Council of the
European Union

Brussels, 9 February 2021
(OR. en)

11885/1/20
REV 1

ENER 346
CLIMA 239
COMPET 469
RECH 369
AGRI 326
ENV 602

COVER NOTE

No. Cion doc.:	SWD(2020) 900 final/2
Subject:	COMMISSION STAFF WORKING DOCUMENT **Assessment of the final national energy and climate plan of Belgium**

Delegations will find attached document SWD(2020) 900 final/2.

Encl.: SWD(2020) 900 final/2

EUROPEAN
COMMISSION

Brussels, 8.2.2021
SWD(2020) 900 final/2

CORRIGENDUM
This document corrects document SWD(2020) 900 final of 14.10.2020.
- Section 3: the plan was missing a sentence on GHG – now added in the SWD. "The integration of the circular economy roadmap and its interactions with GHG emission reductions."
- Modifications are introduced in Annex 1 of the report, regarding specifically values and annotations in tables 1 and 2.
- Minor editorial changes throughout the document.
The text shall read as follows :

COMMISSION STAFF WORKING DOCUMENT

Assessment of the final national energy and climate plan of Belgium

Table of contents

1. SUMMARY

Belgium's final integrated national energy and climate plan (NECP)[1] is difficult to analyse as it does not follow the template provided in the Regulation on the Governance of the Energy Union and Climate Action.

The plan sets a 2030 target for non-Emission Trading System (ETS) **greenhouse gas (GHG) emission** reductions. This is in line with the target of -35% compared to 2005 set in the Effort Sharing Regulation (ESR), contributing to the overall non-ETS EU level reduction target of -30%. Adopted policies show a gap of 23 percentage points to the Belgian ESR target. With additional measures, the gap would reduce to 0.6 million tonnes CO2 eq., with varying contributions from the different regions (Wallonia -36.8%, Brussels Capital Region -39.4% and Flanders -32.6%). Belgium expresses its intention to make use of EU-ETS flexibility to the amount of 1.86 %. The LULUCF (land use, land use change and forestry) sector is expected to remain a net sink over the period up to 2030. The adaptation objectives stated in the NECP are consistent with the national adaptation plan.

The national long-term strategy does not set a reduction target, but estimates the accumulated federated entity-specific measures in the non-ETS sectors to result in 85-87% domestic reductions by 2050 compared to 2005.

Belgium lowers its **renewable** energy contribution to the EU target in the final plan compared to the draft plan. The contribution is now 17.5% of gross final energy consumption in 2030. This level of ambition is considered as unambitious and is below the indicative share of 25% by 2030 that results from the formula in Annex II to Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action (the Governance Regulation)[2]. Belgium also expects to remain below the 2020 target for their baseline for the 2020-2030 renewable energy trajectory. Regarding the use of renewable energy in heating and cooling, the average increase is lower than the expected 1.3 and 1 percentage point annual average increase calculated for the periods of 2021 to 2025 and 2026 to 2030 respectively.

For **energy efficiency**, Belgium's contribution to the EU target amounts to 42.7 Mtoe for primary energy consumption and 35.2 Mtoe for final energy consumption by 2030. This is considered of low ambition[3]. While specific policies and measures in the different dimensions of the Energy Union are often based on energy efficiency, this does not appear to be done in a structured manner in accordance with the '**energy efficiency first principle'**. The final plan provides information on certain measures that are implemented and planned to improve the energy efficiency of buildings. Belgium has not yet submitted its federal level long-term renovation strategy[4].

---

1 The Commission publishes this country-specific assessment alongside the 2020 Report on the State of the Energy Union (COM(2020)950) pursuant to Article 13 of Regulation (EU) 2018/1999 on Governance of the Energy Union and Climate Action.

2 The Commission's recommendations with regard to the Member States' renewable ambitions are based on a formula set out in this Regulation. The formula is based on objective criteria.

3 In accordance with the methodology as illustrated in the SWD (2019) 212 final.

4 Belgium (Brussels) and Belgium (Flanders) submitted the long-term renovation strategy pursuant to Article 2a of Directive 2010/31/EU on the Energy Performance of buildings on 10 March 2020 and 3 June 2020. This assessment is only based on the building related elements provided in the final NECP.

In its plan, Belgium does not set quantified objectives for **energy security**. The supply of fossil energies is well diversified. For electricity, Belgium has quantified the need for flexibility after the nuclear phase out, and has designed a technology-neutral capacity remuneration mechanism. Import dependency is expected to increase from 71% in 2020 to 86% in 2030.

Regarding the **internal energy market**, the final plan lacks specific policy objectives and measures, in particular related to the non-discriminatory participation of renewable energy, demand-response, storage, aggregation, real-time price signals, smart grids, consumer protection and competition of the retail energy market. The electricity **interconnection** level that is expected by 2030 is 33%.

In terms of national objectives related to **research, innovation and competitiveness**, the final NECP includes specific objectives and funding targets for a number of energy/climate related programmes in federal and regional entities. Cumulated targets are not provided for all entities, neither at national level. Their impact is not always described sufficiently to assess to which extent they will contribute to the objectives set in the other dimensions of the plan.

The NECP contains both nation-wide and regional **investment** estimates. The estimated overall amount of private and public investment for the time period 2018 to 2030 is EUR 60 billion for energy domain and EUR 22-27 billion for the transport[5]. The final plan provides, for each region, a preliminary overview of potential sources of financing, although with limited quantitative details, at national, regional and EU level.

A list of **energy subsidies, and in particular fossil fuel subsidies** is not provided in the final plan. Belgium has announced that it will make an inventory of all fossil fuels subsidies and communicate the inventory to the European Commission by the end of 2020. Fossil fuel subsidies have been identified in a recent Commission report on energy prices and costs in Europe[6]. Belgium has indicated in the final plan that it will create an action plan around 2021 for a gradual removal of fossil fuel subsidies.

The plan provides information on the interactions with **air quality** and air emissions policy in particular as regards an integrated assessment of air and climate plans. However, it does not cover the whole of Belgium, and would benefit from including a quantitative perspective.

The final plan considers the **just and fair** transition aspects and provides information on social, employment and skills impacts of a transition to a climate neutral economy, but no information is given on the magnitude of jobs creation. The plan refers to the need for up- and reskilling and the development of new trainings for those that are already in employment as well as for young people. However, detailed and comprehensive information on the planned measures is missing. In addition, there is no information included on how these measures will reach out the most disadvantaged groups, including people with disabilities.

On energy **poverty**, Belgium reports the number of households affected and the measures to reduce energy poverty or ensure that the population at risk is protected, but does not include a quantitative objective for the reduction of energy poverty.

---

[5] Estimated by the Strategic Committee (a group of independent experts), in connection with the National Pact for Strategic Investments (NPSI).

[6] COM(2019) 1 final

There are **several examples of good practices** in Belgium's final NECP, in particular the approach followed to promote regional cooperation. Belgium has spearheaded a reform of the Pentalateral Energy Forum to modify its scope and governance structure for cross-border cooperation in the frame of the NECPs.

The following table presents an overview of Belgium's objectives, targets and contributions under the Governance Regulation[7]:

	National targets and contributions	Latest available data	2020	2030	Assessment of 2030 ambition level
	Binding target for greenhouse gas emissions compared to 2005 under the Effort Sharing Regulation (ESR) (%)	-11%	-15%	-35%	As in ESR
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	9.4% (2018)	13% RED target	17.5%	Unambitious (25% is the result of RES formula)
	National contribution for energy efficiency:	(2018)			
	Primary energy consumption (Mtoe)	46.8	47.8	42.7	Low
	Final energy consumption (Mtoe)	36.3	36.0	35.2	Low
	Level of electricity interconnectivity (%)	24%	24%	33%	N.A.

Sources: European Commission, Energy statistics, Energy datasheets: EU countries; European Semester by country; Belgium's final national energy and climate plan.

2. FINALISATION OF THE PLAN AND CONSIDERATION OF COMMISSION RECOMMENDATIONS

Preparation and submission of the final plan

Belgium **notified** its final national energy and climate plan (NECP) to the Commission on 4 January 2020. In February 2020, Belgium sent an update with a few additions. Belgium is a federal state, where decision-making power is shared between a Federal Government, three Regions (Wallonia, Flanders and the Brussels Capital Region) and three Communities (the Flemish, the French and the German-speaking Community). This division of competence is the

[7] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council.

reason for the lack of an integrated and well-structured final NECP, as federated entities do not report information in a consistent manner.

