



Renewables in the post- COVID-19 recovery package of the EU



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IMRESSUM

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THIS ANALYSIS IS PART OF A [COMPILATION OF RECOVERY PACKAGE ANALYSES](#) AND AIMS AT EXPLORING THE ROLE OF RENEWABLES IN POST-COVID19 RECOVERY SCHEMES. AS A SERIES, THIS RESEARCH IS CONDUCTED CONTINUOUSLY AND WILL BE ADDED TO, ONCE INFORMATION IS AVAILABLE.

Introduction

On 27th of May 2020, the EU Commission introduced its economic stimulus package in reaction to the raging COVID-19 pandemic. The budget of the EU's recovery package alone amounts to 750 billion Euro. This recovery instrument 'Next Generation EU' (NGEU) will reinforce the 1.074 billion Euro heavy EU's Multiannual Financial Framework – its long-term budget for 2021 to 2027 – to an amount of 1.85 trillion Euro¹.

Many of the policies and instruments included in the NGEU scheme build upon and resume the strategies developed and presented in the European Green Deal in late 2019. The stimulus programme aims to achieve three strategic pillars:

- support member states to recover, repair and emerge stronger from the crisis,
- boost private investments and support ailing companies,
- reinforce key EU programmes to accelerate the twin green and digital transformation.

EU leaders agreed that 30% of the total amount of both packages target climate-related projects, complying with the EU's 2050 climate neutrality objective, the EU climate targets of 2030 and the Paris Agreement.² For the member states' Recovery and Resilience Plans, the European Commission invited to ensure the inclusion of a minimum of 37% of climate-related expenditures.³

According to Article 2 of the Treaty on the European Union, access to those funds is based on member states' compliance with basic European values, in particular the rule of law. To pass the recovery measures and the budgets, all 27 member states must give their consent. Unless this would have been the case, the budget and the recovery fund would have been blocked and payments to and support of those countries hit hardest by the COVID-19 pandemic would have been left to their own devices. In a nutshell, one or two member state could hold a budget "hostage", by not giving consent.

The Green Deal as a guiding strategy

The European Green Deal (EGD) was introduced in late 2019 by the newly elected President of the European Commission, Ursula von der Leyen. The EU Green Deal sets out the Commission's plan to transform the EU economy into a more sustainable, inclusive, and just⁴ one. Achieving a climate-neutral continent serves therefore as the overall objective; with renewables being one of its key technological instruments. The European Commission recognises the diverse set of benefits of the

¹ <https://www.pv-tech.org/news/europes-green-recovery-proposals-renewable-highlights-and-reactions>, accessed 05 January 2021.

² <https://www.consilium.europa.eu/en/meetings/european-council/2020/07/17-21/>, accessed 05 January 2021.

³ https://ec.europa.eu/energy/sites/ener/files/report_on_the_state_of_the_energy_union_com2020950.pdf, p. 20, accessed 05 January 2021.

⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en, accessed 05 January 2021.

deployment of renewable energy, including “reducing emissions, boosting energy independence, creating jobs and growth and reducing pollution, together with maintaining the EU’s leadership position in the sector worldwide”.⁵

The Deal was voted for by the European Parliament with the request for higher ambition, on 15th January 2020. On 23rd of June 2020, the EU environmental and climate ministers agreed on the plan of the Commission to apply the European Green Deal as the guiding policy framework for the EU recovery towards green economic growth and strengthening the EU’s resilience.⁶ Making the Green Deal the guiding policy foundation of the EU’s economic recovery by

- calling for a massive **renovation wave** of infrastructure and buildings;
- introducing a more **circular economy** and creating local jobs;
- scaling up **renewable energy** projects (especially wind and solar) and initiating a European **clean hydrogen economy**;
- developing **cleaner transport and logistics** (incl. charging points for e-vehicles, boosting rail travel and clean mobility in cities and regions); and
- strengthening the **Just Transition Fund** (support businesses creating new economic opportunities, reskilling workforce).

