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# Recovering Better!

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Climate Safeguards for the EU's  
Proposed 1.85-Trillion-Euro Budget

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**IMPULSE**

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**Agora**  
Energiewende



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## IMPRINT

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### IMPULSE

#### Recovering Better!

Climate Safeguards for the EU's Proposed  
1.85-Trillion-Euro Budget

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viewed a draft of the report by Climate & Company  
as well as a draft version of these Conclusions  
and Recommendations.



This publication is available for  
download under this QR code.



This paper is based on an  
analysis of climate aspects in  
the proposed EU budget done  
by Climate & Company. Scan the  
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# Preface

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## Dear reader,

on 27 May, the EU Commission proposed an updated EU budget for 2021-2027 of 1.100 bn EUR and a dedicated EU recovery budget for 2021-2024 of 750 bn EUR. The Commission's express intention is to help Europe "recover better", by boosting the economy and by accelerating climate action.

To check whether these claims live up to reality, we asked Climate & Company to assess the amount and focus of climate-funding in the budget proposals against the investment needed into the transition. Herewith you find our conclusions and recommendations based on their analysis.

The uncomfortable truth is, the proposed budget is far from what is needed to enable accelerated climate action in the 2020-2030 decade. We therefore recommend adding concrete climate safeguards to the future budget.

I hope you find this report inspiring and enjoy the read! Comments are very welcome.

Kind regards,

**Dr Patrick Graichen**  
*Executive Director Agora Energiewende*

## Key findings at a glance:

1

**The EU's 1.85-trillion-euro budget proposal pretends to be green, but it is not.** It is uncertain whether the 750 billion NextGen EU recovery budget will be used for clean investment; and only a very limited part of the 1.1-trillion Multiannual Financial Framework is reserved to that end. The proposal fails to meet the stated commitment of the European Commission and Europe's heads of state to an economic recovery in line with climate neutrality by 2050.

2

**The 1.85 trillion euros must help Europe reach the proposed increases to its 2030 climate targets – amounting to a 50 or 55% reduction of carbon emissions – by ramping up massive clean investment in the buildings, power, transport and industry sectors.** Priorities are tripling the speed for creating new solar and wind energy, tripling the rate of energy efficiency retrofits of buildings, greening district heating networks, an EU-wide EV-charging infrastructure, a high-speed EU railway system, a clean hydrogen economy and a climate-neutral industry.

3

**Three climate safeguards can ensure that the future EU Budget is really green:** (1) Stipulating a climate share of 40% across all budget lines in both the NextGen EU budget and the multiannual financial framework; (2) establishing dedicated EU facilities to accelerate climate action in critical areas; (3) setting out a clear exclusion-list of climate-negative activities that will not be eligible for EU funding.

4

**Europe must develop budget governance mechanisms that combine flexibility with climate integrity.** We need (1) to ensure that spending activities are consistent with the National Energy and Climate Plans, the Territorial Just Transition Plans, the Recovery and Resilience Plans, and other planning processes; (2) to devise a role for the EU Green Taxonomy in determining national spending priorities; and (3) to conduct a budget review in early 2024, when EU legislators will have just finished updating the EU's 2030 climate and energy framework.

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# 1 Why the proposed budget falls far short of enabling Europe to reach its climate and energy targets

In December 2019, EU heads of state and government agreed to make the EU greenhouse gas neutral by 2050 and instructed the Commission to revise the EU's 2030 climate target.<sup>1</sup> Some weeks into the COVID-19 pandemic, EU leaders called for an economic recovery programme in keeping with the European Green Deal and the EU climate objectives.<sup>2</sup>

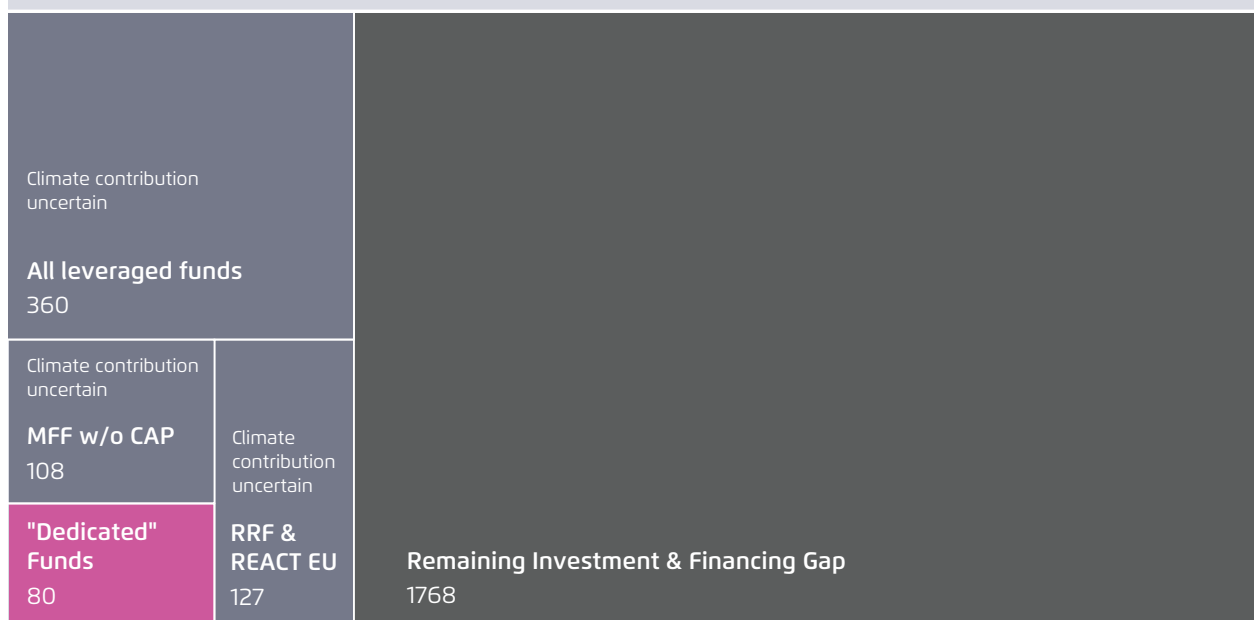
It makes good economic sense to align Europe's economic recovery programmes with EU climate objectives. First, economists project that recovery

programmes complying with the European Green Deal will perform better economically than programmes focussing only on short-term economic stimulus.<sup>3</sup>

Second, the budget and time for tackling the climate crisis are limited. And, third, the effects of economic stimulus programmes unfold over years, sometimes even decades, which is why they must be consistent with the European Green Deal if Europe hopes to achieve greenhouse gas neutrality by 2050.