A **public consultation** on the plan was carried out at national level from 4 June to 15 July 2019. Consultations were also conducted at regional level. Belgium has not submitted a summary of the public's view, but has made available online[8] the detailed results of the consultation, along with a more detailed description of how the results of the national consultation are reflected in the final plan[9]. There is no indication that a strategic environmental impact assessment (SEA) of the NECP has been developed in accordance with Directive 2001/42/EC.

Consideration of Commission recommendations

In June 2019, the Commission issued 10 recommendations based on Belgium's draft plan[10]. Annex II to this staff working document gives a detailed account of how the various elements of the Commission Recommendations are reflected in the final NECP. Overall, the final NECP **partially addresses** the Commission's recommendations. The **main changes** introduced in the final plan are as follows.

On **greenhouse gas emissions in non-ETS sectors**, Belgium has **partially addressed** the recommendation to complement the information on the policies and measures, including in the building and transport sectors, by providing further details of their scope, timing, and expected impacts. In particular, Belgium has provided good coverage of possible policies. The plan puts forward specific measures to tackle emissions from transport and buildings. However, policies and measures are still not described in sufficient detail to enable the reader to understand their exact nature and expected impact, nor is it always clear whether they are existing policies, merely a description of a potential avenue, or measures that have actually been proposed and confirmed. Little quantitative information is provided on the contribution made by an individual measure or cluster of policies and measures to the objectives reported.

On **renewables**, Belgium has only **partially addressed** the recommendation to provide more detailed and quantified information on policies and measures and to significantly raise its ambition for 2030. More specifically, while policies and measures are described in more detail, the level of ambition for 2030 has declined. In particular, the final NECP includes a contribution of 17.5% that is below the contribution of 18.3% indicated in in the draft NECP and significantly below the indicative share of 25% by 2030 that results from the formula in Annex II to the Governance Regulation. However, due to higher energy consumption, renewable energy is set to increase in absolute terms by roughly 3 percentage points more than under the draft plan.

On **energy efficiency**, Belgium has only **partially addressed** the recommendations to increase its ambition by reducing final energy consumption and supporting this increase with additional policies and measures. In particular, the energy efficiency contribution is less ambitious than in the draft plan (the final energy consumption projection is roughly 6% higher compared to the draft NECP). At the same time, Belgium has improved the impact assessment and outlined many new policies and measures across all sectors, with energy efficiency in buildings and transport providing the largest savings. On buildings, the information in the plan includes a first

8 https://www.plannationalenergieclimat.be/fr/enquete-publique

9 https://www.energiepact2050.be/129-17brochure-A4-N.pdf

10 Commission recommendation on the draft integrated national energy and climate plan of Belgium covering the period 2021-2030 – C(2019)4401.

description of measures implemented and envisaged to improve the energy performance of the national building stock. The federal long-term renovation strategy has not been submitted yet[11].

On **energy security**, Belgium has **largely addressed** the recommendation to specify the measures supporting the energy security objectives. In particular, the final plan better outlines the reform of the electricity market linked to the phase-out of the nuclear fleet. It also indicates that Belgium will implement the reforms in its market reform plan under the Electricity Regulation in a timely manner.

On **research, innovation and competitiveness**, Belgium has **partially addressed** the recommendation to clarify the national objectives and funding targets. In particular, Belgium has committed to the European target of at least 3% of GDP spent on R&D (1% public, 2% private) by 2030. The share earmarked for energy/climate is assessed only for the Walloon Region, with a rough estimate being provided for Brussels Region. The 'Smart Specialisation' areas of the federated entities' R&I programmes are consistent with their policies and measures in the other dimensions of the plan. However, the description of some R&I objectives remains general, i.e. not specific enough to be measurable or to assess their impact and contribution to the objectives set out in other dimensions of the plan.

Belgium has **fully addressed** the recommendation to reinforce **regional cooperation**. In particular, more detail has been provided on how countries have cooperated and will continue to do so within the Pentalateral Energy Forum and the North Sea Energy Cooperation.

Belgium has **partially addressed** the recommendation to improve the quantification of **investment needs** and to assess sources of funding. In particular, Belgium's federated entities provided estimations of needs to varying degrees of detail.[12] However, there is no clear correspondence between these need estimates and the measures set out in the final NECP; the robustness of estimation is variable across the entities. The final plan provides for each Region an overview of potential sources of financing. However, no real assessment is made of these sources, taking into account the specific investment needs of the planned policies and measures.

Belgium has **not addressed** the recommendation to list all fossil-fuel energy subsidies and actions undertaken and planned to **phase out energy subsidies, in particular for fossil fuels.** In particular, the list and the plan are not included in the final plan. Belgium committed nonetheless to make an inventory of all fossil fuels subsidies by the end of 2020 and to prepare by 2021 a phase-out action plan.

Belgium has **partially addressed** the recommendation to provide an additional **analysis on air quality.** In particular, the interactions between energy/climate policies and air quality are well described (for all regions) and quantitative targets are set (for Wallonia and the Brussels Capital Region).

Finally, Belgium has **largely addressed** the recommendation to better integrate **just and fair transition aspects**. In particular, the plan refers to the impact of the transition on employment,

[11] Belgium (Brussels) and Belgium (Flanders) submitted the long-term renovation strategy pursuant to Article 2a of Directive 2010/31/EU on the Energy Performance of buildings on 10 March 2020 and 3 June 2020.

[12] Estimated by the Strategic Committee (a group of independent experts) in connection with the National Pact for Strategic Investments (NPSI).

energy poverty and skills. However, for all three topics, the assessment included is rather qualitative in nature, without a quantitative impact assessment.

Links with the European Semester

In the context of the European Semester framework for the coordination of economic policies across the EU and of the country report 2019[13], Belgium received one country-specific recommendation[14] with two sub-parts; one in relation to climate and energy, calling on it to invest in 'sustainable transport, including upgrading rail infrastructure, the low-carbon and energy transition' and one to 'tackle the growing mobility challenges, by reinforcing incentives and removing barriers to increase the supply and demand of collective and low emission transport'. In the 2020 country report[15] adopted on 20 February 2020, the Commission found Belgium had achieved some progress on investment in sustainable transport but limited progress on tackling the growing mobility challenges. The report acknowledges that the Belgian NECP supports the recommendations, but remains abstract in how.

Due to the COVID-19 crisis, the European Semester country-specific recommendations for 2020 addressed Member States' responses to the pandemic and made recommendations to foster economic recovery. In particular, they focused on the need to front-load mature public investment projects as soon as possible and promote private investment, including through relevant reforms, notably in the digital and green sectors. In this context, Belgium received a country-specific recommendation[16] stressing the importance of focusing investment on 'the green and digital transition, in particular on infrastructure for sustainable transport, clean and efficient production and use of energy'.

The Governance Regulation calls on Member States to ensure that their national energy and climate plans take account of the latest country-specific recommendations issued in the context of the European Semester. Belgium's national energy and climate plan has the potential to support implementation of the European Semester recommendations, in particular by identifying investment needs and the financial resources to meet them.

[13] The Annex D to the 2019 Country report also sets out priority investments for the 2021-2027 cohesion policy, substantially contributing to the clean energy transition.

[14] Recommendation for a Council Recommendation on the 2019 National Reform Programme of Belgium and delivering a Council opinion on the 2019 Stability Programme of Belgium, COM(2019) 501 final.

[15] Commission Staff Working Document Country Report Belgium 2020, SWD/2020/500 Final.

[16] Recommendation for a Council Recommendation on the 2020 National Reform Programme of Belgium and delivering a Council opinion on the 2020 Stability Programme of Belgium, COM(2020) 501 final.

3. ASSESSMENT OF THE AMBITION OF OBJECTIVES, TARGETS AND CONTRIBUTIONS AND OF THE IMPACT OF SUPPORTING POLICIES AND MEASURES

Decarbonisation

Greenhouse gas emissions and removals

The final NECP includes Belgium's binding national 2030 target for GHG emissions reduction in sectors outside the EU Emission Trading System **(non-ETS sectors)** (-35 % compared to 2005), as set in the Effort Sharing Regulation (ESR)[17]. Internal effort sharing between the federated entities, which would also include the distribution of access to the different forms of flexibility, was still under preparation at the time of submission and of assessment of the NECP. Operationalisation in the form of quantified annual emission allocations for 2021-2030 varies among regions, with Flanders providing estimates based on an indicative non-ETS-reduction target of -35% and known emission inventories for 2005, 2016 and 2017 complemented with proxy data for 2018.