The digital recovery, in addition, aims to strengthen the EU Single Market by increasing the general **cyber resilience**; investments in **more and better connectivity** (rapid deployment of 5G networks; building a **stronger industrial and technological presence** in strategic sectors (incl. artificial intelligence, cybersecurity, supercomputing, clouds) and more measures.⁷

Making the European Green Deal the framework of the European COVID-recovery has great potential to lead to key strategic investments into renewable energy and energy efficiency enhancements. By scaling up deployment of, in particular, offshore wind energy, by kick-starting the EU’s green hydrogen trajectory, e-mobility and infrastructure improvements, storage and battery research and innovation, climate change mitigation, climate neutrality and green recovery could be achieved. Realising these will be complemented by the newly developed Action Plan on Raw Materials that seeks to strengthen the EU’s crucial markets relevant for realising the transformation towards e-mobility and rapid renewable energy deployment.⁸

Next Generation EU and a green European recovery

The Next Generation EU (NGEU) is the main recovery instrument stipulated to re-start the EU’s economy. Three pillars build the basis of the EU’s recovery scheme:

⁵ https://ec.europa.eu/energy/sites/ener/files/report_on_the_state_of_the_energy_union_com2020950.pdf, p. 4, accessed 05 January 2021.

⁶ <https://www.consilium.europa.eu/en/policies/eu-recovery-plan/#>, accessed 05 January 2021.

⁷ https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940, accessed 05 January 2021.

⁸ <https://www.greeneuropeanjournal.eu/fast-tracking-europes-energy-transition/>, respectively <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0456&from=EN>, accessed 05 January 2021.

1. Support of member states to recover, repair and emerge stronger from crisis through investments and national reforms;
2. Incentivising private investments and ailing companies to kick-start the EU economy;
3. Learning the lessons of the crisis and addressing Europe's strategic challenges.

Two of the three pillars of the NGEU prominently include actions on investments in renewable energy. In the first pillar of **support to member states to increase investments and reforms**, the role of renewables is strengthened, in particular, through the provisions for the **Recovery and Resilience Facility**, the **REACT-EU initiative**, and the **Just Transition Fund**.

- The **Recovery and Resilience Facility** takes up by far the largest portion, with a share of more than 80% of the overall funding of the NGEU instrument⁹. It offers financial contributions or investments and reforms on the national level to increase economic resilience against future crises by creating jobs, boosting economic growth and strengthening Europe's competitive edge¹⁰. By prioritising a green and digital transition the Facility seeks to improve and align as well as accelerate research and innovation activities to achieve the climate neutrality target of the Commission. In order to access funds from this scheme, member states are required to set up national Recovery and Resilience Plans to define their reform and investment agendas until 2026.¹¹ These Plans are supposed to be consistent with the National Energy and Climate Plans (NECPs) as well as several other agreements, programmes, and stipulations.¹² Even though all EU member states can access particular support, those most negatively affected by the COVID-19 pandemic and its economic effects will be favoured.
- Additionally, the Next Generation EU package includes a proposal to provide up to 40 billion Euro to strengthen the existing **Just Transition Fund**, targeting regions heavily relying on fossil fuels and assisting member states to accelerate a just and inclusive transition that can contribute towards the pursued climate neutrality by 2050.¹³
- The newly formed **REACT-EU initiative** (Recovery Assistance for Cohesion and the Territories of Europe) as another component, is primarily intended to support health services, small and medium-sized enterprises and jobs. Decisions on the eligibility will be conditional on the severity of a countries' socio-economic affectedness, measured by, for instance, youth unemployment and relative prosperity of the respective member state. The initiative's budget accounts to 55 billion Euro¹⁴, on top of the current cohesion policy programmes until 2022.

⁹ https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf, accessed 05 January 2021.

¹⁰ https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1749, accessed 05 January 2021.

¹¹ <https://www.consilium.europa.eu/en/policies/eu-recovery-plan/#>, accessed 05 January 2021.