Share of needed climate investment (totalling 2.4 trillion euros) that could be covered by the proposed EU budget (all figures in bn EUR)

Figure 1



Climate&Company, 2020

1 See the EUCO conclusions from 12 December 2020, para 1 and 9.  
2 See the "Joint Statement of the Members of the European Council" from 26 March 2020.

3 See Hepburn et al, "Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?", Joint paper of 4 May 2020.

It is all the more disappointing, therefore, to see that climate-related funding in the proposed EU budget falls significantly short of what is needed for Europe to reach its 2030 climate and energy targets and to transition towards greenhouse gas neutrality. The detailed study of the EU Commission's proposal carried out by Climate & Company reveals three main weaknesses:

1. First, the **proposed cumulative contribution** of the draft for the 2021–2027 Multiannual Financial Framework (MFF) and the draft for the 2021–2024 Next Generation EU (NextGen EU) is too small for the climate-related investment needed in the buildings, transport, power and industry sectors. A conservative calculation<sup>4</sup> shows that, based on current 2030 climate and energy targets, 2.4 trillion euros of climate-related investment will be needed in these sectors during the 2021–2027 period, or 349 billion euros per year. The proposed EU budget would at most cover 28% of needed investment and at worst only 3–8%. Even in the best case scenario, the budget would leave a gap of 1.8 trillion euros investment needs unserved, and it is likely that the actual gap will be much larger. (See figure 1). The investment shortfall would have to be filled by national funds or by tightening legal requirements so as to compel companies and citizens to modify their private investment decisions.
2. A second weakness consists of the **current deficiencies in the mainstreaming of climate priorities** and the weak assurances regarding tangible and measurable climate change mitigation efforts from the climate share of the budget.<sup>5</sup>

3. Third are the **weaknesses and inconsistencies in the proposed governance mechanisms**, which tie national spending programmes only loosely with European climate and energy objectives. This is particularly true of Next Generation EU.<sup>6</sup>

In the following sections we describe the weaknesses in more detail and propose measures for remedying them. The tables in Annex 1 and 2 summarise the most important information by sector and budget instrument.

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4 The methodology is explained in Climate&Company (2020)

5 The "climate share" refers to the 25% of the EU budget earmarked for climate action. We discuss the related issues and challenges below.

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6 Our study has found that the budget proposals are ambiguous at best on whether Member States will be committed to direct a minimum share of Next Generation EU funding to climate-related investment.

## 2 Needed sector investment for meeting the EU's 2030 climate and energy targets

The EU's current climate framework aims to reduce EU greenhouse gas emissions by 40% by 2030 relative to 1990 levels, as decided by the European Council before the adoption of the Paris Agreement. In 2018 the EU adopted new 2030 energy efficiency and renewable energy targets that *de facto* increase EU climate targets to a 45% reduction but fail to put the EU on a credible pathway to climate neutrality by 2050.

The study by Climate & Company, which draws heavily on the European Commission's own work, finds that reaching current climate and energy targets would require 2.4 trillion euros of climate-related investment in the buildings, transport, power and industry sectors during the 2021–2027 period, or 349 billion euros per year. An increase of the EU's climate target to -50% or -55% would increase the needed investment beyond that cited in this report.<sup>7</sup>

### What does "needed investment" refer to?

"Needed investment" refers to the additional financing required to enable the clean-energy transition in accordance with the EU's 2030 and 2050 climate targets. In its analysis accompanying the EU budget proposal, the European Commission uses the term "investment gap". Studies differentiate between investment that is likely to be made without further policy intervention (known as business-as-usual scenarios) and the *additional needed investment that would not happen without policy intervention*. The latter includes increasing renewable energy capacity, implementing energy-efficiency projects, establishing green steel production and building battery charging stations. To make this investment, project developers and investors need incentives, barriers need to be removed and regulatory frameworks for the private sector need to be improved. One element in improving investment conditions is public financing at the EU and state levels. Public financing instruments can take the form of grants, loans, guarantees and mixed instruments such as concessionary loans. Grants, for instance, could be used directly to support investment costs, to fund technical assistance and project development, to set up financial instruments, or to finance project-specific contracts for difference.

The EU Commission president Ursula von der Leyen is determined to increase the EU's 2030 climate target to -50% or -55% below 1990 levels, depending on the outcome of a comprehensive impact assessment currently being performed by the Commission. The European Parliament and a growing group of Member States, together with climate scientists and citizen groups, are calling for an increase of the 2030 climate target to at least -55%.

<sup>7</sup> Given the upward sloping nature of abatement cost curves, the increase could be substantially larger than the numerical difference between the targets.

**Buildings.** Buildings are the largest energy consumer in the EU and contribute roughly one-third of EU greenhouse gas emissions. At the current energy-efficient retrofitting rate – 1%, with deep renovations totalling only 0.2% – a large proportion of inefficient buildings would still exist in 2050. Accelerating the pace of retrofitting and replacing fossil fuels in buildings and district heating systems are an absolute priority. The construction sector employs approximately 15 million people, either directly or indirectly, and makes up 9% of EU GDP.

