Civil Society organisation	Relevant documentation
Croatia	DOOR Croatia	Operational Programmes of the Republic of Croatia for 2021-27 period[xxx]
Czech Rep	Centre for Transport and Energy	https://bankwatch.org/publication/assessment-of-operational-programmes-in-the-czech-republic
Estonia	Estonian Green Movement	https://bankwatch.org/publication/assessment-of-the-estonian-operational-programme
Greece	CAN -E assessment	National and regional Operational Programmes for the 2021-27 period[xxxi]
Hungary	Friends of the Earth Hungary	https://bankwatch.org/publication/assessment-of-hungary-s-operational-programmes
Poland	Polish Green Network	https://bankwatch.org/publication/assessment-of-poland-s-operational-programmes
Portugal	ZERO – Association for the Sustainability of the Earth System	https://ec.europa.eu/commission/presscorner/detail/en/IP_22_4472
Slovenia	FOCUS	Draft Operational Programme of Slovenia[xxxii]
Spain	SEO/Birdlife	Partnership agreement[xxxiii] and multi-regional operational programme[xxxiv]

Table C: Preliminary estimation of the contribution of cohesion policy funds to climate mitigation investments

Member State	Total allocation ERDF + CF	Total ERDF + CF (notional minimum climate spending)	Preliminary estimation of climate mitigation investments
Croatia	6.5	2.3	0.4
Czech Rep	16.7	5.7	1.8
Estonia	3.4	1.1	1.1
Greece	14.4	5.1	4.2
Hungary	15.9	5.7	4.6
Poland	56.6	20.3	20.7
Portugal	14.7	5.2	2.8
Slovenia	2.2	0.8	0.7
Spain	23.5	8.7	4.3

We subsequently compare the investments mobilised through NRRPs and OPs to investment needs for achieving 2030 targets. To this date, the only official sources of investment needs at the Member State level are the estimations provided in respective NECPs[xxxv]: These estimations are based on the pre-climate law EU target of a 40% emissions reduction by 2030 and will consequently be adjusted in revised NECPs to reflect the new EU targets.

The estimation of investment needs in NECPs is not based on a common methodology across Member States, and as such has been characterised as "inconsistent" and "incomplete" by the European Court of Auditors[xxxvi]. NECPs notably do not specify investment needs by source of finance (e.g. public investment, private investment, EU funds) and do not distinguish between gross and additional needs. Being the only source of official information, however, these estimations are useful to gauge the extent to which Member States are mobilising sufficient finance through the programming of EU funds to fill their own investment needs estimations.

To estimate the investment needs of new EU targets to 2030 (55% emissions reduction), we scale the investment needs of existing NECPs by assuming that national contributions are kept at a constant, and that the increase of investment needs is linear.

Table D: Investment needs of current NECPs and estimated investment needs for achieving a 55% emissions reduction target (bn Euros, rounded)

Member State	Current NECP investment needs (40% target)	Estimated 55% target investment needs
Croatia	19	26
Czech Rep	95	130
Estonia	2	3
Greece	43	60
Hungary	57	78
Poland	195	268
Portugal	127	174
Slovenia	22	30
Spain	241	331

We finally compare the total investments mobilised via the RRF and cohesion policy funds to estimated investment needs to 2030. Table E provides the figures used to estimate the proportion of investment needs filled by respective EU funds.

Table E: Climate mitigation investment mobilised and investments needs to 2030 (bn Euros)

Member State	RRF climate mitigation investments (max)	RRF climate mitigation investments (min)	OPs climate mitigation investments	Current NECP investment needs	Estimated 55% target investment needs
Croatia	1.69	1.69	0.44	19.00	26.13
Czech Rep	3.28	1.77	1.80	95.20	130.90
Estonia	0.39	0.32	1.09	2.26	3.11
Greece	9.41	4.20	4.20	43.80	60.23
Hungary	2.78	2.66	4.60	57.00	78.38
Poland	13.49	10.07	20.7	195.00	268.13
Portugal	3.50	2.83	2.8	127.00	174.63
Slovenia	0.63	0.52	0.7	22.00	30.25
Spain	24.74	21.55	4.3	241.00	331.38