¹² https://ec.europa.eu/info/sites/info/files/3_en_document_travail_service_part1_v3_en_0.pdf, p. 28, accessed 05 January 2021.

¹³ <https://epthinktank.eu/2020/10/08/eu-just-transition-fund-how-does-it-work-animated-infographic/#:~:text=What%20is%20the%20Just%20Transition,and%20climate%20neutrality%20by%202050>, accessed 05 January 2021.

¹⁴ <https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>, p. 5, accessed 05 January 2021.

Kick-starting the EU economy and mobilising private investments, as the second pillar of the Next Generation EU Recovery scheme, builds on three particularly important parts for the increased role of renewables in the EU recovery:

- The **Solvency Support Instrument** with a budget of 31 billion Euro, aiming at unlocking up to 300 billion Euros in solvency support for companies of all sectors to transition to a cleaner, digitalised and resilient future.
- The EU's flagship investment programme: **InvestEU** aims at mobilising private investment for sustainable infrastructure projects across the EU. The programme is being stocked up with another 15.3 billion Euro¹⁵ to flow into renewable energy, storage, clean hydrogen, batteries and carbon capture technology. In addition, InvestEU tops up the budget for the Strategic Investment Facility with 15 billion to leverage up to 150 billion Euro in investments.

Other elements of the EU's recovery programme have the potential to contribute to strengthening the role of renewables in the recovery itself if set up wisely. They can then also improve the resilience of the EU and the set role of Europe as a pioneer in climate neutrality, sustainability and just transition, but are yet to be further defined.¹⁶

The role of renewables in the EU's recovery efforts

On their meeting in July 2020, EU leaders decided that almost one-third of the combined funds of the Next Generation EU recovery package and the multi-annual EU budget had to be earmarked for green stimulus measures, fighting the climate crisis.¹⁷ Additionally, expenditure and legislation should be in line with the Paris Agreement's climate targets, comply with the EU's new climate targets for 2030 as well as contribute to achieving the goal for climate neutrality by 2050.¹⁸ To reach the climate neutrality target, researchers have estimated that the EU needs about 2.4 trillion Euro in investments.¹⁹

European Institutions have committed at least 11 billion Euro to support different energy types, according to the *energypolicytracker.org*. Only about 408 million Euro, however, are allocated towards clean energy.²⁰ Most of the budget is so far not clearly indicating if allocated for either clean or fossil or other energy types. Many of the policies that could potentially benefit climate change mitigation and energy deployment need yet to be translated into official legislation and to be

¹⁵ <https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>, p. 5, accessed 05 January 2021.

¹⁶ https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf, p. 3, accessed 05 January 2021.

¹⁷ <https://www.energypolicytracker.org/country/european-institutions/>, accessed 05 January 2021.

¹⁸ <https://www.cleanenergywire.org/events/deep-dive-how-green-are-eus-coronavirus-recovery-plans>, <https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>, p. 7, accessed 05 January 2021.

¹⁹ <https://www.reuters.com/article/us-eu-summit-climate-change-factbox-idUSKCN24M19V>, accessed 05 January 2021.

²⁰ <https://www.energypolicytracker.org/country/european-institutions>, accessed 05 January 2021.

quantified.²¹ The future role of renewable energy within the EU's recovery is still undefined, and, therefore, the recovery's definition as 'green'.²²

However, the EU Taxonomy will guide member states, companies, investors, issuers, and project promoters in transitioning towards a resilient, low-carbon, resource-efficient economy as well as in spending recovery funds.²³ To access the recovery funds, member states must comply with the EU Taxonomy. Its 'do no harm' clause, as the binding principle for economic activities, excludes the use and deployment of fossil fuels and nuclear energy. However, the taxonomy has no concrete stance on the exclusion of fossil natural gas.²⁴ It is clear, that this loophole would allow member states to continue to use fossil gas. This might bring Europe on a path of dependency and lessens the urgency with which decisions for deep decarbonisation, based on renewable energy sources are needed.