The NECP estimates that **LULUCF** will remain a net sink between 2021 and 2030. The scenario projects a slight contraction of carbon absorption rates between 2015 and 2020. Yet, over the entire period from 2015 to 2030, sink capacities are projected to increase by 3%. Belgium (along with the Flemish and Walloon regions) commits to the no-debit rule for 2021-2030, using domestic action. However, the NECP does not report any accounted LULUCF emissions as referred to in Regulation (EU) 2018/841. This means that no conclusions can be drawn about the LULUCF commitment for 2030, nor on Belgium's intention to use the flexibility from the Land Use, Land Use Change and Forestry (LULUCF) to the effort sharing sectors..

In absolute numbers, the NECP expects ESR emissions to fall from 78.6 Mt CO2 eq. in 2005 to 52.7 Mt CO2 eq. by 2030. Over the same period, ETS sector emissions are set to fall from 66.6 Mt CO2 eq. in 2005 to 59 Mt CO2 eq. by 2030. The latter value hides a significant projected increase in emissions after 2025, following the planned phase-out of nuclear production, combined with the fact that coal has already been phased out successfully in Belgium.

Achievements in the different regions differ (Wallonia -36.8%, Brussels Capital Region -39.4% and Flanders -32.6%) and collectively, they result in an expected shortfall of 0.6 percentage points by 2030. The Flemish contribution is lower than the -35% included in the draft NECP. Belgium has notified to the Commission that it will make use of **ETS flexibility** amounting to 1.86% for compliance under the ESR.

Concerning Belgium's 2050 objective, there are references to long-term strategies at the level of each federated entity[18].

In the **transport** sector, Belgium expects to reduce emissions by 5.9 Mt CO2eq (23%) by 2030 (by comparison with 2020). This is a reduction of 27% by 2030 compared with 2005. The final plan identifies a broad range of measures in this sector, including, for instance measures to

[17] Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030.

[18] On 19 February 2020 (after submission of the final NECP), Belgium adopted its national long-term strategy, which estimates that the sum of entity-specific measures in the non-ETS sectors results in reductions of 85-87% by 2050, by comparison with 2005.

promote active transport (cycling and walking), tax incentives for clean vehicles and related infrastructure, target dates for the phase-out of conventional fuels, etc. The plan also includes the reductions estimated as a result of some of the individual measures. **Electromobility** and the underpinning charging infrastructure is supported by various fiscal measures such as registration taxes, or linked to the greening of company cars, where the new federal government has set a target date of 2026. The plan also includes measures to reduce emissions from shipping and rail, and some measures to promote the development of alternative fuels for aviation.

In the **building** sector, Belgium expects to reduce emissions by 41% by 2030 compared to 2005. Measures include accelerating renewal rates for old fossil fuel boilers in combination with their progressive phase-out; green heat from different heating technologies; improving the energy performance of new buildings through a revised energy performance certificate; introducing renovation contracts at district level; lowering registration taxes; and providing cheap loans. What is less positive is that the compulsory renovation of buildings five years after every transaction, which was announced in the draft plan, has been replaced by an incentive system[19].

The plan includes contributions and some possible measures in the product use and **fluorinated gas** sector (EU-level policies) and in the **waste** sector. In particular, existing measures in Flanders are designed to reduce F-gas emissions to 1.8 Mton CO_2 equivalent and 1.0 Mton CO_2 equivalent by 2030. Additional measures are described which should cut emissions further to 0.6 Mton CO_2 equivalent by 2030.

In the **agricultural** sector, Belgium expects to reduce emissions by 20% by 2030, compared to 2005. The measures concern focus on emissions from animal husbandry and cultivation, with commitments to reduce emissions from the animal husbandry sector in the Flemish region. The focus is also on production of renewable energy on farm, encouraging the use of solid and liquid biomass, fermentation, PV, solar boilers, heat pumps and biofuels in agricultural machinery. Agroforestry and the planting of woods are mentioned. However, there is limited potential for new afforestation. Management of meadows, **forests** and natural and semi-natural wetlands could be better targeted. The plan addresses synergies between mitigation and adaptation awareness actions.

Important cross-sectoral measures include the ongoing discussions on the introduction of climate-friendly energy taxation by 2021; the integration of the circular economy roadmap and its interactions with GHG emission reductions; an emphasis on spatial planning and urban development as essential instruments in the low-carbon transition; and greening the financial system with a view to stimulating private financing for the climate transition.

The plan recognises the country's vulnerability to climate change and the relevance of climate resilience to achieving mitigation objectives. It refers to the national **adaptation** strategy (NAS) approved in 2010. The objectives stated in the plan are consistent with the NAS. The Brussels Capital Region has announced that it will upgrade its regional adaptation strategy.

Belgium notified its long-term strategy to the Commission on 2 March 2020. The federal strategy is designed to support the regions in their transition to a climate-neutral society with a reduction in GHG emissions and removing carbon through natural sinks. The Flemish region intends to move towards full climate neutrality by 2050, while the Walloon and Brussels-Capital Regions

[19] In the non-residential sector, non-energy-efficient tertiary buildings must still undergo a thorough energy renovation within five years of notarial transfer of full ownership as of 2021.

aim to achieve carbon neutrality by 2050. The long-term strategies address most of the elements required under Article 15 of the Governance Regulation, though some of them only partially.

Renewable energy

The national contribution to the 2030 EU renewable energy target is specified in the plan and the **renewable share** is set at 17.5% of gross final consumption of energy by 2030. This is unambitious; it falls below the share of 25% by 2030 that results from the formula in Annex II of the Governance Regulation. The indicative trajectory shows that, until 2025, Belgium remains below the 2020 baseline; furthermore, by 2025 the overall renewable share will not have reached at least 43% of the total expected increase in the share of renewables for 2030. Due to the missing link to the impact and timeframe of the policies and measures, their consistency with the targets and their credibility cannot be assessed.

In the **electricity** sector, Belgium aims to cover a 37.4% share of its electricity consumption from renewable energy sources by 2030. It is not clear how this target was calculated from the data provided by the federated entities. According to the NECP, the share will be achieved mainly through offshore wind (North Sea - Federal), onshore wind (Flanders and Wallonia) and photovoltaic energy (in all three regions).

For **heating and cooling,** the aggregated share of renewable energy for Belgium is set to reach 11.3%, compared to the expected share of 8% by 2020. The average increase is lower than the expected 1.3 and 1 percentage point annual average increase for 2021-2025 and 2026-2030 respectively, with no detailed information of the constraints being perceived. Although the role of waste heat is mentioned in the different regions, the plan does not specify if it is included in the national heating and cooling renewable share. It is not clear how this target was calculated. The key policies and measures in the heating and cooling sector are biomass and heat pumps.

When setting the **transport** target in the final plan, as mandated in Articles 25-27 of Directive 2018/2001[20], the contributions of all eligible fuels amount to 23.7%. The plan includes a table with the breakdown of the planned aggregated incorporation rates for conventional fuels produced from food and feed crops and advanced biofuels. However, this is not shown in absolute values and does not clearly show the calculation that will enable Belgium to reach 23.7% of renewables in transport by 2030. If the planned biofuels incorporation were not feasible, the plan mentions ‘alternative measures’ without specifying what they are. Furthermore, the amount of electricity expected to be consumed in transport and the split between the amount consumed in road and/or rail is not mentioned.

Energy efficiency

Belgium’s **national contribution to energy efficiency** for 2030 is 42.7 Mtoe (primary energy) and 35.2 Mtoe (final energy consumption), respectively -15% and -12% versus PRIMES2007 projections for 2030. Belgium sets the **cumulative savings** target to be achieved under Article 7 of the Energy Efficiency Directive[21] at the level of 185 TWh (15.9 Mtoe) by 2030 or an average of 3.3 TWh (284 Ktoe) of new annual savings.

The plan provides descriptive information on **policies and measures** beyond 2020 targeting all sectors. Buildings and transport are the sectors most explored, with a full list of new measures

[20] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources.