Energy-efficient retrofitting is funded mainly by private investments (households and companies) and supplemented by public financing (i.e. concessional loans and grants). National and regional institutions play a crucial role in providing financing and advice, but do not exist at the same level throughout Europe.

Needed investment in the buildings sector for the 2021–2027 period is estimated to total 1.3 trillion euros, or 53% of the 2.4 trillion total for all four sectors. The proposed budget currently dedicates no money explicitly to energy-efficient retrofitting for buildings. Allocating 53% of the planned climate share of the EU budget dedicated to the low-carbon transition would result in 27 billion euros for buildings. Expanding funding from the rest of the MFF could increase this amount to 84 billion or to 151 billion euros if contributions are also drawn from Next Generation EU.

**Transport.** Emissions in the transport sector represent almost 27% of EU GHG emissions. Around 75% of sector emissions come from road transport, which relies heavily on liquid fossil fuels. The transport sector – automobiles in particular – is economically very important for the EU, representing 7% of EU GDP and employing 13.8 million people directly and indirectly.

The most urgent challenge to reducing GHG emissions in the transport sector is the switch from fossil-fuel-powered vehicles to low-emission

vehicles. Falling costs and improved performance make battery-electric vehicles the preferred alternative to cars powered by internal combustion engines. The market acceptance of electric vehicles depends on the availability of public and private charging points, making them an immediate priority. The modal shift from individual to public transport and staying abreast of new research and manufacturing technologies for batteries represent further challenges.

Public financing instruments for the transport sector transition vary. Direct grants play a role in rolling-out charging infrastructure in rural areas or in supporting cutting-edge research on battery technologies. Government-backed guarantees could help de-risk private investment in battery manufacturing

Needed investment in the transport sector for the 2021–2027 period is estimated at 840 billion euros (or 34.4% of the total). The proposed budget currently explicitly dedicates only 23 billion euros to this end, but under the most optimistic assumptions (in line with those for buildings just described), it could contribute up to 104 billion euros.

**Power.** A complete decarbonisation of the power sector is needed to meet the EU's objective of becoming the first climate-neutral continent by 2050. Combining electricity generation from solar PV and (offshore and onshore) wind with high system flexibility is the most cost-effective approach.

Based on current climate and energy targets for 2030, the next decade will need to see a doubling in the deployment speed of new renewable power capacity (predominantly wind and solar PV) and a reduction of coal-fired power generation by two-thirds.

An increase of the EU's 2030 climate target to -55% will require that the EU triple the deployment speed of new renewable power capacity and almost completely phase out coal-fired electricity generation by 2030.



While most of the financing for renewables comes from the private sector, public funding does play a role for stabilising revenue flows. Continued investment in the grid infrastructure requires public support, particularly in the case of transboundary projects. And the successful social and economic transition of regions in Europe that still generate significant income from coal mining and coal use cannot be achieved without dedicated public support for re-training workers, supporting start-ups and repurposing former mining areas.

Needed investment in the power sector for the 2021–2027 period is estimated at 210 billion euros (or 8.6% of the total). The current proposed budget explicitly dedicates only 15 billion euros to this end, but it could contribute up to 35 billion euros with contributions from MFF and Next Generation EU. The Commission has proposed the establishment of a 40-billion-euro Just Transition Fund. If the EU raises its climate target to -50 or -55%, the Commission would likely increase this funding line as well.

**Industry.** The transition to zero or ultra-low greenhouse-gas-emitting technologies in industrial production is feasible today, but key technologies are not yet competitive. In view of the significant share of the industrial base requiring modernisation (30–60% in Germany alone) and the long asset lifetimes reaching far beyond 2050 (see figure 1), investment made in the 2020s must be climate-neutral or able to be cheaply converted to climate neutrality.

Greening the industry sector will mostly rely on hydrogen, a cross-cutting technology that can be used in the production of carbon-intensive materials such as ammonia, cement, steel and plastics.

Industry will not start the transition to climate-neutrality without a robust framework to enable it. Investment is based on anticipating future profitability and investors face high risks due to significant CAPEX commitments. Grants, guarantees, and loans

can thus be very useful for securing green investment. A Carbon Contract for Difference scheme could reduce financing costs and bridge the cost gap between conventional and green technologies. Since a dedicated EU regulatory framework for the decarbonisation of European industry won't be in place until 2024, it is important that the EU begin now to kick start investment in commercial-scale climate-neutral industry projects through dedicated incentives.

Needed investment in the industry sector for the 2021–2027 period is estimated at 98 billion euros (or 4% of the total). The current proposed budget (when counting innovation and modernisation funds) explicitly dedicates 16 billion euros to this end, but it could contribute up to 25 billion euros under the more optimistic scenarios discussed above.

### 3 Recommendations for strengthening the climate share in the proposed budget and narrowing the climate investment gap

Table 1 summarises the findings for needed investment by sector. In the best case scenario, the share of the EU budget reserved for climate and the estimated leveraged capital could contribute around 675 billion euros for investment, half of it in the form of leveraged financing and half of it in the form of grants. That is to say, **in a best-case scenario more than 70% of needed climate-related investment in the buildings, transport, power and industry sectors must be covered by Member States or by further tightening regulations at the EU or national levels.**

The buildings and transport sectors show the largest gap.

Given the relatively small volume of the EU's budget compared to those of some Member States and its complementary role in relation to national budgets, this situation is not per se a cause for concern. **What is a cause of concern, however, is that it is anything but certain that the EU budget will be able to cover 28% of the needed climate-related investment. Indeed, the real percentage is likely to be much smaller.**

This conclusion is based on the following considerations:

- The few budget elements that specifically address needed investment in the buildings, transport, power and industry sectors total only 80 billion euros, less than 3% of what is required in these sectors. This figure includes an estimated contribution of 26 billion euros from the innovation and modernisation funds, which strictly speaking is not part of the MFF.
- Estimates of the proposed budget's climate share conceal the fact that funds earmarked for the climate will be used *for mitigation as well as for adaptation*, and thus only partially contribute to reducing emissions. This is of particular importance for our analysis here, which focusses on mitigation measures in buildings, transport, power and industry.

