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COMMISSION STAFF WORKING DOCUMENT

Analysis of the recovery and resilience plan of Germany

Accompanying the document

Proposal for a COUNCIL IMPLEMENTING DECISION

**amending Implementing Decision (EU) (ST 10158/21 INIT; ST 10158/21 ADD 1) of 13
July 2021 on the approval of the assessment of the recovery and resilience plan for
Germany**

{COM(2024) 277 final}

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1. EXECUTIVE SUMMARY

Technological shifts, elevated energy prices and geopolitical tensions are impacting Germany’s economy, while advancing on the green transition and decarbonising remain crucial for sustainable growth. In light of these challenges, Germany submitted to the Commission a modified recovery and resilience plan (RRP) including a REPowerEU chapter on 30 April 2024. For the requested modifications of its RRP, Germany has relied on the following legal bases: Article 21(1) of Regulation (EU) 2021/241 (the “RRF Regulation”) requesting the Commission to make a proposal to amend the Council implementing decision considering that its RRP is partially no longer achievable because of objective circumstances. In accordance, with Article 21c, Germany included a REPowerEU chapter in its RRP and requested the allocation of the amount available from the Emissions Trading System (ETS) revenues and from the Brexit Adjustment Reserve (BAR) for its financing.

The modifications submitted by Germany under Article 21(1) of Regulation (EU) 2021/241 affect 8 measures of the plan. In addition, errors of a clerical nature have been corrected in the text of the Council Implementing Decision.

The REPowerEU chapter submitted by Germany contains measures to help address the key energy challenges that Germany is facing. The five proposed measures contain two new reforms, two new investments as well as one scaled-up investment. The proposed new reforms aim at accelerating the deployment of onshore and offshore wind energy power plants. The proposed new investments aim at speeding up the penetration of zero-emission road transport, also by supporting the refueling and charging infrastructure necessary for the operation of these vehicles, and accelerating the planning and approval of energy infrastructural projects through a digital end-to-end platform. The chapter also includes the scale-up of an existing investment on individual renovation measures allowing for more specific interventions applicable to a wider share of residential building stock with renovation needs.

Based on the assessment of the submitted modification and the REPowerEU chapter, the German modified plan receives an A-rating on all criteria, except for costing, where the plan receives a B-rating (unchanged from the original plan assessment).

(1) Balanced Response	(2) CSRs	(3) Growth, jobs...	(4) DNSH	(5) Green target	(6) Digital target	(7) Lasting impact	(8) M & T	(9) Costing	(10) Control Systems	(11) Coherence	(12) REPowerEU	(13) Cross- border
A	A	A	A	A	A	A	A	B	A	A	A	A

2. OBJECTIVES OF THE MODIFICATION OF THE PLAN

2.1. The main newly emerged challenges

The modification of the German RRP comes in response to challenges that emerged since the original plan was formulated. In 2022, Russia’s war of aggression against Ukraine led to a surge in energy and commodity prices in Germany and the EU as a whole as well as to a higher awareness of the need of energy security and autonomy. As highlighted by the 2024 Country Report¹, the German economy, while avoiding a technical recession, faces challenges due to elevated prices for energy including tight labour market. In 2022 and 2023, the unemployment rate was at around 3.0% and the Federal Employment Agency identified a record high number of job profiles with acute labour shortages. The shortage of skilled labour, notably in the IT sector challenges the implementation of the original RRP. Furthermore, the implementation of certain measures has been also challenged by supply chain disruptions in particular for information technology. In addition, Russia’s war of aggression against Ukraine led to increased security concerns. Consequently, initially planned projects under the RRP had to be re-evaluated to meet increased security requirements. In the context of Germany’s current challenges, the proposed revision of its RRP is twofold: including a new REPowerEU chapter to the original plan and modifying existing measures in line with the provisions of the RRF Regulation.

Germany’s modified recovery and resilience plan adds a REPowerEU chapter to the original plan pursuant to Article 21(c) of the RRF Regulation. To deliver on the REPowerEU objectives, it includes two new reforms, aiming at accelerating permitting procedures for on-and offshore wind deployment. It also includes two new investments, one investment for the purchase of zero-emission transport vehicles and another investment for a new digital platform for hydrogen infrastructure planning and approval. The chapter also presents a scale-up of one existing investment related to support for renovations to improve energy efficiency of residential buildings. The REPowerEU chapter will further support Germany’s green transition and help address the current challenges, in particular those identified and recommended in the field of energy to Germany in 2022 and 2023 in the framework of the European Semester.

Pursuant to Article 21(1) of the RRF Regulation, Germany has justified the modification of 7 measures due to objective circumstances. This modification addresses the need to factor in labour shortages, particularly in the IT Sector. It also addresses increased security concerns related to Russia’s war of aggression against Ukraine, which led to re-evaluating initially planned projects related to the modernisation of the Federal Armed Forces’ educational and training facilities to meet increased security requirements. The modification also reflects lack of demand for apprenticeship schemes support due to the improved apprenticeship market situation and the unexpected apprenticeship support provided by the private sector itself. Furthermore, the modification includes also a better alternative for a digital reform measure as well as for a building renovation scheme “Bundesförderung für effiziente Gebäude (BEG)”, where a broader scope addresses the challenge of reducing the emissions in the building sector in a more effective way.

¹ European Commission (2024), SWD(2024) 605

2.2. Overview of the new and modified components

The main elements of the amended RRP and REPowerEU chapter are listed below by component:

Component 1.3 (climate-friendly renovation and construction): two measures are affected by the modification proposal under Article 21. For measure 1.3.1 Support programme for the development of a climate-friendly timber construction sector, target 43 is reduced due to the un expected inability of some contractors to fulfil their obligations. For measure 1.3.3 Building renovation: federal funding for energy-efficient buildings, the change mainly concerns the addition of two targets (48A and 48B) due to a greater coverage of building stock and quicker savings of greenhouse gas emissions. It is a better alternative to the previous measure version in that a much greater share of the residential building stock is eligible for support for individual measures.

