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COMMISSION STAFF WORKING DOCUMENT

Assessment of the draft National Energy and Climate Plan of Lithuania

Accompanying the document

Commission Recommendation

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

{C(2019) 4415 final}

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1. SUMMARY

Main observations[1]

- ✓ Lithuania's draft plan is based on the National Energy Independence Strategy from 2018 and the Climate Strategy from 2012, which is being updated in 2019. Hence, this update can be reflected in the final plan. Targets and objectives for 2030 are provided for all dimensions. The targets for research, innovation and competitiveness are generic rather than specific for the Energy Union. The majority of the policies and measures presented are in the dimensions of decarbonisation (GHG emissions and renewable energy) and energy efficiency.
- ✓ The draft plan presents planned policies that could significantly reduce greenhouse gas emissions. These policies depend on expected funding from EU and national sources, and implementation is therefore uncertain. While planned policies in the transport sector are well described, transport emissions are projected to increase towards 2030. Lithuania's 2030 target for **greenhouse gas (GHG) emissions** not covered by the EU Emissions Trading System (non-ETS), is -9 % compared to 2005, as set in the Effort Sharing Regulation (ESR)[2]. The European Commission estimates that with existing policies Lithuania may miss this target by 15 percentage points, provided that there is no debit in the land use, land use change and forestry (LULUCF)[3] sector. It can be estimated that this corresponds to a deficit of 6.6 Mt CO_2eq over the period 2021-2030.
- ✓ In addition, the draft plan does not mention the commitment to compensate **LULUCF** emissions by an equivalent amount of CO_2 removals in the same sector (no-debit commitment). This commitment and the access to flexibilities between the LULUCF and the ESR sectors are important missing elements that would be needed for understanding how Lithuania intends to achieve its non-ETS GHG reduction target by 2030.
- ✓ The proposed share of 45 % of energy from **renewable** sources in gross final energy consumption in 2030 is a contribution to the EU renewable energy target for 2030 that is significantly above the share of 34 % in 2030 resulting from the formula in Annex II of the Governance Regulation. The indicative trajectories set out in the draft plan do not meet the 2025 reference point[4]. The contributions by sector are 45 % for renewable electricity generation, 90 % for renewable district heating and cooling, 80 % for household-based heating and cooling, and 15 % for transport using renewable energy. 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.

[1] In addition to the notified draft NECP this assessment is based on 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.

- ✓ Lithuania's national contribution for **energy efficiency** is presented in terms of primary and final energy intensity, which is to be 1.5 times lower than in 2018. Based on complementary information provided by Lithuania these figures would represent a significant increase in both primary and final energy consumption compared to the 2020 energy efficiency national target. The policies and measures described in the draft plan are expected to be further detailed and quantified in the final plan.
- ✓ Regarding **energy security** there is a specific objective of decreasing electricity import dependency to 30 % by 2030. Specific objectives on dependency of gas and oil would be welcome. Policies and measures focus mainly on synchronisation, and have a 2025 horizon. Further details are needed in particular regarding electricity generation adequacy in light of the ambitious renewable energy target, including measures on demand response and storage. The references to cybersecurity are detailed and if further elaborated could be used as reference by other Member States.
- ✓ There is a clear **interconnectivity** level of 23 % in 2030 that Lithuania aims for, and specific actions to be taken in order to achieve it. The final plan would benefit from the inclusion of other elements of the internal market dimension with a 2030 and 2040 outlook, for both the electricity and gas sectors. The situation regarding energy poverty is described and energy efficiency and social measures are being taken to address it; nevertheless, clearer objectives and additional measures are required for the final plan. It would be beneficial to highlight clear objectives and policies for reducing **energy poverty** and intended impacts in the final plan.
- ✓ The draft plan includes a target for investment in **research, development and innovation** of 1.9 % of GDP by 2020, but it is not clear whether this extends also to 2030, and what share of funding is attributed to energy and climate related activities. The final plan would benefit from a clear identification of research and innovation objectives on energy and climate.
- ✓ The draft plan mentions that significant **investments** are needed to implement the planned policies and provides an overall figure for decarbonisation and energy efficiency dimensions of EUR 7.6 billion over 2021-2030. This corresponds to average annual investments in the order of magnitude of 1.5 – 2 % of GDP. No figures are provided for the other Energy Union dimensions for this period. Lithuania intends to provide more details on investment needs in the final plan. This would allow to fully take advantage of the role NECPs can play in providing clarity to investors and attract additional investments in the clean energy transition. EU funds are mentioned as a possible source of finance, but without much detail. The use of the Modernisation Fund has not been described in the draft plan and could be a beneficial addition to the final plan.
- ✓ There is potential for intensifying already existing **regional cooperation** between Lithuania and the other Baltic countries, extending them to new areas and broadening the geographic reach to include the Nordic countries.
- ✓ The final plan would benefit from an analysis of the interactions with **air quality** and air emissions policy, and presenting impacts on air pollution.
- ✓ The issue of a **just transition** to a climate neutral economy could be better integrated throughout the plan by considering social and employment impacts, e.g. shifts in sectors/industries, distributional effects and revenue recycling. The draft plan would benefit from providing more details on the question of skills and training.