[21] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency as amended by Directive (EU) 2018/2002.

that nonetheless lack full consistency between federal and regional levels and between regions. These policies and measures are credible, but it is not possible to assess fully whether they are sufficient to meet the target, given the lack of comprehensive and consistent data from the federal and regional governments. It is welcome that all three regional strategies seem to rely on continuing and stepping up existing measures. This should ensure that savings will materialise immediately from 2021 onwards.

Regarding the **buildings sector**, the three regions of Belgium plan to upgrade the energy performance of the whole residential building stock. The targets envisaged (from 85 kWh/m2/year to 100 kWh/m2/year) seem realistic, but they are probably insufficient to decarbonise the building stock by 2050. Moreover, they do not fully reflect the potential of the building sector in Belgium (80% of Belgian building stock was built before energy norms). The Belgian plan presents relevant policies and measures to achieve the targets but could be complemented with other actions removing existing barriers to renovation (e.g. skills in construction sector, building permits). Belgium has not yet submitted its federal level long-term renovation strategy[22].

Energy security

The Belgian NECP states that maintaining high levels of security of supply is a priority in the ongoing transformation of the energy system, with an objective of 37.4% renewable **electricity** and increasing shares of domestic renewable energy of 17.5% in gross final consumption by 2030. When considering risks, the plan does take into account the **plans of other connected Member States**.

As regards **diversification of sources and routes**, Belgium has access to different supply sources of natural gas, both via pipelines and from LNG. However, dependency on energy imports is set to increase from 71% in 2020 to 86% by 2030, mainly as a consequence of changes in the energy mix.

Belgium has confirmed its intention to **phase out nuclear energy by 2025**. An increase in the country's energy dependence is expected after this phase-out. To replace 6 GW of nuclear capacity, the energy production mix is expected to make use of flexible capacity, storage and renewable energy sources. The plan anticipates policies for dismantling the nuclear power plants and for radioactive waste management.

The plan still lacks detailed information on further measures and investments in electricity storage, demand-response and other flexibility measures. It does not include any consideration of cybersecurity in the energy sector. The policies and measures planned are thus not described in enough detail.

The plan does make adequate links with the **emergency plans** for gas, electricity and oil, provided for by applicable sectorial rules.

Internal energy market

The plan states that Belgium is setting an **interconnectivity level** of 33% for 2030, which exceeds the target set at EU level. Currently, the electricity interconnection capacity is 24%. The

[22] Belgium (Brussels) and Belgium (Flanders) submitted the long-term renovation strategy pursuant to Article 2a of Directive 2010/31/EU on the Energy Performance of buildings on 10 March 2020 and 3 June 2020.

plan lists **projects of common interest** in the electricity field which will help reach the declared 2030 electricity interconnection capacity objective.

Given the electricity sector target of 37.4% renewable electricity by 2030, the final NECP lacks a detailed overview of the development of the different sources of **flexibility** that are necessary to integrate the rising share of renewable energy into the electricity system.

The final plan lacks specific policy objectives and measures related to the internal energy market (in particular related to the non-discriminatory participation of renewable energy, demand-response, storage, aggregation, real-time price signals, smart grids, consumer protection and competition of the retail energy market). These measures are not considered to be sufficiently detailed in relation to the achievement of the objectives. Expectations on the development of market concentration also remain to be developed. Finally, the plan provides an inadequate overview of current **market conditions** for gas and/or electricity, in particular as regards levels of competition and liquidity of markets.

Belgium reports the share of the population that experiences **energy poverty**. These figures give estimates for Belgium as a whole, as well as for the different regions. Several measures already exist to counter energy poverty. There is an intention to continue these measures and an intention to refine them, to make them more effective. Existing measures include some designed to mitigate poverty, such as reduced tariffs for gas and electricity for vulnerable consumers, and the installation of digital and smart electricity meters. They also include some that are designed to prevent energy poverty, such as support for renovation of private residences and social housing, or priority support for renovation to benefit vulnerable consumers. These policies and measures are considered credible in relation to the achievement of the target. However, no quantitative objective is provided for the reduction of energy poverty.

Research, innovation and competitiveness

The plan identifies relevant areas where **research and innovation** efforts are focused. Areas of smart specialisation are well described and consistent with their policies and measures spelled-out across the plan. Information is provided on public investment in R&I; these efforts are considered sufficient, although their credibility is limited in relation to the achievement of the target, because R&I objectives remain at a generic level, i.e. they are not specific enough to be measurable. Their impact is not always described sufficiently to assess to which extent they will contribute to the objectives set in the other dimensions of the plan. No information can be found regarding private R&I investment (except for a rough estimate for Wallonia).

The final plan notably reflects Belgium's interest in deploying renewable and low-carbon hydrogen technologies. Hydrogen is considered as an alternative energy carrier for transport in Flanders, and Wallonia has set a target for hydrogen-driven cars (1% of passenger cars by 2030). Belgium provides financing instruments (Wallonia) and is considering setting up a support scheme (Flanders) to stimulate the installation of hydrogen refuelling stations. Belgium is also making financial resources available to support the use of hydrogen trucks.

As regards **competitiveness**, the emphasis at national level is put on competitive energy prices, through the measure named 'Energy Norm' which ensures that energy prices are comparable to those of neighbouring countries. Belgium has set no quantifiable objectives on national competitiveness of specific energy technology sectors, but the regions (mainly Flanders and Wallonia) have identified priority sectors and have developed a policy on clusters to improve their competitiveness. Information on patents is lacking and only Wallonia reports on the number of researchers.

Cooperation with the **strategic energy technology (SET) plan** is taking place through active participation in several Implementation Working Groups and partnering in ERANET projects. It is coordinated among federal and regional entities in the consultation platform BELSET.

4. COHERENCE, POLICY INTERACTIONS AND INVESTMENTS

Belgium has provided a single plan, collecting the information from the entity-specific energy and climate action plans in the final NECP, which is an improvement compared with the draft NECP. Unfortunately, this still falls short of a fully **integrated and coherent** plan that would provide a common vision and a more useful tool to facilitate cooperation between the different authorities in achieving the climate and energy transition.

The final plan refers to the Inter-Federal Energy Pact, which sets out Belgium's ambitions for 2030 and 2050. Such a common vision statement agreed at ministerial level and validated by the respective governments can be considered a logical starting point in achieving an integrated NECP in the Belgian context. On the one hand, the sectoral targets for renewable energy (8 GW solar, 4.2 GW onshore wind and 4 GW offshore wind) have not been set as targets at national level, but they will be over-achieved by the sum of the data provided by the regions[23]. On the other hand, the objectives of achieving 3.5 GW of storage capacity and 2 GW of demand flexibility by 2030 have not been taken up either. Neither has the objective of ensuring that 50% of all new private vehicles sold by 2030 have zero emissions (only presented in one of the draft regional plans) and that 100% of public vehicles by 2025 have zero emissions, with sufficient charging stations (i.e. one public station for every 10 electric vehicles). On innovation, a specific target for funding for energy and climate research and innovation (between 5% and 10% of overall research and innovation funding) has been set for only two regions (Wallonia and Brussels Capital Region) and at federal level. It is important to clarify this apparent inconsistency, notably in view of the national long-term strategy for 2050.

Moreover, the final plan sometimes lacks coherence between elements proposed by the federated entities. As a consequence, opportunities for synergies are not exploited. One example is conversion to high-caloric gas, which could be explored as an opportunity to stimulate replacement of appliances by low-carbon and energy-efficient solutions.

The final plan discusses **interlinkages** only indirectly, based on cross-references in the plan. However, it does not provide information on the consistency of data and assumptions across all five dimensions of the plan, nor on the assessment of policy interactions (between existing and planned policies and measures within a policy dimension or between policy dimensions). More information is needed on policies and measures to carry out a robust assessment of their consistency within and across dimensions, and on the impact of the interactions between the policies on the achievement of the objectives and targets.

For example, the final NECP does not describe future projections of sustainable supply of biomass for energy purposes and its impact on the LULUCF sector. Moreover, the energy security dimension does not reflect the objectives in Belgium's national adaptation plan to mitigate the impact of **climate change risks** on energy supply (e.g. wildfires, storms destroying biomass resources and power networks). Information is lacking on the adaptation co-benefits and trade-offs of energy efficiency, such as in the thermal management of buildings.

[23] After conversion of the data on energy production (GWh) into capacity (GW).