Annex 2: Selected examples of country level recommendations for the use of EU funds

Member State	Key recommendations	Contact
Czech Rep	Exclude and replace investment lines for fossil gas boilers and transmission infrastructure with increased RES penetration and electrification infrastructure Exclude and replace unsustainable biomass investment lines with increased RES penetration Increase the share of investments in RES, heat pumps and wider electrification infrastructure by setting concrete deployment targets in respective spending plans Mainstream the roll-out of energy communities in respective spending plans Establish measurable financial and results-based targets for energy-efficiency investments in respective spending plans	Eva Mariničová Centre for Transport and Energy eva.marinicova@cde-org.cz
Estonia	Allocate more funds to building renovation in order to reach the national target of renovating 22 per cent of the total building stock by 2030 (a total investment of around EUR 5 billion). Invest in energy production decentralisation and energy communities e.g. by using EU funds to set up a guarantee fund Exclude investments highways and TEN-T roads and replace those with sustainable mobility investments to shift both passenger and freight traffic from road to rail Limit oil-to-unsustainable biomass conversion investments and replace them with investments for the electrification of district heating via large scale heat pumps and demand reduction (efficiency)	Silver Sillak Estonian Green Movement silver@roheline.ee
Hungary	Increase and diversify the funding schemes available for energy efficiency investments and RES	Teodóra Dönsz-Kovács MTVSZ teodora.donsz.kovacs

	including energy communities and decentralised energy. Exclude investments highways and TEN-T roads and use the €1.04 billion dedicated to those with sustainable mobility investments Remove investments dedicated to supporting the installation of fossil gas boilers and replace those with electrification investments and heat pumps Dedicate more resources from respective EU funds to the integration of district heating and energy communities into the grid for replacing fossil gas sources.	@bankwatch.org
Poland	Redirect all support for fossil gas boilers, including in energy efficiency schemes towards renewable electrification alternatives, heat pumps, decentralised RES, storage and grid investments Redirect all support for fossil gas pipelines to electrification and renewable alternatives Redirect all support to new road construction (the single largest spending item) to increase investments in the rebuilding of closed railways, the building of new connections for enhancing modal shift, and sustainable public transport. Increase the funding available for energy communities and decentralised energy in respective plans, by creating dedicated funding instruments	Wojciech Szymalski, ISD/INE – Instytut na Rzecz Ekorozwoju, w.szymalski@ine-isd.org.pl
Portugal	Ensure the hydrogen related investments are produced via renewable sources only, for targeted needs, and through smaller scale localised infrastructure. Redirect road construction related investments to expand investments in the public transport and active transport network, for reducing transport costs while enhancing a modal shift	Bárbara Maurício ZERO – Associação Sistema Terreste Sustentável barbara.mauricio@zero.ong

	Increase the budget allocated to the development of energy communities and prosumers, for creation of self-sustainable neighbourhoods in terms of renewable energy generation and direct storage and use.	
Slovenia	Set a higher 2030 renewable energy target than what is in the current Slovenian NECP (27 per cent target), and include additional investments and reforms to reach ambitious targets in the programming of EU funds The distribution grid is a bottleneck for integrating more distributed power generation from renewable energy sources and electric vehicles. The operational programme needs to include investments in the distribution grid (currently not included). The NECP has identified investment needs in distribution grids only of more than €400 million per year while a total of only €80 million is planned through the RRF. Expand investments in public passenger transport infrastructure, railway infrastructure and multimodal infrastructure for ensuring the genuine establishment of a comprehensive system of integrated public passenger transport, as proposed in Slovenia's recovery plan.	Taj Zavodnik Focus – Association for Sustainable Development taj@focus.si
Spain	Mobilise more investment in sustainable urban mobility (beyond electric vehicles), in regional and commuter trains (beyond long distance trains), and night trains. Ensure that investments in hydrogen are exclusively renewables-based, and targeted to the most efficient uses When there are no other cheaper carriers based on renewable energy sources. Dedicate more resource for self-consumption and energy communities' investments in respective plans, while setting concrete and ambitious targets	Ana Marquez SEO/Birdlife amarquez@seo.org

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