- ✓ A list of all **energy subsidies** and actions undertaken and planned to phase them out, in particular for fossil fuels, need to be included in the final plan.
- ✓ The inclusion of adaptation in the draft NECP can be considered to be an example of **good practice**. The draft plan sets strategic as well as sector goals and also provides detailed policies and measures, including budget resources and policy owners in the government.

Preparation and submission of the draft plan

The Lithuanian draft National Energy and Climate Plan (NECP) was submitted to the European Commission 17 December 2018. The draft NECP builds on the climate policy framework from 2012 (National Strategy for Climate Change Management Policy). An update of this Strategy is planned by the end of 2019. The strategy is accompanied by the Inter-institutional Action Plan which defines measures for different sectors for the period 2013-2020. Post 2020 the Action Plan will be part of the final NECP. On the energy side, the draft plan describes the National Energy Independence Strategy (NEIS), approved in 2012 and updated in 2018. This strategy includes strategic directions to 2020, 2030, and 2050. These include integration of the Lithuanian energy system into the EU energy system, renewable energy development, energy efficiency improvement, and modernisation of energy infrastructure.

The **public consultation** on the draft plan is ongoing. An online public consultation, where the stakeholders can access the draft NECP and express their views, was open from 13 December 2018 until 15 March 2019.

Lithuania used the **regional cooperation platform** in the Baltic Energy Market Interconnection Plan (BEMIP) and the Baltic Environmental Ministers Council to exchange on elements of the draft plan. Lithuania expresses the intention to adjust the draft plan based on exchanges with neighbouring Member States in view of finalising the plan.

Overview of the key objectives, targets and contributions

The following table presents an overview of Lithuania's objectives, targets and contributions under the Governance Regulation[5]:

[5] 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.

	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) (%)	+7	+15	-9	As in ESR
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	25.8	23	45	Above 34 % (result of RES formula)
	National contribution for energy efficiency: Primary energy consumption (Mtoe) Final energy consumption (Mtoe)	6.2 5.3	6.5 4.3	10.2 8.0	Very low Very low
	Level of electricity interconnectivity (%)	88	79	23	N/A

Sources: EU Commission, ENERGY STATISTICS, Energy datasheets: EU28 countries; SWD(2018)453; European Semester by country[6]; COM/2017/718; Lithuanian 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

The draft plan includes Lithuania's 2030 binding national **target for non-ETS** greenhouse gas emissions. It also includes the indicative target of 80 % reduction in total greenhouse gas emissions by 2050, presumably compared to 1990.

Separate data for ETS and non-ETS emissions are not presented in the draft plan and an assessment of whether Lithuania is likely to meet its 2030 targets can therefore not be made based on the draft plan alone. However, based on the projections submitted under the Monitoring Mechanism Regulation in 2017, which are used in the draft plan, the Commission estimates that Lithuania may miss its 2030 target by 15 percentage points and have a deficit of annual emissions allocations under the ESR[7] of 6.6 Mt CO_2eq over the period 2021-2030.

[6] 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.

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

This assessment does not take into account possible credits or debits in the LULUCF sector as the draft plan has no information on how Lithuania will meet the no debit commitment. With respect to the National Forestry Accounting Plan including the national Forest Reference Level, submitted by Lithuania as required by Article 8(3) of the LULUCF Regulation, the Commission has put forward technical recommendations requesting action on a number of issues, detailed in SWD (2019) 213.