The information provided on **investment needs** is found overall to be quite detailed. However, the NECP does not provide much information on the methodology used for these estimates, making it difficult to assess the robustness of the investment needs reported. The NECP refers to the 2018 National Pact for Strategic Investments, which contains an evaluation of investment needs in six areas by 2030. It estimates investment needs for energy in these domains at EUR 60 billion over the period 2018-2030 and investment needs for mobility at between EUR 22-27 billion. The main energy-related investments are for the renovation of public buildings, energy security and energy infrastructure. The main investment needed in mobility is for the expansion and maintenance of integrated transport networks and services. Unfortunately, there is no clear correspondence between the Pact and the measures set out in the final NECP.

Flanders provides a range of total investment costs for 2021-2030 between EUR 5.25-7.23 billion, as well as a sectorial breakdown (transport, residential buildings, tertiary buildings, renewable energy). Wallonia provides information on investment costs for specific sectors (residential, renewable electricity production, renewable energy production and energy infrastructure), based on available information from the literature. As for the Brussels Capital Region, investment needs are provided for renovation of residential and commercial buildings only.

The NECP lacks a consolidated quantitative macroeconomic assessment of the impact of the planned policies and measures. In particular, there is limited information on how the policies and measures are financed. Without this underlying assumption, it is difficult to interpret the impact of the planned policies and measurs on key economic variables as private consumption and investment. The analytical part of the NECP provides for each Region, in a qualitative way, a preliminary overview of potential **sources of financing** at national, regional and EU level. However, no real assessment is made of these sources, taking into account the specific investment needs of the planned policies and measures and the sector or market risk factors or barriers in the national or regional context. The NECP includes references to potential policy instruments that may allow investments to be mobilised. In most cases, these are still under investigation.

There is no description of existing **energy subsidies,** particularly regarding fossil fuels. Nor does the final plan mention a timeline for phasing out energy subsidies, especially fossil fuel subsidies.

Concerning **macro-economic impacts**, the NECP provides for Flander an overview of qualitative impacts of climate/energy objectives in different sectors (e.g. transport, buildings,) on value added, competitiveness, disposable income and employment are provided. Quantitative impacts are provided for the building sector only, on value added and employment. For Wallonia, qualitative impacts are provided on GDP, competitiveness, employment with some detail on how these are caused by specific measures.

Regarding the **just and fair transition**, Belgium has assessed the impact of policies and measures on employment, energy poverty and skills, based on a specific study (Flanders[24]) or more general studies (Wallonia[25]). They include for example reduced road congestion and accidents, health benefits, net creation of jobs globally but with sectorial differences, as well as the need for reskilling. To address the implications that the transition may have for employment in some sectors, the plan includes measures for upskilling and reskilling both people in the

[24] PWC study, Impactanalyse van de uitvoering van het Europees Clean Energy pakket voor Vlaanderen, final report, September 2019.

[25] CLIMACT and EUROFOUND studies.

labour market and young students. It announces a mapping of the professions in the sectors that are expected to be most affected by the transition, which should enable Belgium to take targeted measures.

To address the negative impact on **energy poverty**, the plan lists a number of existing measures. However, it does not include any additional measures nor an assessment of the effectiveness of the existing measures, although the plan refers to the intention of having such evaluation of the existing measures (and their interplay). The Commission positively notes that the Flemish region conducted a comprehensive review in 2018-2019.

The final plan provides information and analysis on **air quality and air emissions policy** in the three regions, including quantitative targets of air pollution emissions (NO_x and PM2.5, two key air pollutants) for Wallonia and the Brussels Capital Region, where the link to the National Air Pollution Control Programme (NAPCP) appears very clear, as well as interaction between energy/climate measures and air quality (for all regions). The challenge of bioenergy (considered in the NECP) in terms of air pollution is highlighted in both the NECP and the NAPCP, and this is welcome. Models and assumptions underpinning the air and GHG projections are consistent.

The **circular economy** and its potential for GHG emissions reduction is addressed in the narrative of the final plan. Further quantification would be welcome in future revisions.

On **bioenergy demand and on biomass supply**, the NECP makes reference to studies and action plans without providing details on trajectories. Belgium indicates the use of forest biomass for bioenergy, while reducing imports of wood, with the preservation of the carbon stocks to achieve the targets. The interactions with biodiversity are acknowledged in the NECP.

The NECP acknowledges that energy efficiency contributes to achieving the objectives in other dimensions of the Energy Union, such as reduction of GHG emissions, import dependency and energy poverty. However, while specific policies and measures in the different dimensions of the Energy Union are often based on energy efficiency, this does not seem to be done in a structured manner in accordance with the **'energy efficiency first'** principle.

The final version of the plan partly complies with **data transparency** requirements and with the use of European statistics.

5. GUIDANCE ON THE IMPLEMENTATION OF THE NATIONAL ENERGY AND CLIMATE PLAN AND THE LINK TO THE RECOVERY FROM THE COVID-19 CRISIS

Belgium needs to swiftly proceed with implementing its final integrated national energy and climate plan, notified to the Commission on 4 January 2020. This section provides some guidance to Belgium for the implementation phase.

This section also addresses the link between the final plan and efforts to recover from after COVID-19 crisis, by pointing to possible priority climate and energy polmeasures Belgium could consider when developing its national recovery and resilience plan in the context of the Recovery and Resilience Facility[26].

[26] On 17 September 2020, the Commission published has put forward the Annual Sustainable Growth Strategy 2021 (COM(2020) 575 final), as well as guidance intended to help Member States prepare and present their recovery and resilience plans in a coherent way. This had no bearing on the negotiations

Guidance on the implementation of the national energy and climate plan

Belgium provided a single plan, collecting the information from the entity-specific energy and climate action plans in the final NECP, which is an improvement compared to the draft NECP. Unfortunately, this still falls short of a fully integrated and coherent plan that would constitute a common vision and a more useful tool to facilitate cooperation between the different authorities in achieving the climate and energy transition. Belgium is, therefore, encouraged to ensure more coordination and integration of the plans or the federated entities, so as to maximise synergies between the policies and measures.

In the plan, Belgium confirms the 2030 target for non-ETS greenhouse gas (GHG) emission reductions of -35% compared to 2005, in line with the provisions of the Effort Sharing Regulation. Achievements in the various regions differ (Wallonia -36.8%, Brussels Capital Region -39.4% and Flanders -32.6%). The collective result is an expected shortfall of 0.6 percentage points by 2030. Belgium's federated entities have provided estimates of needs to varying degrees of detail. However, there is no clear correspondence between these estimates and the measures set out in the plan, and the robustness of estimates varies across entities.

The Belgian contribution to EU 2030 renewables is unambitious when compared to the share resulting from the formula in Annex II to the Governance Regulation. Similarly, the Belgian contribution to the 2030 energy efficiency target reflects a low level of ambition. Belgium's plan therefore leaves considerable scope to further develop and step up policies and measures on both renewables and energy efficiency, so as to contribute more to EU climate and energy targets and strengthen the green transition.

Belgium has committed to achieving a share of **renewables** in gross final energy consumption of 17.5% by 2030. The country has reduced its renewable energy contribution to the EU target in the final plan, compared to the draft plan. Belgium should have clarified whether and how it intends to meet its 13% target for 2020. Belgium is invited to explore the use of cooperation mechanisms and of the EU renewable energy financing mechanism to reach that target and maintain it beyond 2020. Belgium could benefit from accelerating some of the provided policies and measures to promote renewable energy, particularly in heating and cooling, and in transport. To meet the contribution set out in the national energy and climate plan, it could be helpful to boost investment in renewables, ensure long-term certainty for household and institutional investors, and speed up administrative processes.

On **energy efficiency**, Belgium would benefit from adopting and implementing additional policies and measures to achieve additional energy savings by 2030. To ensure effectiveness of the proposed measures, it is important to base them on a detailed assessment of impacts and investment needs. Belgium is invited to ensure that the 'energy efficiency first' principle is properly implemented across all areas of the energy system, in particular when planning new gas-fired power plants, where potential for combined heat and power could be explored.

