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Assessment of the draft National Energy and Climate Plan of Czechia

Accompanying the document

Commission Recommendation

**on the draft integrated National Energy and Climate Plan of Czechia covering the
period 2021-2030**

{C(2019) 4403 final}

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1. SUMMARY

Main observations¹

- ✓ The draft integrated National Energy and Climate Plan (NECP) of Czechia reflects all dimensions of the Energy Union in a balanced way, and is **based on the existing energy and climate policy framework** for the period 2021–2030 with a view to 2050.
- ✓ Czechia's 2030 target for **greenhouse gas (GHG) emissions** not covered by the EU Emissions Trading System (non-ETS), is -14 % compared to 2005, as set in the Effort Sharing Regulation (ESR)². Based on the data provided in the draft NECP Czechia nearly achieve this target with existing measures in transport, buildings and other sectors. The draft NECP does not yet contain additional policies and measures, nor considerations if an overachievement in view of a use for transfers to other Member States could be cost-efficient.
- ✓ With respect to the contribution of the **Land Use, Land Use Change and Forestry (LULUCF)** sector, at Czechia is fully compliant with the accounting rules in the LULUCF Regulation³. The plan states that, based on the forest reference levels submitted in December 2018, Czechia is unlikely to obtain LULUCF accounted credits to be used for ESR compliance.
- ✓ In terms of **renewable energy**, Czechia has set a 20.8 % share of energy from renewable sources in gross final consumption of energy in 2030 as contribution to the EU renewable energy target for 2030. This level of ambition is below the share of 23 % in 2030 that results from the formula contained in Annex II of the Governance Regulation, a situation which would also require in the final plan an indicative trajectory that reaches all reference points⁴ in accordance with the national contribution set out in the final plan⁵. The final plan would benefit from elaborating further on the policies and measures allowing the achievement of the contribution and on other relevant sectorial measures.
- ✓ In the **energy efficiency** dimension, the contribution of Czechia for primary energy consumption represents a low level of ambition, while that for final energy consumption is modest. More details on policies and measures should be included in the final plan to enable opportunities for growth and job creation to be fully exploited.
- ✓ As regards **energy security**, the objective is to limit import dependency below 65 % by 2030 and 70 % by 2040. There are diversification target corridors set up for individual fuels in the total primary energy resources and electricity generation which merit further

¹ In addition to the notified draft NECP this assessment also considers informal bilateral exchanges, which are part of the iterative process established under the Governance regulation.

² Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013.

³ Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU.

⁴ Pursuant to Article 4(a)(2) of Regulation 2018/1999.

⁵ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

elaboration in the final plan. The diversification of gas supply could be further discussed in the final plan as well as measures envisaged in view of the planned role of nuclear generation capacity

- ✓ In the **internal market** dimension, Czechia is currently well above the interconnectivity level of 15 % so Czechia does not consider it necessary to introduce further specific policies in this area. No further measures or projections are provided for the electricity market. Renewable gases and technologies are superficially mentioned without objectives or targets for their future integration into the gas market. Aspects related to energy poverty should be addressed more comprehensively in the final plan.
- ✓ Czechia's national priorities for research, experimental development and innovation for 2030 contain several energy related objectives. The draft NECP does not have specific quantifiable targets for public **research, innovation and competitiveness** related to a specific dimension of the Energy Union.
- ✓ Regarding **investment needs**, the draft plan includes some policy specific incremental investments e.g. for renewable energy, efficiency and research, and reflects national and EU funding sources such as Structural and Investment Funds and ETS related revenues. An overall assessment of investment needs to achieve the objectives of the NECP would allow fully taking advantage of the role NECPs can play in providing clarity to investors and attracting additional investments in the clean energy transition. The impact assessment of planned policies and measures is not covered yet and need to be included in the final plan.
- ✓ Czechia plans to make use of already existing bilateral and multilateral platforms, such as the Visegrad Group, for **regional cooperation** before finalising the NECP. Given the upcoming common challenges (along with neighbouring countries) for the future development of the energy sector, there is significant potential for further regional cooperation in several Energy Union dimensions.
- ✓ A list of all **energy subsidies**, including in particular for fossil fuels, and actions undertaken and planned to phase them out need to be included in the final plan.
- ✓ The final plan would benefit from complementing the analysis of the interactions with **air quality and air emissions** policy, including through quantification of the impacts on air pollution.
- ✓ The draft plan does not yet provide sufficient information on the applicability of the concept of **just and fair transition**, including in relation to coal and carbon-intensive regions in transition. This issue could be better integrated throughout the plan, by considering social and employment impacts, distributional effects and revenue recycling. Education, skills and training feature only very generally in the plan.
- ✓ The setting up of a working group dedicated to energy poverty which aims to develop a methodology for identification of 'vulnerable customers' and households affected by energy poverty using variable factors and a cross-sector approach constitutes **good practice**.