Component 3.1 (digitalisation of education): measure 3.1.4 Modernisation of the Federal Armed Forces' educational and training facilities is affected by the modification proposal under Article 21. The change consists in the postponed timeline of target 85 notably due to increased IT security requirements due to Russia's war of aggression in Ukraine.

Component 4.1 (strengthening of social inclusion): measure 4.1.3 Apprenticeship support is affected by the modification proposal under Article 21. This concerns the decrease in ambition of target 91 in line with a total cost decrease, due to lower-than-expected demand for the subsidy supporting apprentices due to the improved apprenticeship market situation and the unexpected apprenticeship support provided by the private sector itself.

Component 5.1 (strengthening of a pandemic-resilient health system): measure 5.1.2 Programme to future-proof hospitals is affected by the modification proposal under Article 21: the timeline of target 102 is postponed due to the limited availability of IT service providers and IT staff in hospitals.

Component 6.1 (Modern Public Administration): three measures are affected by the modification proposal under Article 21. For measure 6.1.1 European identity ecosystem, the timeline of targets 109 and 110 is delayed due to a complete overhaul of the IT model after a first negative test, consisting in the adjustment of the technical and organizational basis of the program to adapt the German public key infrastructure (PKI) instead of the former self-sovereign identity (SSI) infrastructure to ensure a resilient and trusted eID-system in Germany, leading to a better alternative in outcome. For measure 6.1.2 Digitalisation of the administration – implementation of the Online Access Act, target 113 is amended and target 113A added to reflect the delay in the geographical rollout of Länder (regional) services, due to the lack of IT providers aggravated by the pandemic. For measure 6.1.3 Digitalisation of the administration – modernisation of registers, target 115 is delayed and target 116 is amended and delayed due to the delay of the publication of the implementing regulation under the Single Digital Gateway Regulation and to a large extent to the need to develop infrastructure for the exchange of verification data and for the exchange of evidence.

Component 7.1 (REPowerEU)

Under the REPowerEU chapter and based on Article 21c of the RRF Regulation, Germany proposed measures amounting to EUR 2.3 billion in total estimated costs for two new investment and a scale-up of an existing investment as well as two additional reforms that are not associated with any costs under the RRP.

New reforms:

Wind Energy on Land Act (7.1.4): The reform is aimed at increasing the share of renewables in the German energy mix. The reform contains several elements targeting the speed-up of planning procedures and the designation of areas for wind energy generation.

Offshore Wind Energy Act (7.1.5): The reform is aimed at increasing the share of renewables in the German energy mix. The reform contains several elements, including a redesign of the tendering process and a speeding up of administrative procedures.

New investments:

Support programme for light- and heavy duty zero-emission transport and associated infrastructure (7.1.2): This new investment aims at the decarbonisation of freight road transport. It includes the purchase of zero-emission transport vehicles as well as the set-up of electric charging stations and hydrogen refuelling stations.

Digital platform to accelerate planning and approval (7.1.3): This new investment aims at building a platform based on artificial intelligence (AI) to digitalise the application and approval procedures to build a core hydrogen grid.

Scaled-up investment:

Scale-up of Building renovation: federal funding for energy-efficient buildings (7.1.1): The investment is a scale-up of measure 1.3.3 consisting of targeted, individual renovation measures allowing for better achievement of the objective of energy-efficient renovation of residential buildings through more specific interventions applicable to a wider share of residential building stock with renovation needs.

Table 1. New and modified components in the RRP and associated costs²

Component	Status	Costs (million EUR)
1.1 Decarbonisation using renewable hydrogen in particular	Unchanged	3,708
1.2 Climate-friendly mobility	Unchanged	7,149
1.3 Climate-friendly renovation and construction	Modified	4,167
2.1 Data as the raw material of the future	Unchanged	2,684

² The table shows the net cost of the measures, relevant for RRF-related costing.

Component	Status	Costs (million EUR)
2.2 Digitalisation of the economy	Unchanged	3,019
3.1 Digitalisation of education	Unchanged	1,206
4.1 Strengthening of social inclusion	Modified	731
5.1 Strengthening of a pandemic-resilient healthcare system	Unchanged	4,275
6.1 Modern public administration	Modified	2,920
6.2 Reduction of barriers to investment	Unchanged	42
7.1 REPowerEU	New	2,445
TOTAL		32,344

Other elements not covered by assessment criteria

The previous description of the implementation and monitoring aspects of the plan as well as gender equality and equal opportunities for all, as reflected in the Staff Working Document (2021) 163³ final remains valid.

State aid and competition rules fully apply to the measures funded by the Recovery and Resilience Facility. Union funds channeled through the authorities of Member States, like the RRF funds, become State resources and can constitute State aid. When this is the case and State aid is present, these measures must be notified and approved by the Commission before Member States can grant the aid, unless those measures are covered by an existing aid scheme or comply with the applicable conditions of a block exemption regulation, in particular the General Block Exemption Regulation (GBER) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 TFEU. When State aid is present and it requires notification, it is the duty of the Member State to notify State aid measures to the Commission before granting them, in compliance with Article 108(3) TFEU. In this respect, the State aid self-assessment carried out by Germany in the recovery and resilience plan cannot be deemed a State aid notification. In as far as Germany considers that a specific measure contained in the recovery and resilience plan entails de minimis aid or aid exempted from the notification requirement, it is the responsibility of Germany to ensure full compliance with the applicable rules.