The improvement of energy efficiency in buildings has much potential for speeding up energy savings and contributing to the recovery of the economy after the COVID-19 pandemic. Building

---

on the proposal for a Regulation on the Recovery and Resilience Facility in the European Parliament and the Council (Commission Staff Working Document. Guidance to Member States – Recovery and resilience plans, SWD (2020) 205 final).

on the momentum of the '**renovation wave'** initiative[27], there is scope for Belgium to intensify efforts to improve the energy performance of the existing building stock with specific measures, targets and actions that pay due attention to energy poverty. Energy poverty could be, among other measures, addressed through specific support to socially innovative solutions and social enterprises that work on addressing this challenge (e.g. energy-awareness campaigns, retraining unemployed as energy advisors, supporting green installations by co-operatives, buying energy-saving appliances for social enterprises to rent out). It will be important to ensure the upskilling of the workforce in the construction sector. Further support for the renovation of public and private buildings could be provided with increased public funding and by leveraging EU and national budgets with private money, combining grants, lending, guarantees and loan subsidies. Belgium is expected to provide a robust and comprehensive long-term renovation strategy, in accordance with Article 2a of the Energy Performance of Buildings Directive. The long-term renovation strategy is to define a roadmap for decarbonisation by 2050 with ambitious milestones for 2030 and 2040 and 2050, measurable progress indicators, expected energy and wider benefits, measures and actions to renovate the building stock and a solid finance component with mechanisms for mobilising public and private investment[28].

Belgium would benefit from further developing measures to support the **energy security** objectives, including measures ensuring system resilience. These include specific measures to preserve and strengthen cybersecurity in the energy sector. Measures to ensure system flexibility should remain an important focus.

Concerning the **internal energy market**, Belgium would benefit from setting up specific measures and a clear timetable to increase flexibility, in particular as regards the non-discriminatory participation of renewable energy, demand-response, storage, aggregation, real-time price signals, smart grids, competition of the retail energy market, and households consumer protection. This would contribute to achieving the energy security objective and the integration of renewable energies as envisaged in the final plan. Belgium has introduced a capacity mechanism to address generation adequacy concerns. In line with Article 20 of Regulation (EC) No 2019/943, Belgium has proposed measures to improve market functioning through a dedicated implementation plan notified to the Commission. A swift follow-up on such measures and the Commission's opinion[29] on this plan is crucial to support the required reforms.

Belgium would benefit from defining clear indicators to track achievement of milestones towards its **research and innovation and competitiveness objectives**. Over time, the gathering of granular research, innovation and competitiveness data will be useful to strengthen this process. Belgium would need to ensure the link with activities undertaken under the SET plan. It would also benefit from further strengthening the link between the competitiveness objectives and the policies and measures to put in place for the different sectors by 2030.

---

[27] Communication 'A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives', COM(2020)662 and SWD(2020)550.

[28] Belgium (Brussels) and Belgium (Flanders) submitted the Long-Term Renovation Strategy pursuant to Article 2a of Directive 2010/31/EU on the Energy Performance of buildings on 10 March 2020 and 3 June 2020.

[29] The Commission's opinion was adopted on 30 April 2020. C (2020) 2654 final. https://ec.europa.eu/energy/topics/markets-and-consumers/capacity-mechanisms_en#commission-opinions-and-consultations

The national energy and climate plan contains national estimates of strategic **investment needs** for 2015 to 2030 in two climate-relevant clusters: energy (EUR 60 billion including 19 billion on renewables, 17 billion on grids, 5 billion on storage, 17 billion on buildings, 0.3 billion on alternative fuels, and 1.7 billion on nuclear energy), and mobility (EUR 22 to 27 billion). These are drawn from a report from 2018 by a group of independent experts, and therefore differ in scope and timeframe from the energy and climate plan. They are complemented by (partially overlapping) regional investment needs estimates that vary significantly in scope and levels of detail. The implementation of the energy and climate plan would benefit from a more robust, systematic and coherent framework for estimating national investment needs. This evaluation of investment needs should also factor in the economic consequences of the COVID-19 pandemic.

On **regional cooperation**, Belgium has been proactive, notably in the context of the Pentalateral cooperation with its neighbours (Benelux, France, Germany) and the North Sea Energy Cooperation, based on the political declaration of 6 July 2020, with a view to developing offshore grids and tapping into the region's offshore renewable potential. Belgium is invited to continue ongoing efforts on regional cooperation with a view to intensifying exchanges and initiatives that will facilitate the implementation of its national energy and climate plan[30].

A quantitative objective for the reduction of **energy poverty** would support Belgium's envisaged measures to prevent and mitigate energy poverty. Belgium is encouraged to consult the Commission Recommendation of 14 October 2020 on energy poverty and its accompanying staff working document providing guidance on the definition and quantification of the number of households in energy poverty and on the EU-level support available to Member States' energy poverty policies and measures.

Belgium is invited to initiate identification of and reporting on energy subsidies and to start taking action to phase them out, in particular for fossil fuels. A rapid phase-out of the **fossil fuel subsidies** identified in recent Commission analyses, through the development and implementation of specific plans with associated timelines (coupled with measures to mitigate the risk of households' energy poverty), would further boost the green transition.

For all investments implementing the national energy and climate plan, Belgium is invited to ensure these are in line with national, regional or local plans for **air pollution reduction**, such as the National Air Pollution Control Programme (NAPCP), and relevant air quality management plans.

In implementing its plan, Belgium is invited to make the **best possible use of the various funding sources available,** combining scaled-up public financing at all levels (national and local, as well as EU funding) and leveraging and crowding in private financing. Tables 1 and 2 of Annex I provide an overview of EU funding sources which should be available to Belgium during the forthcoming multiannual financing period (2021-2027), and project proposals for EU funding addressed to all Member States and companies. For the forthcoming period, the European Council has committed to the mainstreaming of climate action into all EU programmes and instruments and to an overall target of at least 30% of EU funding to support climate

[30] In this context, the Commission will help address related issues in a strategic manner in its upcoming Strategy for Offshore Renewable Energy by identifying key actions in the area of maritime planning, upscaling technologies, and a new approach to infrastructure planning and offshore renewables capacity building.

objectives. At the same time, EU expenditure should be consistent with the Paris Agreement and the 'do no harm' principle of the European Green Deal. At EU level, funding will also be available for Belgium from the Innovation Fund, based on revenues from the auctioning of allowances under the EU Emissions Trading System.[31]

Link to the recovery from the COVID-19 crisis

The vast majority of Member States' final national energy and climate plans were drafted before the COVID-19 crisis, and the present Staff Working Document assesses Belgium's plan in that context. Nevertheless, the implementation of Belgium's final integrated national energy and climate plan will need to take full account of the context of the post-COVID-19 recovery.

In the context of the Recovery and Resilience Facility, which is expected to be operational on 1 January 2021, **the final plan constitutes a strong basis for Belgium to design climate and energy-related aspects of its national recovery and resilience plan**, and to deliver on broader European Green Deal objectives.

In particular, **mature investment projects outlined in the plan, as well as key enabling reforms that address inter alia, investment-barriers, would need to start as soon as possible.** The link between investments and reforms is of particular relevance for the national recovery and resilience plans, to ensure a recovery in the short to medium term and strengthening resilience in the longer term. In particular, Member States' recovery and resilience plans should effectively address the policy challenges set out in the country-specific recommendations adopted by the Council.

In addition, **the Commission strongly encourages Member States to include in their recovery and resilience plans investment and reforms in a number of 'flagship' areas**[32]. In particular, the 'Power up', 'Renovate' and 'Recharge and refuel' flagships are directly related to energy and climate action and to the final national energy and climate plans. Investments and measures under the 'Reskill and upskill' flagship, in particular as regards green technologies, are also essential to foster the climate and energy transition in all Member States.

In turn, the Recovery and Resilience Facility will provide opportunities to accelerate Belgium's green transition while contributing to economic recovery. In order to meet the European Council's commitment to achieve a climate mainstreaming target of 30% for both the multiannual framework and Next Generation EU, **Belgium's recovery and resilience plan will have to include a minimum of 37% expenditure related to climate**. Reforms and investments should effectively address the policy challenges set out in the country-specific recommendations of the European Semester, and will have to respect the principle of 'do no harm'.

Based on Belgium's final national energy and climate plan, and on the investment and reform priorities identified for Belgium in the European Semester, **Belgium is invited to consider the following climate and energy-related investment and reform measures**:

- Measures to front-load mature public investment projects and to address regulatory barriers to investment in clean energy production and use;

[31] Belgium's national energy and climate plan considers both for the funding of their planned policies and measures.

[32] Cf. Annual Sustainable Growth Strategy 2021 (COM(2020) 575 final), pp. 9-12.