Preparation and submission of the draft plan

Czechia notified its draft integrated National Energy and Climate Plan (NECP) to the European Commission on 31 January 2019. The draft Czech NECP is based upon two main strategic documents, namely the Czech Republic's State Energy Policy (*Státní energetická koncepce ČR*), which was approved in 2015, and the Climate Protection Policy of the Czech Republic (*Politika ochrany klimatu v ČR*), which was approved in 2017.

The draft NECP was prepared by the Ministry of Industry and Trade and was discussed with other ministries and key stakeholders in the period from 21 December 2018 to 10 January 2019. As a result, 220 key comments and 100 recommendations were obtained. Additionally, approximately 500 comments were received during a short **public consultation**. Not all comments received during the consultation process were addressed, therefore Czechia foresees to take them into account, together with the results of the public consultation, before the submission of the final NECP.

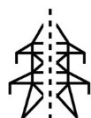
Czechia consulted **nearby Member States** on the development of the draft NECP at the expert meeting of the representatives of the Visegrad Group (Czechia, Slovakia, Hungary, Poland), including representatives from Austria, convened in Bratislava on 20 November 2018.

Overview of the key objectives, targets and contributions

The following table presents an overview of Czechia's objectives, targets and contributions under the Governance Regulation⁶:

	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) (%)	+4	+9	-14	As in ESR. Total GHG 2030 -30 % to 2005
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	14.8	13	20.8	Below 23 % (result of RES formula)
	National contribution for energy efficiency: Primary energy consumption (Mtoe) Final energy consumption (Mtoe)	40.1 25.5	44.3 25.3	41.3 23.7	Low Modest

⁶ 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.



Level of electricity interconnectivity (%)

19

23

>15

N/A

Sources: EU Commission, *ENERGY STATISTICS*, *Energy datasheets: EU28 countries*; *European Semester by country*⁷; COM/2017/718; *Czech draft NECP*.

2. ASSESSMENT OF THE AMBITION OF OBJECTIVES, TARGETS AND CONTRIBUTIONS AND ADEQUACY OF SUPPORTING POLICIES AND MEASURES

Dimension decarbonisation

Greenhouse gas emissions and removals

Czechia has set a **national target of reducing its total GHG emissions** by at least 44 Mt CO₂eq by 2030 compared to 2005, corresponding to a 30 % reduction. It has also set indicative GHG emission targets at 70 Mt CO₂eq in 2040 and 39 Mt CO₂eq in 2050 (80 % reduction compared to 1990).

The draft NECP notes Czechia's **non-ETS 2030 GHG emission target** (-14 % compared to 2005) in the Effort Sharing Regulation⁸.

The draft plan includes existing policies and measures for transport, agriculture and forestry, households (buildings), waste management, industry and energy. According to the scenario with existing measures these measures could achieve -12 % compared to 2005 in effort sharing sectors.

However, the draft plan does not yet contain additional policies and measures to reach the 2030 non-ETS target and the domestic GHG targets. It does not yet indicate whether Czechia intends to use any of the flexibilities available under the Effort Sharing and LULUCF Regulation⁹, such as a cost-effective domestic overachievement by 2030 of the non-ETS target funded by transfer revenues, but states that additional measures will be included in the final plan.

Energy demand in the **transport** sector is projected to increase. Existing measures are described. An action plan for clean mobility exists in support of alternative fuel infrastructure, clean mobility in public transport (including electric buses) and businesses, as well as low-emission zones. Measures to support alternative fuels are described in detail and the draft plan also provides different scenarios on **electromobility** uptake. A GHG scenario with additional measures envisages measures which would reduce transport emissions by 2 %, however, it would increase LULUCF emissions.