³ COMMISSION STAFF WORKING DOCUMENT Analysis of the recovery and resilience plan of Germany, accompanying the document Proposal for a COUNCIL IMPLEMENTING DECISION on the approval of the assessment of the recovery and resilience plan for Germany {COM(2021) 163 final}

3. SUMMARY OF THE ASSESSMENT OF THE PLAN

3.1. Comprehensive and adequately balanced response to the economic and social situation

Germany's modified plan along with the REPowerEU chapter includes a balanced set of reforms and investments contributing to the Union's economic, social and territorial cohesion by referring to the six pillars of Article 3 of the Regulation (EU) 2021/241. The modification of the plan along with the REPowerEU chapter does not impact the assessment of the contribution of the plan to the different pillars, as the nature and extent of the proposed modifications to the RRP do not have an impact on the previous assessment of the plan's comprehensive and adequately balanced response to the economic and social situation, and on its appropriate contribution to all six pillars referred to in Article 3 of the RRF Regulation, as reflected in Staff Working Document SWD(2021) 196 final.

The measures in the REPowerEU chapter contribute to the attainment of the Union's 2030 climate and energy targets and the objective of EU climate neutrality by 2050. The proposed measures aim to address internal and cross-border energy transmission, to boost energy efficiency in buildings, to promote the uptake of renewable hydrogen and other renewable energy and the use of zero emission transport. The implementation of the measures included in the REPowerEU chapter are expected to contribute notably to supporting the objectives in Article 21c(3), points (b), (d), (e) and (f) of Regulation (EU) 2021/241. The new energy efficiency investment is particularly wide-reaching, as the scaled-up part of the measure will support 190 000 individual renovation measures, in addition to those financed from the non-repayable support as part of the investment 1.3.3. The promotion of the purchase of climate-friendly commercial vehicles and the associated refueling and charging infrastructure will contribute to the market activation or market ramp-up in the vehicle sector for climate-friendly commercial vehicles and thereby reduce GHG and pollutant emissions from road freight transport. The digital platform to accelerate planning and approval of hydrogen projects will accelerate Germany's efforts towards establishing a high-performance hydrogen network infrastructure. Finally, the two reforms in the field on onshore and offshore wind will pave the way for an increased supply of wind energy in Germany.

Coverage of the six pillars of the Facility by the modified German RRP components

● = investments and reforms of the component significantly contribute to the pillar; ○ = the component partially contributes to the pillar

Components	Green transition	Digital transition	Smart, sustainable & inclusive growth	Social and territorial cohesion	Health, and economic, social and institutional resilience	Policies for the next generation
1.1. Decarbonisation using renewable hydrogen in particular	●		●		○	
1.2. Climate-friendly mobility	●		●			
1.3. Climate-friendly renovation and construction	●		○	○		
2.1. Data as the raw material of the future	○	●	●		○	
2.2. Digitalisation of the economy	○	●	○	○	○	○
3.1. Digitalisation of education		●	●	●	○	●
4.1. Strengthening social inclusion		○	○	●		●
5.1. Strengthening a pandemic-resilient healthcare system		●	●	○	●	
6.1. Modern public administration		●	○	○	●	
6.2. Reducing barriers to investment	○	○	○	●	○	○
7.1. REPowerEU	●	○	○	○		○

Taking into consideration all reforms and investments envisaged by Germany, its modified RRP continues to represent, to a large extent, a comprehensive and adequately balanced response to the economic and social situation, thereby contributing appropriately to all six pillars referred to in Article 3 of the RRF Regulation, taking the specific challenges and the financial allocation of Germany into account. This would warrant a rating of A under the assessment criterion 2.1 in Annex V to the RRF Regulation.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) that the plan represents a comprehensive and adequately balanced response to the economic and social situation, thereby contributing appropriately to all six pillars referred to in Article 3 of the RRF Regulation, taking the specific challenges and the financial allocation of Germany into account, as reflected in the previous Staff Working Document (SWD(2021)163 final).

3.2. Link with country-specific recommendations and the European Semester

The modifications to Germany's RRP confirm and strengthen the previous assessment that the RRP is contributing to effectively addressing all or a significant subset of the country-specific recommendations addressed to Germany. As the maximum financial contribution for Germany has been adjusted upwards, all 2022 and 2023 country-specific recommendations are considered in the overall assessment.

The modified RRP includes an extensive set of mutually reinforcing reforms and investments that contribute to effectively addressing a significant subset of the economic and social challenges outlined in the country-specific recommendations addressed to Germany by the Council in the context of the European Semester. This applies in particular to reducing investment bottlenecks and modernisation of the public administration as well as reforms and investments to accelerate the green and digital transition. It also contributes to addressing challenges related to education, labour market participation, labour taxation and social policy. This composition is not altered by the modified RRP.

The addition of the REPowerEU chapter will contribute to reinforcing the ambition of the plan as regards the relevant CSRs related to the energy transition. Stepping up the programme of federal funding for energy-efficient measures in buildings through REPowerEU contributes to increase the energy efficiency of buildings, allows for a diversification of energy sources and is in line with the country-specific recommendations 2022.4 as well as 2023.4 focusing on reducing overall reliance on fossil fuels as well as improving energy efficiency. Furthermore, the promotion of climate-friendly freight transport through including the promotion of the purchase of climate friendly commercial vehicles and associated refuelling and charging infrastructure is in line with country-specific recommendation 2023.4 to step up energy efficiency in the transport sector. Facilitating planned hydrogen infrastructure projects through a digital platform to accelerate planning and approval of hydrogen projects addresses challenges raised in country specific recommendations 2022.4 as well as 2023.4 reducing reliance on fossil fuels as well as diversifying energy supply and routes. The two additional reforms included in REPowerEU aimed at the expansion of wind energy offshore and on land address issues raised in country-specific recommendations 2022.4 as well as 2023.4 related to slow and complex permitting procedures as major bottlenecks to speed up the deployment of renewable energies in Germany.