- Measures to ramp up the renovation of buildings, including reforms of energy taxes and flanking social measures, to address the current shortage of workers with the requested skills in the construction sector, and to simplify the procedure for building permits to improve renovation rates;
- Measures supporting sustainable mobility, including on railways, electric and hydrogen vehicles and recharging points; review of energy taxes and of infrastructure pricing to reflect congestion and externalities; measures to gradually phase-out the favourable tax treatment of company cars.

The above mentioned measures are indicative in nature and not meant to be exhaustive. They aim to orient reflections in the development of the national recovery and resilience plan. They do not prejudge the position of the Commission on the actions to be proposed. This position will, inter alia, need to comply with the agreed legislative text on the Recovery and Resilience Facility.

ANNEX I: POTENTIAL FUNDING FROM EU SOURCES TO BELGIUM, 2021-2027

Table 1: EU funds available, 2021-2027: commitments, EUR billion

Programme	Amount	Comments
Cohesion policy funds (ERDF, ESF+, Cohesion Fund)	2.7	In current prices. Includes funding for European territorial cooperation (ETC). Does not include amounts transferred to the Connecting Europe Facility.
Common agricultural policy – European Agricultural Fund for Rural Development, and direct payments from the European Agricultural Guarantee Fund.	4.1	In current prices. Commitments under the multi-annual financial framework.
Recovery and Resilience Facility	5.1	In 2018 prices. Indicative grants envelope, sum of 2021-2022 and estimated 2023 commitments. Based on the Commission's summer 2020 GDP forecasts.
Just Transition Fund	0.2	In 2018 prices. Commitments both under the multi-annual financial framework (MFF) and Next Generation EU.
ETS auction revenue	2.6	Indicative: average of actual 2018 and 2019 auction revenue, multiplied by seven. The amounts in 2021 to 2027 will depend on the quantity and price of auctioned allowances.

Table 2: EU funds available to all Member States, 2021-2027, EUR billion

Programme	Amount	Comments
Horizon Europe	91.0	In current prices. Includes Next Generation EU credits.
InvestEU	9.1	In current prices. Commitments both under the multi-annual financial framework (MFF) and Next Generation EU. Includes the InvestEU fund (budgetary guarantee to public and private investment) and the advisory hub (technical advice). Does not consider appropriations available to beneficiaries through implementing partners, such as the European Investment Bank.
Connecting Europe Facility • Transport • Energy	 24.1 5.8	In current prices. The commitment for transport includes the contribution transferred from the Cohesion Fund. Excludes Connecting Europe Facility Military Mobility funding for dual use infrastructure.
Recovery and Resilience Facility	360.0	In 2018 prices. Non-allocated commitments for loans. Loans for each Member State will not exceed 6.8% of its gross national income.
Technical Support Instrument	0.9	In current prices.
Programme for Environment and Climate Action (LIFE)	5.4	In current prices.
European Agricultural Fund for Rural Development	8.2	In current prices. Commitments under Next Generation EU.
Innovation Fund	7.0	Approximation: 7/10 of the allocations of ETS allowances to provide revenue to the Innovation Fund for 2021-2030 and assuming a carbon price of EUR 20 per tonne.

Note to both tables

The figures provided by programmes under the EU budget include both the proposals under the forthcoming multiannual financial framework, and the reinforcement of these under the Next Generation EU instrument outside the EU budget, unless indicated differently.

The figures quoted in this document are based on the conclusions of the European Council of 17-21 July 2020. They however do not prejudge the outcome of the ongoing discussions between the European Parliament and the Council on the elements of the recovery package, such as the Multiannual Financial Framework, the sectoral programmes, their structure and budgetary envelopes, which will be concluded in accordance with their respective adoption procedure.

For most of the above funds, support to the climate and energy transition is one objective among others. However, for the forthcoming period, the European Council has committed to the mainstreaming of climate action into all EU programmes and instruments and to an overall target of at least 30% of EU funding to support climate objectives. EU expenditure should also be consistent with the Paris Agreement and the 'do no harm' principle of the European Green Deal.

Some of the programmes listed in Table 2 provide funding through open calls to companies, not public administrations.

ANNEX II – DETAILED ASSESSMENT OF HOW COMMISSION RECOMMENDATIONS HAVE BEEN ADDRESSED

Recommendations		Assessment	
Decarbonisation - GHG	Complement the information on the policies and measures needed to achieve the greenhouse gas target for sectors not covered by the EU emissions trading system of -35% in 2030 compared to 2005, including in the building and transport sectors where most reductions will have to happen, by providing further details on their scope, timing, and the expected impacts.	Partially addressed	Belgium has copied the information from the entity-specific energy and climate action plans into the final NECP. As a result, more policies and measures are presented. Belgium has also provided more information on many of the policies and measures needed to achieve the GHG target for sectors, but the additions are mainly qualitative descriptions of the policies and measures rather than real clarifications of the scope, timing and expected impact of individual measures or clusters of measures.
	Specify its intended use of the flexibilities between the effort sharing, accounted land use, land use change and forestry and the emissions trading system sectors.	Partially addressed	Belgium has only partially specified the intended use of ETS and LULUCF flexibilities, as the overall use of flexibilities will depend on the burden-sharing agreement between the various entities concerned, which has not been decided yet. Belgium did notify its intended use of ETS flexibility for compliance with the Effort Sharing Regulation (1.86%), but does not mention this in the NECP. The NECP also includes statements by the Flemish and Walloon Regions, which aim to comply with the no-debit rule under the LULUCF Regulation without using domestic flexibilities. No information is provided on the Brussels Capital Region.
Decarbonisation - renewables	Significantly raise the level of ambition for 2030 to at least 25% as Belgium's contribution to the Union's 2030 target for renewable energy, as indicated by the formula in Annex II of Regulation (EU) 2018/1999.	Not addressed	The Belgian NECP proposes a contribution of 17.5% as a share of renewable energy in gross final energy consumption. This is lower than what was proposed in the draft NECP and remains significantly below 25%.
	Include an indicative trajectory in the final integrated national energy and climate plan that reaches all the reference points pursuant to Article 4(a)(2) of Regulation (EU) 2018/1999 in accordance with that share, in view of the need to increase the level of efforts for reaching this target collectively.	Not addressed	The Belgian NECP contains an indicative trajectory for the overall renewable energy target at national level for the years 2022, 2025 and 2027, with the 2020 baseline below the 2020 renewable energy target and failing to meet the reference points.

	Indicate detailed and quantified policies and measures that are in line with the obligations laid down in Directive (EU) 2018/2001 to enable a timely and cost-effective achievement of this contribution.	Partially addressed	The plan gives a better description of federal and regional plans and policies to promote more use of renewables. However, there is no overview of the planned budget for the policies and measures reported in the NECP. For a limited number of individual, entity-specific policies and measures (mainly for the Flemish Region and the decarbonisation dimension) information is provided on the planned budget in Section 3 of the NECP, but the time frame, source of finance and quantified impact are lacking. This makes it impossible to assess whether the policies and measures concerned are consistent with the targets and whether they are credible.
	Furthermore, ensure that Belgium's renewable energy target for 2020 set in Annex I of Directive 2009/28/EC of the European Parliament and of the Council (9) is fully met and maintained as a baseline from 2021 onwards, and explain how Belgium intends to meet and maintain such baseline share.	Not addressed	Belgium's renewable energy contribution will remain below the 2020 baseline until 2025.
	Step up efforts in the heating and cooling sector to meet the indicative target included in Article 23 of Directive (EU) 2018/2001 and intensify efforts to increase and diversify renewables in the transport sector.	Partially addressed	The plan proposes a contribution of an 11.3% share of renewable energy in gross final energy consumption of heating and cooling. This is lower than what was proposed in the draft NECP (12.7%). For the transport sector, the plan proposes a contribution of a 23.7% share of renewable energy in gross final energy consumption. This is higher than what was proposed in the draft NECP (20.6%).
	Provide additional detail on the enabling frameworks for renewable self-consumption and renewable energy communities in line with Articles 21 and 22 of Directive (EU) 2018/2001, including simplification of administrative procedures.	Partially addressed	The final NECP provides only partial information on renewable energy communities and renewable energy self-consumption. More policies and measures are included, but the information provided is mostly qualitative. Information on the expected impact, the associated time horizon and the budget is often lacking. Belgium's final NECP contains a rough outline of how administrative procedures will be simplified.
Energy efficiency	Increase the energy efficiency ambition by reducing final energy consumption, in view of the need to increase the level of efforts to reach the Union's 2030 energy efficiency target.	Not addressed	The contributions are substantially less ambitious than in the draft plan. Primary energy consumption (PEC) is set at 42.7 Mtoe, compared to 39 Mtoe in the draft NECP. Final energy consumption (FEC) by 2030 is set at 35'2 Mtoe, compared to 33.1 Mtoe in the draft NECP. Compared with the draft, additional policies and measures deliver less savings (PEC: 4.8 to 3.4 Mtoe and FEC: 4.4 to 3.7).