Table 1: Investment and financing needs in the buildings, industry, power and transport sectors for 2021–2027, along with sources and resulting gaps vis-à-vis different budget lines [in billions of euros]

	Initial investment & financing gap	Dedicated Funds	MFF w/o CAP	RRF & REACT EU	Leveraged funds	Total funding	Remaining investment & financing gap
Power	210	15	9	11	31	66	144
Industry	98	16	4	5	14	40	58
Buildings	1295	27	57	67	191	342	953
Transport	840	23	37	44	124	227	613
<b>Total</b>	<b>2443</b>	<b>80</b>	<b>108</b>	<b>127</b>	<b>360</b>	<b>675</b>	<b>1768</b>

Climate&Company, 2020

- Absent a climate share in Next Generation EU, Member States have full discretion regarding the use of funding for climate-related investment from the massive 560-billion-euro Recovery and Resilience Fund. Their decisions rest entirely on as yet undeveloped national recovery and resilience plans.
- Leveraged funds play an important role and account for about 50% of the potential funding. However, if the funds used for leveraging the needed climate-related investment are less than expected or if the underlying assumptions for the leveraging factor – 1 euro in InvestEU is assumed to leverage 13.3 euros in investment – prove too optimistic, then the leveraged funds will contribute much less to narrowing the investment gap.
- Lastly, it is important to restate that the needed investment described in the report is based on a -40% climate target for 2030, not on -50% or -55% targets.

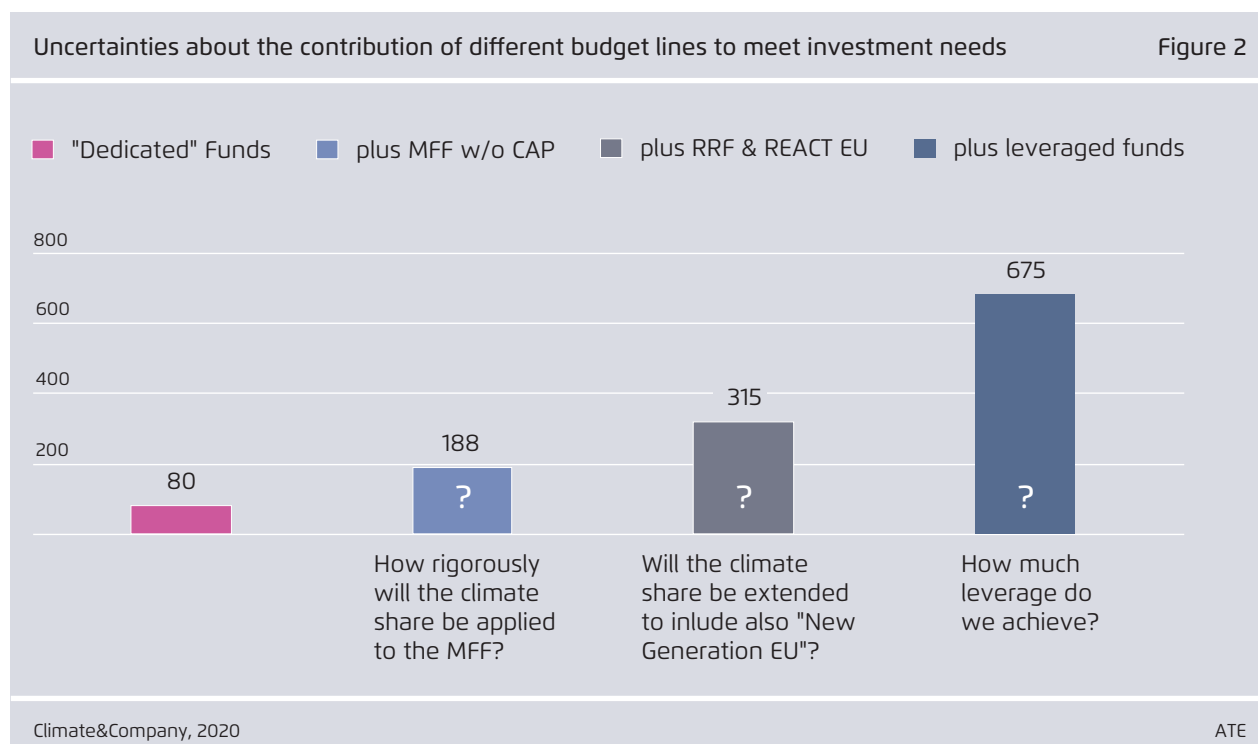
It seems safe to assume that, based on current proposals, the likely contribution of the EU budget to narrowing the gap in climate-related investment will be much smaller than 675 billion euros.

**This creates a very high risk for EU climate policy and for the success of the European Green Deal.**

We thus recommend three steps for strengthening the share of the proposed budget dedicated to the climate and for narrowing the climate-related investment gap:

- (1) raise the climate share to 40% across budget lines (without funds for agriculture);
- (2) establish EU facilities to accelerate climate action in critical areas;
- and (3) establish an exclusion list of climate-negative activities that will not be eligible for funding from MFF or Next Generation EU. The effectiveness of these climate safeguards should be supported by more robust governance mechanisms combining flexibility with climate integrity (section 4).

(For a summary, see figure 2.)



### 3.1 Raising the climate share to 40% across budget lines (without agricultural funds)

The Commission has proposed a budget-wide climate share of 25%. This is an average figure across all budget lines; specific budget lines will have differing climate shares, ranging from 0% (e.g., Solvency Support Instrument) to 100% (e.g., Innovation Fund).