Taking into consideration the reforms and investments envisaged by Germany, its modified recovery and resilience plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the country-specific recommendations, or challenges in other relevant documents officially adopted by the Commission under the European Semester, and the modified recovery and resilience plan represents an adequate response to the economic and social situation of Germany. This would warrant a rating of A under criterion 2.2 in Annex V to the RRF Regulation

3.3. Growth potential, job creation, economic, institutional and social resilience, European Pillar of Social Rights, mitigating the impact of the crisis, and social territorial cohesion and convergence

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) and the modified plan does not alter the plan's impact on the growth potential, job creation, and economic, social and institutional resilience of Germany, on contributing to the implementation of the European Pillar of Social Rights, including through the promotion of policies for children and youth, and on mitigating the economic and social impact of the COVID-19 crisis, thereby enhancing the economic, social and territorial cohesion and convergence within the Union.

3.4. The principle of 'do no significant harm'

The modified German recovery and resilience plan including the REPowerEU chapter is expected to continue to ensure that no measure included in the plan does significant harm to environmental objectives, within the meaning of Article 17 of the Taxonomy Regulation.

The modified plan assesses compliance with the 'do no significant harm' (DNSH) principle following the methodology set out in the Commission's technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation (2021/C58/01). The assessment is done systematically for each modified reform and investment following the two-step approach. The assessment concludes that for all modified measures, there is either no risk of significant harm or, where a risk is identified, a more detailed assessment is performed demonstrating the absence of significant harm.

As regards the REPowerEU measures (e.g. on heavy-duty vehicles, building renovations, investment on a digital end-to-end platform to accelerate planning and approval, and two reforms in the field of wind energy), they are largely unproblematic from the point of view of the DNSH principle, and none requires a DNSH derogation. In the field of circular economy, the DNSH self-assessment for the scaled-up building renovation measure notably contains indications on the fact that at least 70 % (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for re-use, recycling and other material recovery, and the DNSH self-assessment for the heavy-duty vehicles measure contains indications of the fact that beneficiaries are subject to the national End-of-Life Vehicles Directive (*Altfahrzeugverordnung*) and to the national Batteries Act (*BattG*).

Where needed, the requirements of the DNSH assessment are enshrined in the design of a measure and specified in a milestone or target of this measure. This ensures that any disbursement for the respective measures can only be made once compliance with the DNSH principle is ensured.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) that no measure for the

implementation of reforms and investment projects included in the plan is expected to do a significant harm to environmental objectives within the meaning of Article 17 of Regulation (EU) No 2020/852 (the principle of ‘do no significant harm’), as reflected in the previous SWD (2021) 163 final.

3.5. Green transition

All the measures in the REPowerEU chapter are expected to significantly contribute to the green transition, including biodiversity, or to addressing the challenges resulting therefrom, as well as to the achievement of the Union 2030 climate and energy targets and of EU climate neutrality by 2050.

Under the REPowerEU chapter, one upscaled investment should significantly contribute to reduced primary energy consumption and increased energy savings in many public and private buildings and enterprises. One investment should promote climate-friendly freight transport, targeting a substantial reduction in emissions by incentivising the adoption of electrically powered vehicles and supporting the necessary infrastructure development, and another investment should facilitate planned hydrogen infrastructure projects, all in the context of national renewable energy and hydrogen strategies aiming to increase the share of renewable electricity and green hydrogen. The expansion of wind energy, both offshore and on land, is further introduced via two reforms to reduce dependency on fossil fuel imports and accelerate progress towards climate neutrality. Legislative reforms are proposed to streamline permitting procedures, ensuring sustainable and responsible utilisation of renewable energy resources. Also, measures in the REPowerEU chapter reinforce green transition elements of the original plan. For example, hydrogen infrastructural projects of the original plan (component 1.1) could be accelerated through the digital permitting platform added via the REPowerEU chapter.

All the new or modified measures are expected to have a long-term impact.

Climate target

On the basis of the assessment guidelines provided for sub-criterion 5b, the measures in the modified RRP (including the REPowerEU chapter) supporting climate change objectives account for 49.5% of the plan’s maximum financial contribution (i.e. above the 37% required), based on the methodology for climate tracking set out in Annex VI to the RRF Regulation. Components 1.1 (Decarbonisation using renewable hydrogen in particular), 1.2 (Climate-friendly mobility), and 1.3 (Climate-friendly renovation) make particularly important contributions to the climate target. Additionally, the proposed measures within the REPowerEU chapter supporting climate change objectives account for 48.7% of the REPowerEU chapter, based on the methodology for climate tracking set out in Annex VI to the RRF Regulation.

The nature and extent of the proposed modifications to Germany’s recovery and resilience plan do not have a material impact on the previous assessment (rating of A) of the contribution of the

plan to the green transition and to the climate target, as reflected in the previous SWD (2021) 163 final.

3.6. Digital transition

Based on the methodology set out in Annex VII to the RRF Regulation, the contribution to digital objectives accounts for 47.5% of the modified plan's maximum financial contribution (excluding the REPowerEU chapter) still well above the required minimum threshold of 20%. The modifications proposed to the original plan lead to a slight reduction in the percentage of the RRP's total allocation supporting digital objectives, from 48.1% to 47.5%, notably given the reduction in the total allocation to apprentice support. The contribution to the digital transition continues to come from x components of the Plan.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have an impact on the previous assessment (Rating of A) of the plan's contribution to the digital transition or to address the challenges resulting from it and ensures that at least 20% of its total allocation (excluding the measures in the REPowerEU chapter) contribute to support digital objectives, as reflected in SWD (2021) 163 final.