The draft plan describes existing measures to reduce GHG emissions in the **building sector**. The measures are financed through a subsidy programme, New Green Savings, which is financed by the proceeds from the auctioning of ETS emission allowances.

⁷ https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/european-semester-your-country_en.

⁸ Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030.

⁹ Regulation (EU) 2018/841 on greenhouse gas emissions and removals from land use, land use change and forestry.

The draft plan describes several existing measures in **agriculture** that are relevant also for LULUCF and renewable energy, such as biogas plants, energy from biomass, land management for better nitrogen retention, afforestation, and sustainable management of permanent grassland. Czechia has an action plan for forest resilience and a strategy to support forest-based bioeconomy.

The draft plan states that, based on Czechia's forest reference levels submitted in December 2018, it is unlikely to generate **LULUCF** accounted credits to be used for ESR compliance. It refers to the report on LULUCF actions submitted to the Commission under the LULUCF Regulation for further information. The plan provides the value of the forest reference level that should be used to project LULUCF accounted debits and credits. With respect to the National Forestry Accounting Plan including the national Forest Reference Level, submitted by Czechia as required by Article 8(3) of the LULUCF Regulation, the Commission has put forward minor technical recommendations requesting action on a limited number of issues, detailed in SWD (2019)213.

The application of the LULUCF accounting rules could be made more explicit in the final NECP (for instance, by also stating the baseline for managed cropland, grassland and wetland).

The draft plan states that Czechia's **adaptation** strategy is complementary to the climate protection strategy and highlights adaptation in terms of objectives, priority actions and tasks. Adaptation is referred to in the policy and measures section for forestry, agriculture, transport and energy which also describes general adaptation goals.

Renewable energy

The share of 20.8 % **renewable energy** in gross final energy consumption as contribution to the EU renewable energy target for 2030 is below the share of 23 % in 2030 that results from the formula contained in Annex II of the Governance Regulation.¹⁰

The Czech draft plan provides an overview of national renewable objectives and trajectories at the sector level, including the renewable energy contribution of each sector to gross final energy consumption in shares and absolute values in yearly time steps. The **indicative trajectory** to reach the 2030 contribution is set out for all the years between 2021-2030, with an indicative trajectory reaching the reference points of 18 % by 2022, 43 % by 2025 and 65 % by 2027. The estimated trajectories for the sectorial share of renewable energy technologies to achieve the overall sectoral trajectories for renewable energy from 2021 to 2030 and sector also are provided in yearly steps.

The share for renewable energy in the **electricity** sector is set at 14.2 % (starting from 14 % in 2020). By 2030, solar together with biomass and hydropower continue to be the main sources of renewable electricity, however with close to no increase in electricity production levels throughout the 2021-2030 period.

As regards the **heating and cooling** sector¹¹, the sectoral share is set at 30 %, starting from 22 % in 2020. Biomass is still expected to account for 56 % of the total renewable energy sources. The sectoral trajectory in the draft plan shows that Czechia intends to increase renewable energy in heating and cooling sector by an indicative 0.8 percentage points as an annual average calculated

¹⁰ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

¹¹ The sectoral share is set at 30 %, starting from 22 % in 2020.

for the periods of 2021 to 2025 and 2026 to 2030, **rather than 1.3 percentage points** (when including waste heat up to 40 %) as indicated in Article 23 of the Renewable Energy Directive¹².

In the transport sector, the share is set at the level of 14 %, starting from 8.8 % in 2020. The draft plan describes the contribution from each expected renewable energy technology in shares and absolute values in TJ. The final plan would benefit from addressing applicable multipliers and including the sub-target for advanced biofuels in accordance with Articles 25-27 of the Renewable Energy Directive¹³. Also Czechia needs to clarify whether the obligation of 14 % renewable energy consumption in transport, pursuant to Article 25 of the Renewable Energy Directive¹⁴ on fuel suppliers would be extended post 2020. The sectoral trajectory for renewable energy in transport indicates that **the starting point will be lower** than the 10 % target specified in the Renewable Energy Directive¹⁵.