Fossil gas has also been a point of discussion within the framework of the Just Transition Fund (JTF). In December 2020, member state governments have decided to exclude fossil natural gas from the list of energy sources eligible under the JTF. The decision comes at a trade-off with the European Parliament that has voted majorly to include investments for gas projects. In order to somewhat compromise, investments into such projects will still be possible under the European Regional Development Fund.²⁵

At the meeting of EU leaders in July, it has also been decided that the additional contributions to the Just Transition Fund would be cut from the 40 billion Euro initially proposed by the European Commission, to 10 billion Euro. Topping up the JTF to about 17.5 billion. These cuts could significantly impact investments of effective actions on climate protection and a clean and fair energy transition.²⁶ In addition, for member states to access the funds, countries would have to commit to the EU's target of climate neutrality by 2050 to receive their full share of the JTF. The original proposal would have forced countries to a national commitment to climate neutrality to access any of the funds available – which has been said to be a “red line” for coal-reliant countries. In light of these significant cuts to the Just Transition Fund, it is to be expected that the ability of particularly coal-heavy countries to commit to heightened targets of climate mitigation as well as the EU's climate neutrality target are impaired. Along this line of thought, if willing countries cannot commit to higher ambitions due to restricted funding, they will only receive half of their estimated share of the JTF funding. This creates a paradox in which those willing but unable countries will even be less able to stem a transition towards a sustainable economy. Nevertheless, not forcing member states to commit to the climate-neutrality target of the EU, may also result in some countries free-riding on the higher ambitions of others and continuing some form of business as usual for as long as possible. This might

²¹ [ibid.](#)

²² <https://www.greeneuropeanjournal.eu/fast-tracking-europes-energy-transition/>, accessed 05 January 2021.

²³

https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf, accessed 05 January 2021.

²⁴ <https://www.energypolicytracker.org/country/european-institutions>, accessed 05 January 2021.

²⁵ <https://www.euractiv.com/section/energy/news/eu-agrees-its-green-transition-fund-will-not-support-natural-gas/>, accessed 05 January 2021.

²⁶ <https://www.reuters.com/article/us-eu-summit-climate-change-factbox-idUSKCN24M19V>, accessed 05 January 2021.

then at some later point in time result in the need for additional support by EU institutions for fast-tracking a self-imposed delay in transition for some countries, at the expense of other member states to fulfil EU commitments towards climate-neutrality.

Apart from the JTF, the proposed budget for the InvestEU infrastructure investment programme of the EU was cut from 20 billion Euro to 10 billion Euro at the meeting of the EU leaders. This includes a cut in investments for renewable energy and storage, clean hydrogen, batteries, and carbon capture strategies and technologies. Remaining funds, earmarked for green recovery, could support funding for investments, suggested by the European Commission in its original proposal, in the energy efficiency of buildings and renewable heating, investments in a circular economy and natural capital, and investments in electric vehicles and charging infrastructure. This, too, remains to be determined.²⁷ Nevertheless, the Commission recognises the great potential of renewables for decentralised energy solutions to play a key part in this boost of sector resilience, not only in the energy sector.

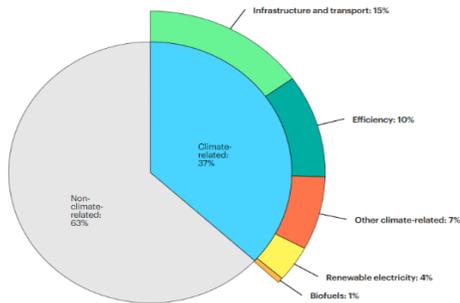
In contrast, the Recovery and Resilience Facility disposes of an amount of 672.5 billion Euro. Of this, 360 billion Euro will be made available in the form of loans, the rest in grants. 70% of the available grants are supposed to be committed in the years 2021 and 2022, the rest until the end of 2023.²⁸ In the '2020 report on the State of the **Energy Union on Governance of the Energy Union and Climate Action**', published on 14th of October 2020, the Commission reiterates the Facility's flagship areas – among these renewable energies – as important instruments for member states to guide the development of their National Recovery and Resilience Plans to access funds for economic recovery.²⁹ Most prominently here are the 'Power up' flagship of clean technologies and renewables and hydrogen; the 'Renovate' flagship of improving "energy and resource efficiency of buildings"; and the "Recharge and refuel" flagship to accelerate the use of sustainable, accessible and smart transport, charging and refuelling stations and the extension of public transport as part of a coordinated approach towards common challenges of all Member States."³⁰ The report, however, does not clearly define the role of renewables in key sectors such as hydrogen or electric mobility. It remains to be seen if the Power up flagship, as well as the others, will leave loopholes for the fossil gas industry, in particular, to remain a relevant player in Europe's energy sector.