3.7. Lasting impact of the plan

The modified recovery and resilience plan, under the REPowerEU chapter, includes new measures that, in addition to the existing measures, are expected to have lasting positive effects on the German economy and boost its green transition. The REPowerEU measures are expected to contribute to the green transition by generally reducing the reliance on fossil fuels, by increasing energy savings in many public and private buildings and enterprises and thus contributing to a more energy efficient building stock, by promoting climate-friendly freight transport and thus contributing to a more climate friendly vehicle stock, by facilitating planned hydrogen infrastructure projects and by paving the way for further deployment of wind energy, both offshore and on land.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) of the lasting impact of the measures proposed by Germany, as reflected in the previous SWD (2021)163.

3.8. Milestones, targets, monitoring and implementation

The original assessment regarding ensuring effective monitoring and implementation of the RRP remains mostly the same. The existing monitoring and control system for the updated German RRP enables an adequate monitoring of the plan's implementation. The structure tasked with the implementation, monitoring and reporting of the RRP is still in place, the coordination

unit in the Federal Ministry of Finance and the line Ministries continue to have clearly assigned responsibilities and adequate structure for implementing the plan, monitoring progress and reporting. The overall arrangements proposed by Germany in terms of organisation of the implementation of the reforms and investments remain credible. The milestones and targets that accompany the new and modified measures, are clear and the proposed indicators for those milestones and targets are relevant, acceptable, and robust.

At the same time, in its audit on the protection of the financial interests of the Union (PFIU) the Commission found shortcomings regarding the staffing level of the coordinating body, and noted that even if the coordinating body created an overview of measure implementation, it still has difficulties to closely monitor and control the implementing bodies' activities, potentially emerging risks or hurdles related to the particular measures.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) and the modified plan does not alter the adequacy of the arrangements proposed by Germany to ensure the effective monitoring and implementation of the plan.

3.9. Costing

Germany provided detailed information on the estimated costs of the measures in the current RRP that are affected by costing changes, as well as for the new measures in the REPowerEU chapter that entail a cost. Germany provided detailed costing information for the measures in the current RRP measures whose modifications entailed a new cost assessment, as well as the scaled up or new investments in the REPowerEU chapter. The two reforms included in the REPowerEU chapter do not include RRF-eligible costs. The estimated costs of the modified and new measures are reasonable and in line with the nature and type of the envisaged investments. Most of the calculations are clearly explained and well substantiated by supporting documents, allowing to identify the methodology used.

The assessment of the cost estimates and inherent supporting documents shows that the majority of the costs of the new measures and of the existing measures whose modifications entailed a new cost assessment are well justified, reasonable and plausible. None of the measures assessed include costs covered by existing or planned EU financing and are commensurate to the expected economic and social impact of the envisaged measures. Moreover, the changes in the cost estimates of the other modified measures are justified and proportional, commensurate to the expected national economic and social impact.

Reasonable costs

Germany accompanied its cost estimates with actual data and supporting evidence for unit cost estimates, together with adequate explanation for the calculation methodology. Overall, the assumptions used by Germany to estimate the costs of the new measures and of the existing

measures whose modifications entailed a new cost assessment provide a reasonable explanation of the key cost drivers of the measures. The calculations are generally clearly spelled out allowing to identify the methodology used.

The new measures included in the REPowerEU chapter and the existing measures whose modifications entailed a new cost assessment, comply with the eligibility criteria set out in the RRF Regulation. All costs are incurred for reforms and investments after February 2020 and after February 2022 for the measures in the REPowerEU chapter.

The reasonability of the costs of the other modified measures has not decreased from the initial assessment of these measures, as the changes in the cost estimates for all of them are duly justified and proportional. In the case of measures being modified under Article 21(1) of Regulation (EU) 2021/241 for cost-related reasons, sufficient information has been provided to justify the objective circumstances and the proportionality of the changes in the cost estimates or related target. In this context, the reasonability of the cost estimates, taking into account the new measures in the REPowerEU chapter, and the modified measures, has been established to a medium extent.

Plausible costs

The amount of the estimated costs of new measures in the REPowerEU chapter and the existing measures whose modifications entailed a new cost assessment is in line with the nature and type of the envisaged reforms and investments. For most of these measures, Germany provided supporting documents and links to online sources to substantiate the cost estimates.

Most of the estimated costs of the new measures and the two measures where the level of required implementation has been changed are in line with the nature and the type of the envisaged investments. Overall, the cost estimates of the new measure and the measures where the level of required implementation has been increased, are assessed as plausible. The plausibility of the costs of the other modified measures has not decreased from the initial assessment of these measures, as the changes in the cost estimates for all of them are duly justified and proportional. Sufficient information has been provided to justify the objective circumstances and the proportionality of the changes in the cost estimates or related target.

No double Union financing

Germany has indicated that the costs of any modified or new measure to be financed by the RRF will not be funded by other Union funding sources. Furthermore, the set-up to prevent, detect and correct double funding has not been altered by the modification of the plan.

Commensurate and cost-efficient costs

The estimated total costs of the updated RRP are in line with the principle of cost-efficiency and are commensurate to the expected national economic and social impact. The updated RRP, including the new investments, new reforms and the modified measures, is expected to effectively address a significant subset of challenges identified in the country-specific recommendations (CSRs). In particular the increased efforts in building renovation, and more broadly the REPowerEU chapter are expected to contribute to reinforcing the ambition of the RRP as regards

the relevant country-specific recommendations addressed in the field of energy and the green transition.

The justification provided by Germany on the amount of the estimated total costs of the modified recovery and resilience plan is to a medium extent reasonable, plausible, in line with the principle of cost-efficiency and is commensurate to the expected national economic and social impact.

Germany provided sufficient information and evidence that the amount of the estimated cost of the reforms and investments of the modified recovery and resilience plan to be financed under the Facility is not covered by existing or planned Union financing.

This would warrant a rating of B under the assessment criterion 2.9 of Annex V to the RRF Regulation.

3.10. Controls and audit

The previous assessment on the adequacy of the control and audit arrangements presented by Germany in the RRP to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the Facility, including the arrangements aimed to avoid double funding from the Facility and other Union programmes, had concluded that these arrangements are adequate. This warranted a rating of A under the assessment criterion 2.10 of Annex V to the RRF Regulation.