The draft plan includes bioenergy, disaggregated between heat, electricity and transport in the estimated trajectories by renewable energy sectors and technology in gross final consumption, but only as part of the national objectives under technology contribution per each sector and in consumption rather than according to the demand. Furthermore, there is no inclusion of trajectories on biomass supply, by feedstocks and origin and trajectories for forest biomass, an assessment of its source and impact on the LULUCF sink.

Regarding the **policies and measures** which Czechia plans to implement in order to achieve its contributions and objectives under the renewable energy section of dimension decarbonisation, the draft plan provides information on new aid to finance deployment of renewable energy for the period 2021 to 2030 in four directions. Firstly, modification of the current form of support for small generation up to 1 MW where aid in the form of feed-in tariffs will be replaced with a “market based” hourly green bonus. Secondly, aid in the form of competitive tendering procedures (auctions) for generation above 1 MW will be introduced. Thirdly, new forms of support will be implemented so that some of the current installations can be maintained in operation, and some other new sources of support for example use of heat from biogas installations could be introduced in particular to ensure the achievement of the sectoral objective for renewable energy in the heating and cooling sector. Lastly, new forms of support will be dedicated for the sectoral objectives of renewable energy in the transport sector as required by Directive 2018/2001¹⁶ especially for biomethane.

On a general note, the measures included in the draft plan are under consideration and there is a lack of concrete information which makes it difficult to assess the consistency between the level of ambition and the measures in place to reach the contribution. More information on alleviating administrative burden is needed and policies and measures on the enabling framework to promote facilitating renewable self-consumption and communities need to be included in the final NECP.

¹² 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.

¹³ 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.

¹⁴ 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.

¹⁵ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources.

¹⁶ 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.

Dimension energy efficiency

Czechia sets **its national contribution** to the European energy efficiency target in absolute values both as **final energy consumption** of 23.646 Million tonnes of oil equivalent (Mtoe) in 2030 and **primary energy consumption** of 41.249 Mtoe. Czechia also expresses its target in terms of energy intensity as 0.157 MJ/CZK. The 2030 target translates into a decrease of final energy consumption by 7 percentage points compared to the target in 2020, and 9 percentage points compared to the business as usual in 2030.

The national contribution is set at a level that would allow the country to increase its energy consumption by 2.9 % in relation to 2017 levels for primary energy consumption while final energy consumption would have to decrease by 7.2 %. On the other hand, the target for 2030 is set at a lower level as compared to their 2020 energy efficiency target both for primary and final energy consumption. Such a trend appears to contradict the collective EU effort needed to achieve the EU 2030 target. Furthermore, the national **energy efficiency contribution** is based on projections of the With Existing Measures (WEM) scenario, which foresees a steady linear increase in energy consumption over the next decade. However, the limited details about the methodology used to build the scenario and the limited elements provided about the impacts of the policies and measures related to the energy efficiency dimension are not sufficient to understand the rationale behind the increase in energy consumption.

Overall, the contribution of Czechia to **primary energy consumption** represents a low level of ambition taking into account the need to increase efforts at EU level to collectively reach the Union's 2030 efficiency targets, while final energy consumption ambition is modest. The latest increases in energy consumption in Czechia clearly indicate a much higher level of efforts needs to be put in place rather quickly.

Czechia's objective for annual energy savings under Article 7 of the Energy Efficiency Directive¹⁷ for the period 2021-2030 was set at 84 PJ for new energy savings, i.e. a total of 462 PJ cumulated energy savings by 2030. The **cumulative energy savings** obligation under this article is estimated at 11 Mtoe and yearly new savings obligation at 0.2 Mtoe. The preliminary calculations have been made following the recommended methodology.

With respect to the **policies and measures** underpinning these objectives, Czechia mentions that some of the current measures will still be valid in the period of 2021-2030 (e.g. Operational programmes 2014-2020, which will continue until 2023). However, a few of these measures are mentioned in the draft NECP. Czechia is considering the option of developing a combination of Energy Efficiency Obligation Scheme and alternative measures. Generally, the description of the policy measures is of very limited detail and their expected impacts are not yet reported. As regards policies and measures the Czech draft NECP lists broad strategies such as Strategic Sustainable Urban Mobility Plan or Freight Transport Strategy and accompanying measures. However, measures to incentivise multimodality and modal shift, intelligent transport systems, digitalisation and automation are not described in detail.