²⁷ https://www.theguardian.com/environment/2020/may/28/eu-green-recovery-package-sets-a-marker-for-the-world?CMP=share_btn_tw; <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/all-the-green-elements-of-the-eu-s-8364-750b-recovery-proposal-58822603>; https://www.bloomberg.com/news/articles/2020-05-20/eu-to-unveil-world-s-greenest-virus-recovery-package?cmpid=BBD052120_GREENDAILY&utm_medium=email&utm_source=newsletter&utm_term=200521&utm_campaign=greendaily, accessed 05 January 2021.

²⁸ <https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>, p. 5, accessed 05 January 2021.

²⁹ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en, accessed 05 January 2021.

³⁰ https://ec.europa.eu/energy/sites/ener/files/report_on_the_state_of_the_energy_union_com2020950.pdf, p. 21, accessed 05 January 2021.



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¹ IEA, *Next Generation EU total and expected climate- and energy-related spending, 2021-2023*, IEA, Paris, Note: Percentage values are estimations based on current proposals by the European Commission and past funding patterns. <https://www.iea.org/reports/renewables-2020/key-trends-to-watch>

The *International Energy Agency* (IEA), based on past European funding patterns from 2014 to 2020, estimated that of the 37% budget of the national recovery and resilience plans earmarked for green investments and reforms, 15% will materialise in infrastructure and transport (103,5 billion Euro), 10% in the energy efficiency of buildings and industry (70,6 billion Euro), 4% are estimated to be spent on renewable electricity capacity (24,6 billion Euro),

followed by 1% on biofuels (3,3 billion Euro).³¹

Recognising that 40% of the EU's energy consumption is caused by buildings and the renovation rate of older buildings is currently at 1%, ambitions to reach an average climate-neutrality in this sector by 2050 need a massive push.³² The *Climate Action Tracker* predicts EU efforts to have the potential to lead to economic growth and job creation in particular in the area of heightening energy efficiency in the building sector. The initiative for a 'renovation wave' may lead to an improvement in air quality and a decrease in energy poverty and the EU's energy dependence.³³

The 'recharge and refuel' flagship combined with other initiatives may accelerate the transformation away from combustion engines in cars and planes and towards the expansion of network for trans-European (rapid) trains.³⁴ Improvements in local and long-distance public transport can have a positive effect on job creation as well as labour mobility, reductions in individual transportation via cars as well as air pollution. Investments in the expansion and safety of bike infrastructure can be low hanging fruits in the improvement of road safety, reduce greenhouse gas emissions and promote public health.³⁵

Improvements in private transportation need to go beyond transforming car fleets from being powered by combustion engines to electronic drive systems. Alternatives in public transport, energy

³¹ <https://www.iea.org/reports/renewables-2020/key-trends-to-watch>, accessed 05 January 2021.

³² https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/201008_Recovery_and_resilience_Policy_Brief_FINAL.pdf, p. 4, accessed 05 January 2021.