The modifications to the original plan as such do not affect the original assessment. However, in the context of the modification of the German RRP, its audit and control system needs to be reassessed on the basis of criteria 2.10 of Annex V of the RRF Regulation.

Robustness of internal control system and distribution of roles and responsibilities

The original assessment finding that the internal control system is robust, with a clear distribution of roles and responsibilities, and the bodies are independent in their functioning, remains the same.

Adequacy of control systems and other relevant arrangements

The original assessment regarding the adequacy of the control systems and other relevant arrangements remains mostly the same.

Adequacy of arrangements to avoid double EU funding

The original assessment regarding the adequacy of the control systems and other relevant arrangements remains mostly the same.

Legal empowerment and administrative capacity of control function

The original assessment regarding the adequacy of the control systems and other relevant arrangements remains mostly the same.

Conclusion

The chapter of the plan on audit and control and the additional information provided gives a rather complete description of the arrangements for the implementation and control of Germany's RRP. The chapter provides the details for all the entities and gives reasonable assurance that there is a sound structure in place to monitor, implement and control the allocated funds from the RRF.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) and the modified plan does not alter the adequacy of the control and audit arrangements proposed by Germany.

3.11. Coherence

The modified RRP presented by Germany is structured along ten coherent components, which support the common objectives of stimulating the recovery of the German economy, addressing long-lasting structural challenges – that have become more acute during the crisis. Furthermore, the investments and reforms are embedded in a coherent framework to make the German economy fit for the future, particularly as regards the green and digital transition, innovation, competitiveness, and social cohesion. The modification of the RRP regards three components, and brings an additional component (7.1.), the REPowerEU chapter. Each component is built around consistent packages of both reforms and investments, with mutually reinforcing or complementary measures as explained hereafter.

Mutually reinforcing measures

The modifications to the RRP do not negatively affect the components' coherence, nor the coherence of the plan as a whole. They do not alter the way they are mutually-reinforcing. The additional REPowerEU chapter is fully in line with the measures deployed under the initial RRP to support the green transition and further reinforces the ambition of some of them. In particular, the scope on decarbonization and energy efficiency is broadened and enhanced with the scale-up of the energy efficiency measure for the renovation of buildings. The promotion of the purchase of climate-friendly commercial vehicles strengthens the focus on sustainable transport. The digital platform to accelerate planning and approval of hydrogen projects as well as the two laws on the expansion of wind energy should contribute to enhancing the deployment of renewable energies, reinforcing and widening this focus already present in the initial RRP. The modifications do not have contradictory aims or possible negative effects on one another.

Complementarity of measures

The modifications made to three of the existing components of the RRP do not negatively alter the complementarity of the components. The additional component addressing the REPowerEU objectives brings a new complementarity layer as it includes measures that aim at reinforcing the reduction of greenhouse gas emissions further in addition to promoting renewable energy. At the

level of the modified plan, all components pursue complementary aims – with no contradictory aims.

The nature and extent of the proposed modifications to Germany's recovery and resilience plan do not have a material impact on the previous assessment (rating of A) of the coherence of the actions proposed by Germany, as reflected in the previous SWD (2021)163.

3.12. REPowerEU

The measures in the REPowerEU chapter will directly contribute to promoting the decarbonisation of buildings through refurbishment measures and the installation of renewable heating systems. They will also promote climate-friendly freight transport, targeting a substantial reduction in emissions by incentivising the adoption of electrically powered vehicles and supporting the necessary infrastructure development. In addition, they will facilitate planned hydrogen infrastructure projects which has been identified as crucial for meeting decarbonization goals. The expansion of wind energy, both offshore and on land, is further introduced to reduce dependency on fossil fuel imports and accelerate progress towards climate neutrality. Legislative reforms are proposed to streamline permitting procedures, ensuring sustainable and responsible utilisation of renewable energy resources.

The upscaled energy efficiency measure, the investment in a support programme for light- and heavy-duty zero-emission transport, the investment in a digital permitting platform and the reforms to accelerate the deployment of onshore and offshore wind energy power plants will directly contribute to the second REPowerEU objective of boosting energy efficiency in buildings, decarbonising industry, and increasing the share of renewable energy. Also, more in detail, the upscaled investment in building renovation (federal funding for energy-efficient buildings) will contribute to the fourth REPowerEU objective on incentivising reduction of energy demand. The investment in a support programme for light- and heavy-duty zero-emission transport and the reforms in onshore and offshore wind energy will contribute to the fifth REPowerEU objective of addressing internal and cross-border energy transmission and distribution bottlenecks, supporting electricity storage and accelerating the integration of renewable energy sources, and supporting zero-emission transport and its infrastructure, including railways. The investment in a digital permitting platform to speed up building Germany's core hydrogen grid will contribute to the sixth REPowerEU objective on supporting the other objectives through an accelerated requalification of the workforce towards green and related digital skills, as well as through support of the value chains in critical raw materials and technologies linked to the green transition.

As explained in section 3.5., the REPowerEU measures are expected to contribute to the green transition by increasing energy savings in many public and private buildings and enterprises, by promoting climate-friendly freight transport, by facilitating planned hydrogen infrastructure projects and by paving the way for further deployment of wind energy, both offshore and on land.

All the above measures are expected to contribute to the REPowerEU objectives in coherence and complementarity with a number of other reforms and investments promoted under the RRP, mainly under Components 1.1., 1.2. and 1.3, as well as under other national initiatives or EU funded programmes such as programmes co-funded by the Cohesion Policy and the Just Transition Funds.