	Support this with policies and measures that would deliver additional energy savings by 2030. Underpin proposed policies and measures by an impact assessment and a more detailed set of information on the scale and implementation timeline in the period 2021-2030.	Partially addressed	There are many new policies and measures relating to transport: for example two regions (Flanders and Brussels) have included measures specific to transport. The Walloon Region refers only to ongoing studies of possible changes to fiscal incentives to encourage alternative fuels. The federal level has not included any specific energy efficiency transport measures, although it is clear from its general policy line that it intends to foster developments including electromobility in road transport, and a modal shift to trains, with a higher proportion of electrified trains. The NECP provides further information about energy efficiency in buildings, including a first description of measures implemented and envisaged to improve the energy performance of the national building stock. Belgium has not yet submitted its federal level long-term renovation strategy.
Energy security	Identify the measures supporting the energy security objectives on diversification and reduction of energy dependency, including measures ensuring flexibility.	Largely addressed	The final plan better outlines the reform of the electricity market linked to the phase-out of the nuclear fleet. It also indicates that Belgium will implement the reforms in its market reform plan under the Electricity Regulation in a timely manner.
	Take into account the regional context and the actual potential of the interconnectors and of the generation capacities in the neighbouring countries when assessing resource adequacy in the electricity sector.	Fully addressed	The resources adequacy and new interconnectors are assessed at regional level, notably through the Energy Pentalateral Forum. Belgium cooperates on offshore wind through the North Seas Energy Cooperation.
Internal energy market	No recommendation	N.A.	-

Research innovation and competitiveness	Further clarify national objectives and funding targets in research, innovation and competitiveness, specifically related to the Energy Union, to be achieved between now and 2030, so that they are readily measurable and fit for purpose to support the implementation of targets in the other dimensions of the integrated national energy and climate plan.	Partially addressed	Belgium spent, in 2018, 2.76% of GDP on total R&D and has committed to meeting the European target of at least 3% of GDP spent on R&D (1% public, 2% private) by 2030. The share allocated to energy/climate is assessed only for the Walloon Region, while a rough estimate of a share is provided for the Brussels Region. The 'smart specialisation' areas of the R&I programmes of the entities are well described and consistent with their policies and measures in the other dimensions. However, descriptions of R&I objectives remain at a high level and are not sufficiently specific to be measurable or to assess whether the measures will be sufficient to reach the R&I objectives or to what extent they will contribute to the objectives set in the other dimensions of the NECP. As regards competitiveness, Belgium has set no quantifiable targets for national competitiveness in specific energy technology sectors. The regions (mainly Flanders and Wallonia) have identified priority sectors and have developed a clusters policy to increase their competitiveness. The effectiveness of the clusters is monitored through impact metrics (additional employment, turnover, investment) in Flanders, but the NECP contains no information about related targets, or on their contribution to the objectives set in the NECP's other dimensions.
	Underpin such objectives with specific and adequate policies and measures, including those to be developed in cooperation with other Member States, such as the European Strategic Energy Technology Plan.	Largely addressed	Flanders and Wallonia's participation in and commitment to the SET plan are described in detail, by Implementation Working Group and by ERANET. The links with policy priorities are identified. For Flanders, other forms of cross-border cooperation are described: ERDF-Interreg, Innovation Fund, IPCEI; Trilateral chemical cooperation.
Regional cooperation	Intensify the already excellent regional cooperation within the Pentalateral Energy Forum based notably on the political declaration of 4 March 2019 to specifically include the development and monitoring of the integrated national energy and climate plans in particular as regards relevant issues for cross-border cooperation.	Fully addressed	Belgium has provided additional information on the Pentalateral Energy Forum and how the countries belonging to it will cooperate on the various dimensions of the Energy Union and within the North Sea Energy Cooperation.

Investments and funding sources	Improve the quantification of the mainly qualitative information on investment needs and complement it with a comprehensive assessment of overall investment needs to achieve the objectives.	Partially addressed	Reporting on investment needs is found overall to be quite well developed, although information remains largely lacking on the methodology used for the estimates, making it difficult to assess their robustness. In the context of the September 2018 National Pact for Strategic Investments (NPSI), the Strategic Committee (a group of independent experts) estimated strategic investment needs by 2030 in six domains[33]. However, these estimates do not necessarily contain the same measures as the NECP. Flanders has provided a range of total investment costs for 2021-2030 (between EUR 5.25-7.23 billion) as well as a sectorial breakdown, but it remains unclear if this covers all the required investments or only energy policies. Due to the lack of an appropriate integrated instrument for evaluating investment needs, Wallonia only provides information on investment costs for specific sectors based on available information from the literature. As for the Brussels Capital Region, investment needs are provided for the renovation of residential and commercial buildings only.
	Provide a general assessment of the sources of investment, including appropriate financing at national, regional and Union level.	Largely addressed	The analytical part of the NECP provides for each Region, in a qualitative way, a preliminary overview of potential sources of financing at national, regional and EU level. However, no real assessment is made of these sources, taking into account the specific investment needs of the planned policies and measures and the sector or market risk factors or barriers in the national or regional context. Reference is made to potential policy instruments to attract and mobilise the necessary investments. However, in most cases these instruments are still under investigation, and it is not clear which instrument will be implemented and how it will attract investments.

[33] Energy (EUR 60 billion: 19 RES, 17 grids, 5 storage, 17 buildings, 0.3 alternative fuels, 1.7 nuclear), mobility (EUR 22 to 27 billion), digital transition (EUR 28 to 32 billion) (NECP, Part A, p. 234).

Energy subsidies	List all energy subsidies.	Not addressed	The final plan does not provide a list of energy subsidies.
	List in particular fossil fuels subsidies.	Not addressed	In comparison with the draft NECP, it is stated in the final plan that an inventory of fossil fuel subsidies will be communicated at the end of 2020.
	List actions undertaken as well as plans to phase them out.	Partially addressed	No plans to phase out fossil fuel subsidies are presented. Belgium has indicated that it will set up a phase-out action plan around 2021.
Air quality	Complement the analysis of the interactions with air quality and air emissions policy, including from a quantitative perspective.	Partially addressed	For Wallonia, quantitative projections of air pollution emissions (NOx and PM2.5) with existing and additional climate-energy measures are included. For Flanders, only qualitative statements are presented about the air pollution impacts of climate-energy measures and about the similarity in the modelling approach used for climate-energy and air programmes. For Brussels, emissions are reported for NO_x and PM2.5 for 2015 - 2030.

Just transition and energy poverty	Better integrate just and fair transition aspects, notably by providing more details on social, employment and skills impacts of planned objectives, and policies and measures, including in carbon-intensive and industrial regions.	Largely addressed	For Flanders, the impact of policies and measures on employment, energy poverty and skills is based on specific studies. For Wallonia, the plan refers to studies by Eurofound and by CLIMACT. For both studies, reference is made to the positive impact on employment only, but no information is given about the magnitude of the effect. Nor is there a reflection on the extent to which these studies take account of the plan's specific features. The plan announces a mapping of the professions in the different sectors that are expected to be those most affected by the transition. It includes measures for upskilling and reskilling people already in the labour market as well as young students. However, detailed and comprehensive information on the planned measures is missing. In addition, there is no information included on how these measures will reach out the most disadvantaged groups, including people with disabilities. There is no quantitative impact assessment of the measures proposed. This makes it difficult to assess the adequacy of the measures proposed. As well, a distributional impact assessment on households' incomes (including impact on housing costs) of the planned transition measures would have been useful.
	Further develop the approach to addressing energy poverty issues, including by providing additional details on existing and potential measures, the energy-poverty plans and their expected impact, while at the same time completing the analysis as required by the Regulation (EU) 2018/1999.	Largely addressed	The plan lists a number of existing measures to mitigate poverty and prevent energy poverty. However, it does not include any additional measures apart from those that were already in place or planned. Nor does it include a quantitative objective for reducing energy poverty, or the impact of the measures.