No specific measures are yet provided to fulfil the obligation under Article 5 of the Energy Efficiency Directive¹⁸ apart from the general renovation strategy. Indicative milestones of the long-term renovation strategy are not yet reported.

¹⁷ 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.

¹⁸ Directive 2012/27/EU on energy efficiency.

Some new additional measures under Article 7 of the Energy Efficiency Directive¹⁹ are under development. The draft plan mentions new financial instruments for the renovation of buildings. Czechia aims at covering 60 % of district heating demand with CHP by 2040.

Dimension energy security

Czechia acknowledges its import dependence for natural gas from third countries (the Russian Federation), however does not provide particular policies and measures in order to increase the diversification. In that respect the mere reference to the development of the internal market for natural gas and to the EU legislation in that area is insufficient.

While clear on the evolution of generation adequacy and interconnectivity as a consequence of a changing electricity mix, the Czech draft plan could further identify and more clearly describe other measures, assess their impact and provide projections, including on the overall energy mix and cybersecurity.

Cybersecurity and critical infrastructure, though mentioned in the draft plan, would merit more substance in view of their increasing importance in energy supply systems of the future.

The draft plan mostly describes existing legislation rather than any proposed new specific measures. The exception is the role of nuclear power generation and the preventive and emergency measures both in gas and electricity, which are well reflected. This could be complemented with further information on the policies and measures ensuring the long-term supply of nuclear materials and fuel, particularly in view of the development of the nuclear generation capacity.

New potential sources of gas and related technologies as concepts are mentioned but no projections are provided. Information on the target date for the plans of the Risk Preparedness Regulation would also be welcome.

Dimension internal energy market

Czechia has provided in its draft NECP a clear evaluation and a substantial analysis of the current and projected level of **interconnectivity** in electricity. The concept is also linked to the Ten-Year Network Development Plan process for infrastructure development.

In the case of the gas market, the description of the current situation is more limited. Objectives are not very clearly defined and are more qualitative in nature. Renewable gases and technologies are superficially mentioned without objectives or targets for their future integration into the gas market.

New measures and the assessment of their potential impacts and projections are lacking.

As competitive markets are a key enabler for other dimensions of the Energy Union, objectives related to the further development of wholesale and retail market competition and corresponding measures and timelines merit being included in the final plan. The final plan should provide sufficiently precise objectives on all aspects related to **retail markets**. Furthermore, it should specify potential for increasing system flexibility, describe in detail the policies and measures on flexibility and on non-discriminatory participation of new market participants, detail plans for smart meters in electricity and gas markets, address different flexibility sources in all energy markets.

¹⁹ Directive 2012/27/EU on energy efficiency.

The draft plan could benefit from more detailed descriptions of policies and measures on consumer participation in the energy system, demand response and storage, including via aggregation, and on dynamic pricing.

Regarding **energy poverty**, a special working group to define energy poverty in the Czech legal system was established in 2015 under the National Action Plan for Smart Grids. Its aim is to prepare a certified methodology to evaluate energy poverty and vulnerability of consumers by the end of 2020. Related aspects should be addressed more comprehensively in the final plan. Furthermore, the draft NECP states that some of the measures under Article 7 of the Energy Efficiency Directive ²⁰ will be set in a way to ensure energy efficiency gains for low-income households.

Dimension research, innovation and competitiveness

As regards objectives for research and innovation for 2030, the draft NECP refers to the national priorities for research, experimental development and innovation for 2030. This is a rather comprehensive list, containing 170 objectives, several of which are energy specific on a 2030 timescale. In addition, there is also a basic breakdown of the share of financial expenditure per priority area, two of which are rather energy related. Sustainable Energy and Materials should be allocated around 18 % of the total research, development and innovation budgets up to 2030. However, the objectives are often general or subjective.

While it is noted that Czechia aims to align national energy research and innovation priorities with the EU, and in particular the priorities of the **Strategic Energy Technology (SET) Plan**, which is well reflected in the draft NECP, the underlying objectives, such as “evolution of economically efficient solar energy”, are not specific enough to be able to assess if policies and measures will influence overarching trends in the energy sector of increasing efficiencies and reduced costs. The THÉTA programme and the corresponding dedicated budget of CZK 4 billion covers the period 2018-2025. However, overall Czechia’s national Research and Development and Innovation Policy is for the years 2016 to 2020, and this key strategic document at national level does not have a 2030 perspective.