Finally, relevant stakeholders (Länder, social partners, welfare organisations and environmental associations) have been consulted on the REPowerEU chapter, and their feedback has been integrated into the draft REPowerEU chapter. To ensure ownership by the relevant actors, it is crucial to involve all local authorities and stakeholders concerned, including social partners, throughout the implementation of the investments and reforms included in the modified RRP including the REPowerEU chapter.

Taking into consideration the assessment of all the measures envisaged in the REPowerEU chapter, the chapter is expected, to a large extent, to contribute effectively to energy security, the diversification of the Union's energy supply, an increase in the uptake of renewables and energy efficient, an increase of energy storage capacities or the necessary reduction of dependence on fossil fuels before 2030. This would warrant a rating of A under criterion 2.12 of Annex V to the RRF Regulation.

3.13. Cross-border or multi-country dimension or effect

Although no measures of direct multi-country dimension, in terms of cooperation and/or scope, are included in this chapter, most of the measures do have a cross-border effect since they contribute to the reduction of the demand and dependency on fossil fuels. In particular, the scale-up of measure 1.3.3 concerning building renovation will contribute to reducing Germany's fossil energy needs. A direct cross-border impact is also anticipated with the reform of the *Wind Energy on Land Act* and the *Offshore Wind Energy Act*, as the additional electricity from wind energy can influence the demand-supply balance across several countries and affect cross-border flows. Therefore, the measures can be considered as having a positive cross-border effect as established in the Commission's guidance in the context of REPowerEU. The total estimated costs of these measures represent 89.6%% of the total allocation available for the REPowerEU chapter, which significantly exceeds the 30% requirement set out in Article 18 4 (h) of the Regulation 2021/241 establishing the RRF.

Taking into consideration the assessment of all the measures envisaged in the REPowerEU chapter, the measures in the chapter are expected, to a large extent, to have a cross-border or multi-country dimension or effect. This would warrant a rating of A under criterion 2.13 of Annex V to the RRF Regulation.

REPowerEU measure with cross-border or multi-country dimension or effect	Costs (EUR million)	Contribution to the target in % of the REPowerEU chapter
7.1.1 Scale-up of measure 1.3.3 Building renovation	2 090	85.5%
7.1.3 Digital platform to accelerate planning and approval	99	4.0%
7.1.4 Reform: Wind Energy on Land Act	0	NA
7.1.5 Reform: Offshore Wind Energy Act	0	NA
Total	2 189	89.5%

ANNEX I: Climate tracking and digital tagging⁴

Measure ID	Measure/Sub-Measure Name	Budget (EUR m)	Climate		Digital	
			Int. Field	Coeff.	Int. Field	Coeff.
1.1.1.1	Hydrogen projects within the framework of IPCEIs: part 1	500	022	100%		
1.1.1.2	Hydrogen projects within the framework of IPCEIs: part 2	500	027	100%		
1.1.1.3	Hydrogen projects within the framework of IPCEIs: part 3	500	033	100%		
1.1.2	Funding programme for decarbonisation in industry	449.3	022	100%		
1.1.3	Pilot scheme for climate action contracts based on the principle of Carbon Contracts for Difference	550	027	100%		
1.1.4	Project-related climate protection research	50.4*	022	100%		
1.1.5	Flagship projects for research and innovation in the context of the National Hydrogen Strategy	588.2*	022	100%		
1.1.6	Federal support for efficient heat networks (BEW)	570	034bis0	100%		
1.2.1	Support for the construction of charging infrastructure	960.1	077	100%		
1.2.2.1	Funding for the development of electromobility: R & D, mobility concepts	42*	022	100%		
1.2.2.2	Funding for the development of electromobility: zero-emission vehicles	21*	n/a**	100%		
1.2.3.1	Support for the replacement of the private vehicle fleet: zero-emission vehicles	2 764	n/a**	100%		
1.2.3.2	Support for the replacement of the private vehicle fleet: hybrid vehicles.	1 296	n/a**	40%		
1.2.4	Extension of the initial registration period for granting the ten-year tax exemption for purely electric vehicles	295	n/a**	100%		
1.2.5	Support for purchases of buses with alternative propulsion	1 085	na**	100%		
1.2.6.1	Support to promote alternative rail propulsion: electric rolling stock	182	072bis	100%		
1.2.7.1	Promotion of the industries involved in hydrogen and fuel cell applications in transport: part 1	229.4*	022	100%		
1.2.7.2	Promotion of the industries involved in hydrogen and fuel cell applications in transport: part 2	229.4*	n/a**	100%		
1.3.2	Municipal living labs for the energy transition	57	025	40%		
1.3.3.1	Building renovation: federal funding for energy-efficient buildings: medium-depth level renovations	2 500	025bis	100%		

⁴ While the estimated cost of Germany's recovery and resilience plan exceeds the total allocation of non-repayable financial support to Germany, Germany will ensure that all spending related to the measures mentioned in this table as contributing to climate objectives are fully financed by the funds from the Recovery and Resilience Facility.