In our analysis, the budget proposals are ambiguous at best on whether Member States will be obliged to direct a minimum share of Next Generation EU funding for climate-related investment. This means it might be completely up to the Member States to decide whether the biggest fund in the future budget – the Recovery and Resilience Fund with a proposed firepower of 560 billion euros – will contribute to narrowing the climate-related investment gap.

The European Parliament, while deliberating the old MFF proposals, has called for increasing the climate share to 30%.<sup>8</sup>

We propose raising the climate share to 40% across all budget lines, without including the contribution of agriculture. This proposal is underpinned by the following considerations:

→ First, when calculating a climate share for the buildings, transport, industry and power sectors it is important to exclude from this calculation the agricultural part of the budget.

Currently the 40% climate share for agriculture, that translates into 139,3 bn EUR of “climate spending”, is accounted across all parts of the budget leading to a stark overestimation of actual funding available for climate change mitigation in the buildings, transport, industry and power

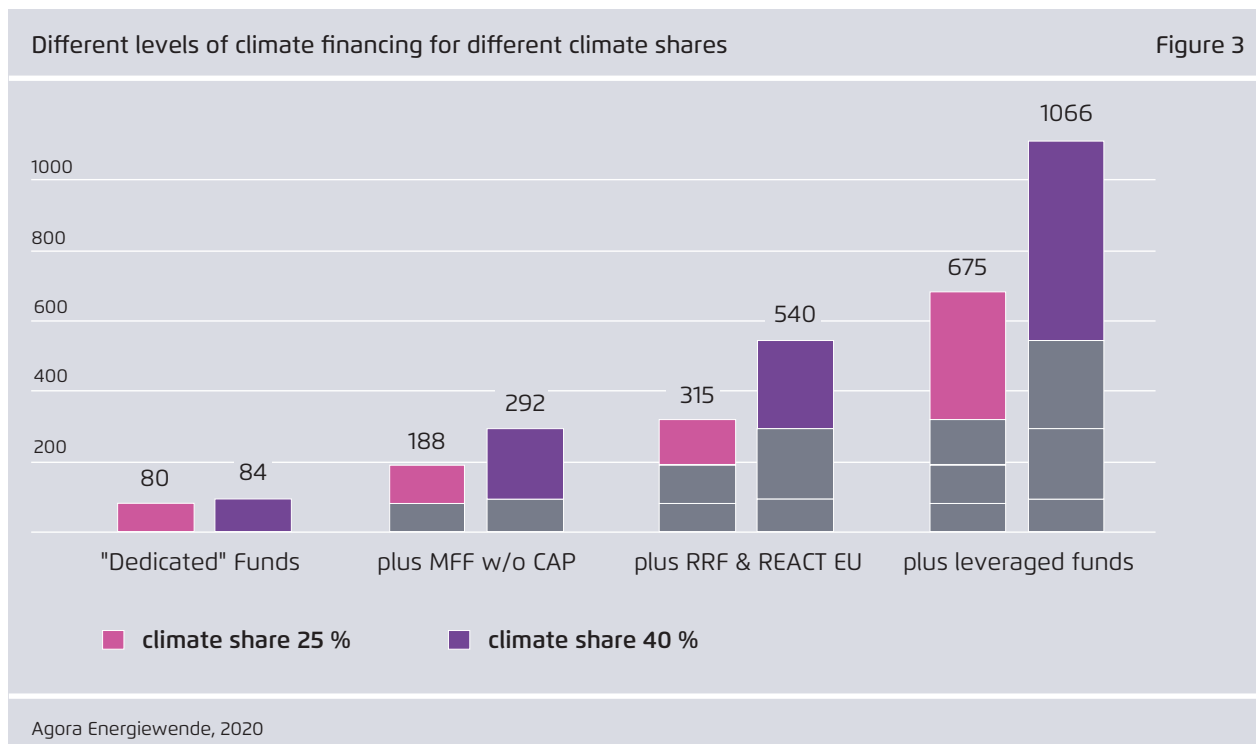
sectors. While climate friendly activities in the land-use sectors are important, they are difficult to account for as regards their contribution to climate change mitigation.

- Second, given the size of Next Generation EU, in particular its 560 bn EUR Recovery and Resilience Fund, and considering that recovery programmes in line with the European Green Deal perform better economically than programmes only focusing on short-term economic stimulus as well as the limited fiscal space and time to tackle the climate crisis, it is absolutely essential to also set a climate spending target for Next Generation EU.
- Third, the climate share targets climate action more broadly and includes both *climate change mitigation and climate change adaptation*. Without taking any particular stance on the allocation to these two important objectives, even a 25% climate share calculated without agricultural funds will contribute significantly less to climate mitigation investment in the buildings, transport, power and industry sectors than nominally would be expected.
- Fourth, the planned increase in the EU's climate and energy targets for 2030 will increase needed investment and should thus be accompanied by an increase to the climate share. As noted, the required increase in climate-related investment could be substantially larger than the numerical difference between the targets, given the upward-sloping nature of abatement cost curves.

According to our calculation, a climate share of 40% across budget lines (without agricultural funds) could contribute an additional 390 billion euros in nominal spending for climate action (see figure 3).

When assuming a more realistic 50:50 split between climate mitigation and climate adaptation investment, however, *increasing the climate share to 40% across budget lines (without agricultural funds)*

<sup>8</sup> European Parliament resolution of 30 May 2018 on the 2021-2027 multiannual financial framework and own resources (2018/2714(RSP)).



would bring the **reliable contribution** of the budget for climate-related investment in the buildings, transport, power and industry sectors in line with the (very unlikely) best-case outcome from a 25% climate share (see above).

### 3.2 EU flagship initiatives to enable key climate-related investment in the buildings, transport, power and industry sectors

The clean-energy transition requires specific investments based on national and local circumstances. Most Member States, particularly those torn by crisis, depend on financing from the European budget. In some areas, the availability of EU funding must be complemented by a dedicated and concerted EU-level effort to create economic and political momentum for the transformation ahead.