Projected emissions and removals in the **LULUCF** sector are provided in reported terms; however, the accounting rules set out in the LULUCF Regulation[8] are not used. The latter element is necessary to assess whether Lithuania would achieve its overall non-ETS target.

The draft plan includes an overview of existing and planned policies and measures by sector. The quantified effect of the planned measures in the main effort sharing sectors (transport, agriculture, buildings and waste) amounts to 5.5 Mt CO_2eq over the period 2021-2030. If implemented, the planned measures can therefore significantly reduce the estimated cumulative deficit. Nevertheless, the final plan would benefit from including information on whether Lithuania plans to use flexibilities to meet its non-ETS target. EU programmes are presented as a source of funding for many of the planned measures, especially in the agriculture sector.

In the **transport** sector, Lithuania plans efficiency gains in the vehicle fleet and in the transport system, increased use of alternative fuels (including liquefied natural gas and biomethane), innovative transport technologies, as well as electrification of railways and taxation based on the polluter pays principle. Specific support is planned for electromobility including for charging infrastructure. Around 15000 electric vehicles are expected by 2025. Plans for supporting LNG use in road and maritime transport, are also mentioned, as well as financial support for biomethane use in transport, blending obligations for biomethane and development of infrastructure for biomethane. However, emissions in the transport sector are projected to further increase by 2030, so further measures, not yet included in the draft NECP, would be needed to reduce emissions.

Some of the planned policies, notably in the waste sector, are presented as objectives whereas the type of policies are not specified. Further policy development would therefore be necessary before these actions can be implemented. For energy use (except transport), and for industrial processes and product use, only existing measures are described.

The draft plan describes **adaptation** measures in line with the national adaptation strategy, in many cases including resources and policy owners. Adaptation objectives are not specified in the draft plan, but it is mentioned that they are included in the Strategy for the National Climate Change Management Policy by 2050.

Renewable energy

The overall ambition level for 2030 is to achieve a share of renewable energy in gross final energy consumption of 45 % as contribution to the EU renewable energy target for 2030. This contribution of 45 % is significantly above the share of 34 % that results from the formula in Annex II of the Governance Regulation. The targets are 45 % for electricity generation, 90 % for district heating and cooling, 80 % for household-based heating and cooling, and 15 % for

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

transport. These objectives build on good progress, as Lithuania is already above its 2020 national renewable target and plans to continue increasing its renewable share beyond 2020.

The indicative trajectory is provided for the overall renewable contribution and by sectors and technologies in both shares and quantities. The trajectory is presented in an optimistic and pessimistic scenario. Both trajectories fail to meet the 2025 reference point set out in the Governance Regulation[9].

Wind and solar play key roles, followed closely by bioenergy, in the increase of renewable electricity generation. However, it is not clear how the sectoral trajectory follows the same overall trajectory. More detailed information on planned renewable energy capacity would also provide better investment visibility.

Renewable heating and cooling is the strongest performing renewable sector and is based currently mainly on biomass. The draft plan mentions that ambient energy and solar thermal will also contribute to the achievement of high level of renewable energy in this sector by 2030. However, the proposed measures in view to achieve this level of ambition need to be further developed, in particular on how the indicative annual average increase of 1.3 percentage points increase will be achieved and including on measures on the promotion of renewable energy in district heating and cooling. The role of waste heat is not included.

Regarding renewable energy in transport the draft plan proposes that the target is achieved through renewable electricity and electromobility, conventional and advanced biofuels. However, it is not clear why two trajectories with different starting points have been put forward for the transport sector. For the final plan the calculation of the transport target as requested in Articles 25-27 of Directive 2018/2001[10] in absolute values of ktoes needs to be included also making it clear what Lithuania means by 1st and 2nd generation biofuels, including applicable multipliers, as well as the trajectory of biomass supply for the whole period detailed by sectors, feedstock and origin, export and import.