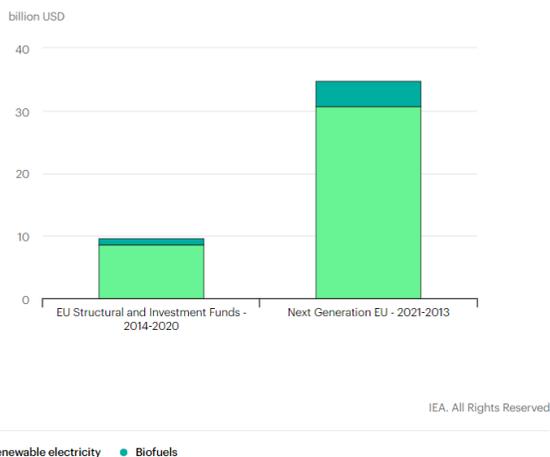
³³ <https://climateactiontracker.org/countries/eu/>, accessed 05 January 2021.

³⁴ *ibid.*

³⁵ https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/201008_Recovery_and_resilience_Policy_Brief_FINAL.pdf, p. 5., accessed 05 January 2021.

efficiency and in the distribution of charging stations – electric and hydrogen – need to be provided. Furthermore, extensive funding has to go into research and innovation of alternative drive system. It is essential the EU and its member states do not lock in e-mobility without sufficiently considering advances in more energy-efficient, environmentally friendly modes of transportation and drive systems. It has, moreover, to be safeguarded that the fuel – be it electricity, hydrogen, or any other alternative fuel – has to be produced eco-friendly. Legislation needs to be set up to set strict guidelines for fuels to be produced sustainably, climate-neutrally, non-polluting and in consideration of environmental and social safeguards, excluding fossil-based energy, grey hydrogen and crop-based biofuels and bioenergy³⁶.

Cumulative renewable electricity and biofuels spending from dedicated EU funds 2014-2023



2 IEA, Cumulative renewable electricity and biofuels spending from dedicated EU funds 2014-2023, IEA, Paris, <https://www.iea.org/reports/renewables-2020/key-trends-to-watch>

spent equally on solar PV and wind, this “could finance 2040 GW of solar PV and 1020 GW of wind plants across the European Union.” However, as member states have already set up long-term renewable energy plans, this money – rather than trigger additional renewable capacity expansion – is expected to mainly fund the realisation of plans in motion.³⁹ Apart from scaling up renewable energy deployment, research and innovation need to be provided with funding in energy storage technologies, smart grid management, and the interconnection of member states’ electricity grids to avoid gaps in domestic energy production. Community energy projects need to be encouraged and be able to feed in produced energy into the grids and get access to the energy market. All measures

The European Commission estimates investment needs in key sectors and technologies – particularly, offshore renewable energy and green hydrogen – to amount to a minimum of 1.5 trillion Euro in 2020 and 2021. Therefore, a recovery led by private investment is crucial for the green and digital transition of the EU.³⁷ The IEA estimates the funds available for renewables electricity through the NGEU package to be about 25.2 billion Euro, and thus “more than three times the amount allocated through the European Structural and Investment Funds for 2014-20”³⁸. Additional private sector investments, leveraged through the grants and loans of the recovery programme, could be up to three times of the funding by the EU. It is estimated that if about 80% of the funds for renewable electricity were

³⁶ For a more extensive list, see <https://www.transportenvironment.org/sites/te/files/publications/RRF%20and%20InvestEU%20-%20T%26E%20Position%20Paper%20%284%29.pdf>, accessed 05 January 2021.
³⁷ https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf, p. 3, accessed 05 January 2021.
³⁸ <https://www.iea.org/reports/renewables-2020/key-trends-to-watch>, accessed 05 January 2021.
³⁹ *ibid.*

will have a positive impact on the economy by simultaneously being in synch with the EU's climate-neutrality target.