Against this background, we recommend launching a select set of EU flagship initiatives with strong

European value added to address the social dimension of the energy transition and overcome current bottlenecks. Each flagship initiative should be supported by dedicated EU-level financing. We recommend creating the following flagship initiatives for the buildings, transport, power, and industry sectors:

- **Buildings Sector Flagship:**  
**A European renovation financing facility to boost renovation wave and employment**  
 To address the remaining investment and financing gap in the buildings sector (953 billion euros for the 2021–2027) the European Investment Bank should set up a “European renovation and financing facility” to support the “European Renovation Wave.”<sup>9</sup>

The facility would provide the sector with access to blended financing instruments (such as grants

9 Such proposal was indeed included in a leaked Commission working paper on a green recovery plan.

and loans). To mobilize additional private funding, the EIB could convert the facility to a fund for private investors. Guarantees could be used to arrange a waterfall structure, e.g. using public money for high-risk first-loss shares and offering private investors less-risky / mezzanine shares.

An internal Commission working paper leaked prior to the publication of the budget proposals called for €91 billion euros to be spent per year from the additional funds of the EU Recovery Plan (€25 billion in grants and €61 billion in guarantees) and allocated to InvestEU.

- **Transport Sector Flagship-1:**

- **A rural low-carbon transport infrastructure fund under EAFRD or ERDF**

- To address the remaining investment and financing gap in the transport sector (613 billion euros), low-carbon vehicles and infrastructure need to be supported. Specific funding should be dedicated to low-carbon transport infrastructure in rural areas with specific milestones such as creating 2 million public charging stations by 2025.

- **Transport Sector Flagship-2:**

- **A rail investment package**

- The internal Commission working paper that was leaked prior to the publication of the budget proposals called for a rail investment package (€40 billion) through frontloaded CEF and CF rail windows and increased co-financing.

- The study by Climate&Company shows that targeted funds to remove bottlenecks for rail infrastructure (e.g. in border regions) are particularly effective. InvestEU financing should also be made available to change the rolling stock where necessary.

- **Transport Sector Flagship-3:**

- **Strengthening the European Battery Alliance**

- Innovation funding and the de-risking of private investments should boost the European Battery Alliance. When useful, innovation funding could

be combined with just transition and recovery funding as part of the structural change in former high-carbon regions.

- **Industry Sector Flagship-1:**

- **Green hydrogen for the industrial transition**

- To support addressing the remaining investment and finance gap in the industry sector (58 billion euros for the 2021-2028 period), the EU budget should prioritise green hydrogen as a key cross-cutting technology. Funding must become available very soon and could be earmarked in different funding lines (Innovation Fund, Horizon, InvestEU).

- **Industry Sector Flagship-2:**

- **European solar manufacturing**

- To meet Europe's increased renewable energy targets it is essential to boost solar manufacturing capacity in the EU. According to the European solar industry the total needed investment for developing 6 GW-scale manufacturing projects between now and 2022 is at least one billion euros. The strategic investment facility could support cost-competitive financing solutions to invest in new PV manufacturing projects. In addition, Horizon Europe and the upcoming Innovation Fund could support innovation and the market deployment of breakthrough technologies by financing start-ups and pilot-lines, among other measures.

- **Power Sector Flagship: A green infrastructure fund for renewables to fund solar in the South and offshore hubs in the North and the Baltic Seas**

- To address the remaining investment and financing gap in the power sector (144 billion euros), the budget should include a green infrastructure fund for renewables with a specific focus on solar PV in Southern Europe and offshore hubs in the North and Baltic Seas.

The fund would be administrated by the EIB and receive 10 billion euros annually for two years mainly to finance loans with a medium to high

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leverage factor for electricity grid-related investment and a lower factor for other categories. If EIB uses the two-year grant as a guarantee, and assuming a EIB leverage factor of 13, that initiative could contribute to the mobilisation of 260 billion euros.

The green infrastructure fund could be combined with an EU tendering scheme, which could, say, tender 15 GW of renewable energy electricity over two years (total needed investment amounting to 25 billion euros) also in support of national initiatives. In this case the EU would blend national financing with EU financing for national tenders.

### 3.3 A clear exclusion list of climate-negative activities that will not be eligible for EU funding

The budget should also establish an exclusion list of climate-negative activities that will no longer be eligible for EU funding. The list should be based on the following considerations:

- the new energy lending guidelines of the European Investment Bank;
- the EU taxonomy for sustainable investments, which will come into effect in 2021;
- the "do no significant harm" principle; and
- the principle of policy consistency.

In effect, the list would eliminate investment in fossil fuel technologies, along with the production of stranded assets because by 2050 all technologies need to be climate neutral.

## 4 Budget governance mechanisms combining flexibility with climate integrity

Accelerated climate action is an important priority across the economy and, by extension, in every area of the EU budget. However, specific funding needs differ between Member States and regions.