As regards competitiveness, the draft NECP does not focus on competitiveness of the low-carbon technologies sector specifically, instead making reference to the more general Strategy for International Competitiveness of the Czech Republic. The NECP would benefit from presenting a comprehensive analysis on where the Czech low-carbon technologies sector, including for decarbonizing energy and carbon-intensive industrial sectors, is currently positioned in the global market, highlighting areas of competitive strengths and potential challenges. Measurable objectives for the future should be defined on that basis, together with policies and measures to achieve them, making appropriate links to enterprise and industrial policy.

3. COHERENCE, POLICY INTERACTIONS AND INVESTMENTS

The interlinkages between the dimensions are visible, but not yet explicitly mentioned, therefore the final plan should provide more details on the policy interaction. **Energy efficiency first** as an overarching principle is partly mentioned in footnotes to the policies and measures for the energy security and internal energy market dimensions, however it is not yet clear whether and how this principle will be applied.

²⁰ Directive 2012/27/EU on energy efficiency.

It is not pointed out that for all the calculations the same data were used, although there are indications which lead to such a conclusion, therefore data consistency should be clarified in the final plan.

The draft NECP does not yet contain information on how **climate change risks** might affect **energy supply** (e.g. wildfires, droughts and storms damaging biomass resources and power networks). Information is also lacking on adaptation co-benefits for energy efficiency, such as in the thermal management of buildings.

The intended increase of crop based **biofuels in the transport** sector (1st generation biofuels) is quite significant, which could create competition with food products contrary to the Indirect Land Use Change Directive. It is also noteworthy that the GHG WAM scenario reports a negative impact of additional transport measures on LULUCF emissions. The plan also recognises issues related to biodiversity and resilience of ecosystems as a consequence of land use change and climate change. However, it would benefit from a further analysis of the synergies and trade-offs between climate and biodiversity (e.g. role of ecosystem services for mitigation and adaptation), beyond agriculture. A further assessment of the sustainable supply of such biomass and its limits would improve the NECP.

The Czech plan has very limited information on the interaction between climate and the circular economy. Considering the relevance for greenhouse gas emission reductions, the final plan could reflect such interactions.

The draft plan lacks quantitative information on the interactions with air quality and air emissions policy.

Existing and planned policies and measures in the area of **energy security** are reported, often linked to policies and measures in other dimensions. However, they could benefit from more detailed description and a timeframe which would better allow for an assessment of the policy interactions.

The draft NECP does not yet provide sufficient information on the applicability of the concept of **just and fair transition**, including in relation to coal and carbon-intensive regions in transition. This issue could be better integrated throughout by considering social and employment impacts related to a green/circular economy e.g. shifts in sectors/industries (and skills impacts), distributional effects (and energy poverty) and revenue recycling. Education and training feature only very generally in the plan. **Skills** development is envisaged in the context of robotisation and digitalisation. Except for “training for public procurement for complex services” and for “training of staff” for the “implementation of instruments and measures” the plan does not set out which occupations will need which skills.

The draft plan provides for some policies in the different dimensions projections on **investment** costs, expenditures and funding sources. However, the information seems rather descriptive. The content varies from simply listing existing investment support schemes or funding sources such as EU structural and investment funds to projections for state budget expenditures for national major science and research programmes as THÉTA. Czechia intends to use 60 to 70 % of its projected ETS revenues including its share from the Modernisation Fund (CZK 151 to 226 billion 2021-2030, around EUR 6 to 9 billion) to support investments in renewable energy and energy efficiency. A comprehensive assessment of the **investment needs**, market risks and barriers would be welcomed in the final plan, as Czechia has indicated that is its intention. Some investment needs could partly be covered by EU funds, in particular cohesion policy funding,

notably in line with the investment analysis for 2021-2027 of the 2019 European Country Semester Report for the Czech Republic and with any relevant legislation.