Measure ID	Measure/Sub-Measure Name	Budget (EUR m)	Climate		Digital	
			Int. Field	Coeff.	Int. Field	Coeff.
1.3.3.2	Building renovation: federal funding for energy-efficient buildings: individual renovation measures	1 595	025	40%		
2.1.1.1	Innovative data policy for Germany: overall strategy high-performance computing	21*			021quater	100%
2.1.1.2	Innovative data policy for Germany: ideas competition and piloting of data fiduciaries	45.4*			009bis	100%
2.1.1.3	Innovative data policy for Germany: research network depersonalisation	37.8*			009bis	100%
2.1.1.4	Innovative data policy for Germany: support programme anonymisation	25.2*			009bis	100%
2.1.1.5	Innovative data policy for Germany: National Research Data Infrastructure (<i>Nationale Forschungsdateninfrastruktur</i>) and data literacy	50.4*			108	100%
2.1.1.6	Innovative data policy for Germany: PhD programme in data sciences	5.5*			108	100%
2.1.1.7	Innovative data policy for Germany: incentives for the after-use of data	4.2*			108	100%
2.1.1.8	Innovative data policy for Germany: long-term competence monitoring	8.0*			108	100%
2.1.1.9	Innovative data policy for Germany: data literacy courses for students	8.8*			108	100%
2.1.1.10	Innovative data policy for Germany: toolbox data literacy	8.4*			108	100%
2.1.1.11	Innovative data policy for Germany: innovation process ‘architectures, institutions and spaces for the data society’	6.7*			108	100%
2.1.1.12	Innovative data policy for Germany: establishment of data cooperations	11.3*			011	100%
2.1.1.13	Innovative data policy for Germany: data literacy in the federal administration: data laboratories, Chief Data Scientists and competence building	200.8*			108	100%
2.1.2	IPCEI microelectronics and communication technologies	1 500			021quater	100%
2.1.3.1	IPCEI Next Generation Cloud Infrastructure and Services (IPCEI CIS): emission reduction and energy efficiency criteria	375	055bis	40%	021quater	100%
2.1.3.2	IPCEI Next Generation Cloud Infrastructure and Services (IPCEI CIS)	375			021quater	100%
2.2.1.1	Vehicle manufacturer/supply industry investment programme: digitalisation of production as a boost for productivity and resilience: greenhouse gas emission reduction or energy efficiency criteria	650	010ter	40%	010ter	100%
2.2.1.2	Vehicle manufacturer/supply industry investment programme: digitalisation of production as a boost for productivity and resilience	427.1			010ter	100%
2.2.1.3	Vehicle manufacturer/supply industry investment programme: new innovative products as the key to vehicles and	392.67			009bis	100%

Measure ID	Measure/Sub-Measure Name	Budget (EUR m)	Climate		Digital	
			Int. Field	Coeff.	Int. Field	Coeff.
	mobility of the future - automated driving					
2.2.1.5	Vehicle manufacturer/supply industry investment programme: finding joint solutions, building regional innovation clusters	232.4			019	40%
2.2.2	Federal programme 'Building continuing education and training networks (CET networks)'	31.9*			016	40%
2.2.3	Digitalisation and Technology Research Centre of the Bundeswehr (dtec.bw)	588.2*			009bis	100%
2.2.4	Promoting the digitalisation of rail by replacing conventional interlocking/fast-track programmes to speed up the roll-out of the 'Digital Rail Germany' (SLP)'	500	070	40%	070	100%
3.1.1	Investment programme for teacher devices	420.2*			012	100%
3.1.2	Education platform	529.4*			012	100%
3.1.3	Educational centres of excellence	172.3*			108	100%
3.1.4	Modernisation of the Federal Armed Forces' educational and training facilities	84*			012	100%
4.1.3	Apprenticeships support	282			099	40%
4.1.5	Digital pension overview	28.8*			011	100%
5.1.1	Strengthening the digital and technical resources of the public health service	684*			011	100%
5.1.2	Programme to future-proof hospitals	3 000			095	100%
6.1.1	European identity ecosystem	168.1*			011	100%
6.1.2	Digitalisation of the administration – implementation of the Online Access Act	2 521*			011	100%
6.1.3	Digitalisation of the administration – modernisation of registers	231.1*			011	100%
7.1.1	Scale-up: Building renovation: federal funding for energy-efficient buildings: individual renovation measures	2 090	025	40%		
7.1.2.1	Support programme for light- and heavy-duty zero-emission transport: vehicles	117.1	n/a**	100%		
7.1.2.2	Support programme for light- and heavy-duty zero-emission transport: electric recharging and hydrogen refueling stations	138.7	077	100%		
7.1.3	Digital platform to accelerate planning and approval	99	033	100%	011	100%

Note: Cells with green shading reflect changes compared to the staff working document adopted in June 2021. Changes to measure 1.1.6 and measure 1.2.1 as well as measure 1.2.3 were explained in [SWD\(2023\) 371 final](#). Changes to measure 1.3.3, measure 4.1.3 and component 7.1 are explained in the current staff working document.

* Budget figures are rounded to hundred thousands. The table shows the cost of the measures without VAT. For most measures this equals the cost included in the recovery and resilience plan. However, for measures marked with an asterisk (*), Germany indicated that their cost may include VAT, and in this table the cost is shown while taking away the full amount of potential VAT for these measures (assuming that the maximum VAT rate of 19% fully applies). For the original plan in 2021 Germany submitted two cost estimates. Using the same categories, the amended RRP has a gross value of EUR 33,777,845,061 that includes VAT for some measures, while a net value of at least EUR 32,346,796,674 excludes VAT.

** The 'Methodology for climate tracking' annexed to the Recovery and Resilience Facility Regulation does not set out intervention fields that would allow for climate or environmental tracking of electric vehicles or plug-in hybrid vehicles, except for vehicles for

urban transport falling under intervention field 074. According to Article 18(4)(e) of the Regulation, the methodology should however 'be used accordingly for measures that cannot be directly assigned to an intervention field listed in Annex VI'. In this context, the Commission has applied a 100% climate contribution coefficient for zero-emission vehicles of all categories (this includes battery electric and fuel cell/hydrogen-powered vehicles); a 40% climate contribution coefficient for plug-in hybrid light-duty vehicles; and, in line with the criteria under the Taxonomy Regulation, a 100% climate coefficient for low-emission heavy-duty vehicles.

*** While the estimated cost of Germany's recovery and resilience plan exceeds the total allocation of non-repayable financial support to Germany, Germany will ensure that all spending related to the measures mentioned in this table as contributing to climate objectives are fully financed by the funds from the Recovery and Resilience Facility.

**** Reforms and investments in the REPowerEU chapter are not taken into account when calculating the plan's contribution to the digital target requirement set by Regulation (EU) 2021/241.