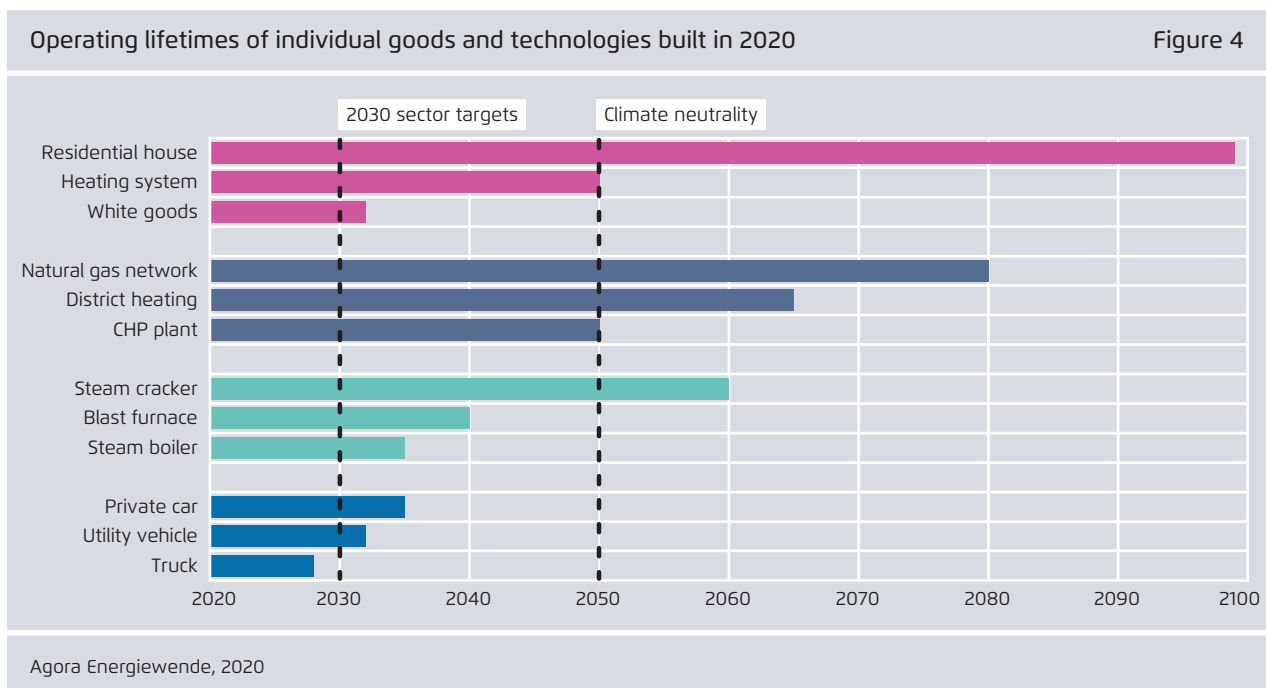
The EU budget provides Member States much flexibility in prioritising the use of EU funds and should continue to do so. At the same time, achieving climate-neutrality by 2050 is a shared objective of the Member States, as is accelerated climate action in all sectors to meet the 2030 climate and energy targets.

The uncomfortable truth is that in light of the average investment lifetimes for key infrastructure we are in many cases just one investment cycle away from 2050, as the following figure makes plain.

It is of the utmost importance, therefore, that infrastructure spending be consistent with the EU's

climate objective starting now and not later. Yet the urgency of climate integrity cannot be easily squared with the flexible use of EU funds at the national level. We thus recommend that future EU-budget negotiations devise robust and practical solutions to the following challenges:

- Spending priorities must be consistent with the objective of climate-neutrality by 2050 in all cases where public money is used for investments with average lifetimes reaching beyond 2050.
- Spending must be consistent across multiple planning processing, most crucially the 2030 National Energy and Climate Plans of Member States (under the Energy Union Governance Regulation), the Territorial Just Transition Plans (under the Just Transition Mechanism Regulation),





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and the Recovery and Resilience Plans (under the Recovery and Resilience Fund Regulation).

More clarity on the timing, content, status, and development process of the national Recovery and Resilience Plans is particularly pressing at the moment because these are a completely new instrument. How do these plans relate to the National Energy and Climate Plans of Member States, which follow a binding template and include public consultation standards? There is nothing comparable yet for the Recovery and Resilience Plans of Member States.

The EU Commission plans to develop a guidance document for that purpose. It is critical that climate and energy experts be engaged in the development of the document and that transparent processes for setting national priorities be created that involve all stakeholders.

- The EU must clarify the role and contribution of the European Semester process in overseeing effective spending under the forthcoming EU budget.
- The EU must determine how the new EU Green Taxonomy will be applied in the development of national spending priorities and operational programmes.
- The EU must undertake a climate review of the budget in 2024, given that by the end of 2023 EU legislators will have updated the EU's 2030 climate and energy framework.

A systematic effort to create **transparency** and **public accountability** in the development and implementation of national spending programmes would also strengthen the climate integrity of the EU budget. To those ends, it is important that the **European Parliament** become fully involved in decisions regarding the future European budget prior to its adoption and in overseeing how the budget is used.

## Annex 1: Sector information

The information below summarises the needed investment and the potential availability of funding for different budget instruments in each sector. A much more detailed description of needed

investment, pertinent studies and sources of information and data can be found in the study by Climate & Company.

Table 2 – Summary of industry sector

Technologies	Needed investment and financing (EUR bn/yr)	RRF	InvEU incl. SSI	Innovation Fund <sup>2</sup>	Horizon	JTF
	Key Instrument:	Grants & loans	Guarantees & loans	Grants	Grants	Grants
	EU Budget (bn EUR):	560	141.5 <sup>1</sup>	~ 10	94	40
	Leverage target:	not specified	450 (300 + 150)			
<b>Decarbonising industry</b>	<b>5-10</b>	✓	✓✓	✓✓	✓✓	✓
Hydrogen economy	< 4	✓	✓✓	✓✓	✓✓	✓
Green steel	0.9 – 2.9	✓	✓✓	✓✓	✓✓	✓
Other (ammonia, cement, plastics)	A: 0.3 – 1.1; C: 1.9 – 3.0; P: 3.0 – 7.0.	✓	✓✓	✓✓	✓✓	✓

Notes:

- ✓ Fund potentially addresses sector/technology.
- ✓✓ Fund is designed to promote innovative technologies.

1 Guarantees from InvEU (75.2) & SSI (66.4). SSI already has a guarantee of 26 billion euros.

2 The Innovation Fund is not part of the MFF/Next Generation EU, but it is important for the transition in the four sectors.