There is some description on **subsidies** for energy efficiency measures and for renewable energy and nuclear energy. However, it does not provide information on fossil fuel subsidies, mentioning that these will be done in the final NECP report. At the same time the Commission Energy Prices and Costs Report²¹ identifies energy subsidies in the Czechia, including subsidies for fossil fuels. It is important that the complete final plan includes a detailed description of all energy subsidies as well as of the national policies, timelines and measures to phase-out energy subsidies, particularly for fossil fuels.

Links with the European Semester

Identifying financing needs and securing the necessary funding will be key to deliver on energy and climate objectives. The Commission addressed this question as part of the 2019 European Semester process. Based on the 2019 Country Report for Czechia, published on 27 February 2019²², the European Commission's recommendation for a Council recommendation for Czechia issued on 5 June 2019²³, in the context of the European Semester, highlights in particular the need to invest in 'transport, notably on its sustainability, low carbon and energy transition, including energy efficiency'. When preparing its overview of investment needs and related sources of finance for the final plan, Czechia should take into account these recommendations and links to the European Semester.

There is some description on **subsidies** for energy efficiency measures and for renewable energy and nuclear energy. However, it does not provide information on fossil fuel subsidies, mentioning that these will be done in the final NECP report. At the same time the Commission Energy Prices and Costs Report²⁴ identifies energy subsidies in the Czechia, including subsidies for fossil fuels. It is important that the complete final plan includes a detailed description of all energy subsidies as well as of the national policies, timelines and measures to phase-out energy subsidies, particularly for fossil fuels.

4. REGIONAL COOPERATION

Czechia prefers the bottom-up approach to regional cooperation. It actively cooperates with other Member States in various multilateral and/or bilateral platforms depending on the issues concerned — electricity, gas, research, development and innovation, etc.

In renewable energy Czechia intends to use statistical transfers to achieve its 2030 renewable energy contribution. Czechia is very interested in renewable projects supported under Connecting Europe Facility and potential involvement under projects of common interest, but the information provided is limited at this stage.

²¹ Commission Staff Working Document Accompanying the Document Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Energy prices and costs in Europe, COM(2019) 1.

²² SWD(2019) 1002 final: Country Report Czech Republic 201

²³ COM(2019) 503 final: Recommendation for a COUNCIL RECOMMENDATION on the 2019 National Reform Programme of the Czech Republic and delivering a Council opinion on the 2019 Convergence Programme of the Czech Republic

²⁴ Commission Staff Working Document Accompanying the Document Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Energy prices and costs in Europe, COM(2019) 1.

There is significant potential for further regional cooperation in the internal energy market and energy security areas, including in assessing regional system adequacy as foreseen in the Electricity regulation²⁵. This will become even more important in the light of the changes in the electricity system accommodating higher shares of renewable energy and electricity imports, and characterised by an increased need for flexibility.

In order to explore the potential of regional cooperation, before finalisation of the NECP Czechia foresees further discussions with neighbouring countries and, where appropriate, other Member States. In this regard, Czechia plans to make use of already existing bilateral and multilateral platforms.

In addition to the Visegrad Group, where Czechia may initiate discussions under its presidency starting on 1 July 2019, Electricity Neighbours²⁶ as well as bilateral dialogues with Germany and France are also opportunities to address the objectives, policies and measures put forward in the draft plan.

5. COMPLETENESS OF THE DRAFT PLAN

Information provided

The submitted draft NECP is consistent and, to a large extent²⁷, follows the outline provided with the template for national energy and climate plans.²⁸ Targets, objectives and contributions to be provided in the final plan could build more consistently on rules set out in applicable legislation. The use of voluntary template for projections with existing measures (WEM) is welcome.

As regards the **decarbonisation dimension**, the **greenhouse gases** part of the draft NECP is partially complete. The draft plan does not yet include an estimation of the annual binding emission limits in 2021-2030 under the ESR. Furthermore, the draft plan does not contain additional policies and measures yet.

Most of the elements required under the **renewable energy dimension** for the objectives and targets and the policies and measures are provided with the draft plan and generally follow the structure of Annex I. Planned capacities are described but are not split between new capacities and repowering. Measures regarding power purchase agreements (PPAs) and enabling framework to promote and facilitate development of renewable self-consumption are missing. As regards the renewable energy share in district heating and cooling and related infrastructure, Czechia did not report information at this stage.

On **energy efficiency**, the national contributions to the EU target are provided, including with quantification. Existing policies and measures are qualitatively described. The underlying methodology and the conversion factors used to set out Czechia's contribution are explained in

²⁵ Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity.