On 10th October 2020, the European Parliament majority adopted its negotiated mandate on the EU climate law. GRC Member Michael Bloss, MEP tweeted on that day: "Its one of the most important day for EU climate policy in the coming 10 years."⁴⁰ The law enshrines the obligation to achieve climate neutrality by 2050. Further, the parliament voted to raise the EU's GHG emission reduction target to 60% by 2030, compared to 1990 levels.⁴¹ This ambitious plan did not pay off, however. The EU Council decided for a lower 55% reduction target, as originally proposed by the Commission in September 2020.⁴² This goal, however, includes the measures of 'carbon sinks' through technologies of carbon capture and storage, altering the EU's target to a "net" emission target. According to *EUobserver*, effective emission reductions would be reduced by 50.5% to 52.8%. Furthermore, alterations made on the meeting in December include for member states to be able to choose a national energy mix and technologies seen as most appropriate, including fossil fuels such as gas as transitional technologies.⁴³ These commitments, however, fall short when considering a global trajectory towards a rise in temperature of 3.2°C by 2100.⁴⁴

To avoid dangerous climate change and fulfil commitments made within the Paris Agreement, the EU target needs to be set at 65% emission reduction by 2030, accompanied by the funding of climate action abroad. A reduction of emissions by 48% would result from implementing the EU's goals for energy efficiency and renewable energy alone.⁴⁵ According to the European Commission's Long-term Decarbonisation Strategy, Europe would need approximately 1,200 GW of wind capacity in 2050 alone, compared to 190 GW in 2019.⁴⁶ Even though the COVID-19 pandemic caused a deep but temporary fall in greenhouse gas emissions in 2020 among EU countries and the UK of an estimate of 10 to 11% in comparison to pre-COVID-times, the high reliance of the economy on emission-intensive processes will very likely lead to a growth in emissions once the peak of the crisis is overcome.⁴⁷ Consequently, before the backdrop of heightened ambitions of climate change mitigation, some of these policies and instruments will need to be re-assessed to contribute committing to the Paris Agreement and to keeping well below 2°C of global warming and the EU's target of climate-neutrality by 2050. This assessment also highlights the importance of strengthening the role of renewables and energy efficiency to reach the EU's targets on climate-neutrality. The numbers also reiterate the vast potential of a European energy transition and the necessity of its realisation.

Accordingly, ambitions regarding additional renewable energy investments and deployment need to be increased exponentially. Further actions of decoupling European economic growth from emissions need to be taken and the opportunities of renewables – such as the successful implementation of a renewable energy strategy combined with substantial energy savings –

⁴⁰ https://twitter.com/micha_bloss/status/1337014685284098055, accessed 05 January 2021.

⁴¹ <https://www.europarl.europa.eu/news/en/press-room/20201002IPR88431/eu-climate-law-meps-want-to-increase-2030-emissions-reduction-target-to-60>, accessed 05 January 2021.

⁴² https://ec.europa.eu/commission/presscorner/detail/en/mex_20_2389, accessed 05 January 2021.

⁴³ <https://euobserver.com/green-deal/150364>, accessed 05 January 2021.

⁴⁴ <https://www.theguardian.com/cities/ng-interactive/2017/nov/03/three-degree-world-cities-drowned-global-warming>, accessed 05 January 2021.

⁴⁵ <https://climateactiontracker.org/countries/eu/>, accessed 05 January 2021.

⁴⁶ <https://w3.windfair.net/wind-energy/pr/35575-eu-europe-european-commission-green-deal-call-r-research-innovation-energy-ransition-digital-transition>, accessed 05 January 2021.

⁴⁷ <https://climateactiontracker.org/countries/eu/current-policy-projections/>, accessed 05 January 2021.

highlighted in this regard.⁴⁸ Binding targets for each measure and a binding deployment path for renewables would need to be introduced, to guarantee the successful implementation of the European climate law. Otherwise, member states might not sufficiently invest in and commit to renewable energy, energy efficiency, modernisations in infrastructure and mobility and other related needs to realise this goal. As they are formulated thus far, the EU's recovery package Next Generation EU and pursuing stimuli plans are inadequate in meeting the climate crisis successfully and in encouraging member states to come forward with measures on renewable energy and other clean technology to contribute to a successful green recovery of the continent.

⁴⁸ For more information, <https://us.boell.org/sites/default/files/hbs-decoupling.pdf>, accessed: 05 January 2021.