Table 3 – Summary of power sector

Key technologies	Needed investment	RRF	InvEU incl. SSI	Innovation Fund	Horizon
	Key Instrument:	Grants & loans	Private sector financing	Grants	Grants for studies and pilots
	EU Budget (bn):	560	141.5 bn	~ 10	~ 94,4
	Leverage target:	not specified	450 bn (300 + 150)		
<b>Electricity sector investment gap</b>	<b>30 / year (gap)</b>	✓	✓	✓	✓
Expanding low-carbon electricity	25–280 / year	✓	✓	✓	✓
Solar PV (utility scale & rooftops)	6–22 bn / year	✓	✓		✓
Rebuilding the solar industry in Europe)	N.A.			✓	✓✓
Wind industry	16.5 bn / year				
Grid infrastructure	34–200 bn / year	✓	✓	✓	
Storage technologies	N.A.			✓	✓✓
Notes:	✓	Fund potentially addresses industry sector / a particular technology.			
	✓✓	Fund is designed to promote innovative technologies.			

Table 4 – Summary of transport sector

Technologies	Needed investment	RRF	InvEU incl. SSI	Innovation Fund	Horizon	CEF - Transport
	Key instrument:	Grants & loans	loans	Grants	Grants	
	EU budget (bn EUR):	560	141.5 bn	~ 10	94.4	12,9
	Leverage target:		450 bn (300 + 150)			
<b>Investment gap transport</b>	<b>120 / year (gap)</b>	✓	✓	✓	✓	✓✓
Comprehensive charging station network	Needed public Investment: EUR 20 bn until 2030	✓	✓		✓	✓✓
Rail infrastructure	EUR 430 bn until 2030	✓	✓	✓		✓✓
Innovation funding (batteries)	EUR 70–130 bn				✓	✓✓
Notes:	✓	Fund potentially addresses the transport sector / a particular technology.				
	✓✓	Fund is designed to promote innovative technologies.				

Table 5 – Summary of buildings sector

Technology	Inv. Needs	RRF	InvEU <sup>1</sup>	React	JTM <sup>2</sup>	Horizon	ERDF	CF
	Key instrument:	G./L.	Guarantees	Grants	G./L.	TA	G./L.	G./L.
	EU budget (bn EUR):	560	75.2	55	40	94	196.9	40.7
	Leverage target:	not specified	300		~150			
<b>Decarb. building stock</b>	<b>115 (resid.) 70 (busin.)</b>	✓	✓	✓	✓	✓	✓	✓
Energy efficient retrofitting	> 80 bn/year	✓	✓	✓	✓	✓	✓	✓
Green district heating systems	13.2–47.6 bn/year	✓	✓	✓	✓	✓	✓	✓

Notes:

- ✓ Fund potentially addresses activity/technology.
- ✓✓ Fund is designed to promote activity/technology.
- 1 Windows: Strategic investment facility; investing in the EU econ. recovery;
- 2 Incl. public loan facility under the JTM.
- 3 G./L. = Grants/Loans

## Annex 2: The potential contribution of budget instruments to needed sector investment

Scenario I represents budget proposals currently on the table. Note that the Recovery and Resilience Fund and the React-EU Fund do not stipulate a specific climate share. Although the underlying legislation mentions climate and energy targets and the European Green Deal as objectives, it does not set specific climate spending targets. As for the 25% share earmarked for climate-related investment, Scenario I does not distinguish between mitigation and climate adaptation and thus overestimates contributions to meeting needed investment in the sectors.

In a few cases, the sector funding contributions reflect explicit earmarking for sector investment (such as the Innovation Fund targets for industry). In all other cases, the available climate-funding per budget-line was allocated according to the %-share of needed investment in the sectors relative to the overall needed investment. For example, the needed investment in the buildings sector constitutes 53% of overall needed climate-related investment (1295 of 2443 bn EUR).

Table 6 – Contribution of budget instruments to meeting sectoral investment needs under scenarios with 25% and 40% climate share

	Innovation Fund	Modernisation Fund	CEF-E	CEF-T	Just Transition Fund *	LIFE	Cohesion Fund	ERDF	CEF-Digital	Horizon Europe	RRF	REACT-EU	Digital Europe	Sum		
Funding allocated to instruments																
Total [bn EUR 2018]	10	16	5.2	12.9	40	4.8	40.7	196.9	1.8	94.4	560.8	55	8.2	1047		
Scenario I: Status quo (climate share 25% on average, without Next Generation EU, without EAGF & EAFRD, share based on CAN data)																
Climate action share [%]	100%	100%	60%	60%	40%	61%	37%	30%	60%	35%			25%			
Climate action share [bn EUR]	10.0	16.0	3.1	7.7	41	2.9	15.1	59.1	1.1	33.0			2.1	191		
Scenario II: Climate share 40%, but 50% of funding allocated to mitigation and 50% to adaptation (except for innovation and modernization fund), base case scenario (II)																
Climate mitigation share [bn EUR]	10	16	2.6	5.2	40.0	1.5	13.8	61.4	0.2	28.3	112.2	11	1	303.1	Needed investment, bn EUR, cumulative 2021–27	
		8.0	2.6		3.4	0.1	1.2	5.3	0.0	2.4	9.6	0.9	0.1	34	210	Power
	10.0	4.0			1.6	0.1	0.6	2.5	0.0	1.1	4.5	0.4	0.0	25	98	Industry
		4.0			21.2	0.8	7.3	32.6	0.1	15.0	59.5	5.8	0.5	147	1295	Buildings
				5.2	13.8	0.5	4.7	21.1	0.1	9.7	38.6	3.8	0.4	98	840	Transport
	10.0	16.0	2.6	5.2	40.0	1.5	13.8	61.4	0.2	28.3	112.2	11.0	1.0	303.1	2443	Total

Notes: \* Following a recent opinion by the Legal Service of the Council of the European, it remains unclear, whether NextGenEU can be used to expand the size of the Just Transition Fund from the originally proposed 7.5 bn euros to 40 bn euros.

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