²⁶ Electricity Neighbours is an initiative set up in 2015 on the basis of a joint declaration prepared by the German Federal Ministry of Economy and Energy in cooperation with the European Commission and the countries of the Pentalateral Energy Forum. The group consists of Germany, France, the Benelux countries, Denmark, Italy, Norway, Sweden, Poland and Czechia. The statement in the Joint Declaration emphasizes the importance of the internal market as the most cost-effective means of ensuring security of supply.

²⁷ There are also some inconsistencies with the template, as section 2.1.iv from the template is included in 2.1.iii of the draft plan; section 2.4.3 of the draft plan does not follow entirely the structure of the template; section 3.1.2 of the draft plan adds one more point in between; section 3.4.3.iii from the plan is double, but with different caption.

²⁸ Annex I of the Regulation (EU) 2018/1999 on the governance of the Energy Union and Climate Action.

detail for 2020 and 2030. Although it was not required in the draft NECP, Czechia included some general information relating to policies and measures for buildings that could be implemented as part of its long-term renovation strategy to support the renovation of the national stock²⁹, which is expected to be completed only in the final version of the plan. Expected impact of individual measures or group of measures on the national contribution is incomplete. There are few new energy efficiency policy measures, some of which, such as the energy efficiency obligation scheme, are presented as options. Estimate of wider benefits and roadmap with indicators in the building sector could be added. With regards to the cost-optimal calculations, the Czech NCEP only indicates that the report has been submitted, but offers no further information about it.

On **energy security**, the Czech draft plan is well developed on the objectives and targets, such as overall diversification and level of import dependency. However, targets on resilience, flexibility and cybersecurity both on the level of the whole energy system would be welcomed, including a reference to the role of indigenous sources, demand response and energy storage. The draft plan covers the sectors of electricity, gas, oil and heating. Objectives in the gas sector also extend to biogas and its role in replacing coal with a view to meeting longer term climate targets.

The Czech draft NECP covers many aspects of the **internal market**, in particular the current functioning of the national retail and wholesale gas and electricity markets. However, in addition to the analysis on the interconnectivity target and a qualitative target for market integration, the final plan would benefit from definition of further objectives or targets, in particular as regards retail market competition, as well as from the inclusion of specific measures, e.g. in the area of integration of renewable electricity and gas sources, as well as an assessment and projections related to these measures.

In the area of **research, innovation and competitiveness**, the draft plan mentions priority policy areas within existing strategies, plans or specific programmes such as THÉTA, however no specific targets are yet identified.

Robustness of the Czech draft National Energy and Climate Plan

The Czech draft plan contains most of the required elements of the **analytical basis**. It reports a projection with existing measures (WEM) in the voluntary template. The scope of its scenario with additional measures (WAM) is limited to GHG emissions. Existing and planned policies and measures are listed in the main document. The draft plan uses a mix of data sources, including Eurostat, national statistical offices, national ministries, OECD and IEA data as well as data from Czech operators and energy companies.

The **with existing measures projections** largely cover the five dimensions of the Energy Union. Additional information would be desirable on the following variables: (i) the differentiation of sectoral GHG emissions per IPCC sector also for the with additional measures scenario, (ii) GHG emissions from international aviation, (iii) non-GHG air pollutants, (iv) energy related investment needs and (v) levels of electricity exchange per partner.

The projections are presented in a largely transparent way: key parameters have been provided, including sources, and the key models used have been mentioned. The plan's transparency would be further improved by (i) documenting the modelling approach, and (ii) identifying more clearly which of the existing policies and measures have been taken into account in the with existing measures scenario.

²⁹ Required by Article 2a of the Directive 2010/31/EU on the Energy Performance of Buildings Directive as amended by Directive 2018/844.

The model based projections include an uncertainty analysis for different levels of renewable energy. The key model parameters are largely in line with the EUROSTAT figures for the base year 2016. The draft plan follows the fuel and EU ETS prices assumptions recommended by the Commission.

The impact assessment of planned policies and measures is announced to be provided in the final plan. It should include, macroeconomic and, to the extent feasible, the health, environmental, employment and education, skills and social impacts, including just transition aspects.