On the longer term, Lithuania aims to achieve energy independence using mainly renewable energy. By 2050, renewable electricity share is planned to be 80 % and renewable energy in transport 50 %. Renewable self-consumers are planned to account for 50 % of final energy consumption. The draft plan mentions that support for renewable electricity and enabling framework for energy communities and self-consumption will be developed during the course of 2019.

Dimension energy efficiency

Lithuania has set its 2030 national contribution for energy efficiency in terms of primary and final energy intensity which is to be 1.5 times lower than in 2018. The complementary information provided by Lithuania, as part of the iterative process, indicates that the primary energy consumption (PEC) level in 2030 is projected at 10.2 Mtoe and final energy consumption (FEC) at 8.0 Mtoe in 2030. These figures represent a significant increase in both primary and final energy consumption comparing to Lithuania's 2020 energy efficiency target (6.5 Mtoe for

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

PEC and 4.3 Mtoe for FEC), as well as the latest Eurostat 2017 energy data (6.2 Mtoe for PEC and 5.3 Mtoe for FEC).

The projected energy consumption levels for 2030 included in the draft plan are based on the extrapolation of the growth rate of energy consumption in the past three years until 2030 (around 3 % per year) and it is not clear how it is linked with the expected reduction in energy intensity (it is assumed that GDP growth rate would be higher but no macroeconomic projections are provided). Consequently, the methodology for target setting might need to be revised. Overall, the proposed energy efficiency contributions are of very low ambition taking into account the collective efforts needed for achieving the Union's 2030 energy efficient targets.

The policies and measures contained in the draft plan under the energy efficiency dimension are not sufficiently well described and include only a partial estimation of energy savings. More details are needed in order to understand how these measures contribute to the achievement of the 2030 energy efficiency contributions.

The expected impact is quantified only for some of the measures (totalling 25 TWh). The main proposed measures include renovation of multi-apartment buildings, renovation of public buildings, consumer education and advice and implementation of energy audits in industry. The draft plan also indicates that building renovation (50 % of buildings are to be renovated by 2030) and more ambitious building codes for new constructions will deliver the highest energy savings. The current potential for the application of high-efficiency cogeneration and efficient district heating and cooling is missing, but could be relevant in light of the energy savings identified in both buildings and businesses (energy audits).

The plan mentions measures that contribute towards more efficient organisation of the mobility system and thus towards improved energy efficiency and emissions reductions (e.g. investments in infrastructure, incentives for the use of combined freight transport, Sustainable Urban Mobility Plans, promotion of eco-driving). The plan would benefit from more explicit reference to multimodality and modal shift enabled by the completion of the Rail Baltica project, as well as digitalisation and automation in the different transport modes.

An estimate of the cumulative energy savings to be achieved under Article 7 of the Energy Efficiency Directive[11] over the next obligation period 2021-2030 is provided (25 TWh equivalent to 2.1 Mtoe). In relation to Article 5 of the Energy Efficiency Directive, the draft plan refers to an objective to renovate 330,000 m^2 of floor area of public buildings by 2030 (2 TWh of savings).

Dimension energy security

The draft plan describes measurable targets for decreasing electricity import dependency to 30 % by 2030 and 0 % by 2050. However, this is not the case for the gas and oil sectors.

Policies and measures focus mainly on the synchronisation of the electricity systems of the Baltic States with Continental Europe, and have a 2025 horizon, while longer perspective of actions (2030 and especially 2040), are not described in detail. Nevertheless, mitigation measures until full synchronisation is in place could be included in the final plan. In addition, the final plan could be improved by making reference to the existing legislation focusing on energy security

[11] Directive 2012/27/EU on energy efficiency.

(such as risk assessments, preventive action and emergency plans for gas as well as risk preparedness plans for electricity).

The references to cybersecurity are positively noted and additional details for concrete measures could be elaborated further and be used as potential good practice for other Member States.

Dimension internal energy market

Clear 23 % interconnectivity level for 2030 is set in the draft plan, including concrete actions to be taken in order to achieve it. However, the final plan should be updated with the latest details of specific EU Connecting Europe Facility support for the infrastructure projects and national financing measures. On the other elements of the internal market dimension, the longer perspective seems to be missing (2030 and especially 2040). However, it is noted that up to 2025 the draft plan present concrete policies and measures. Similarly, in the gas sector – there is a clear target of creation of the regional gas market model in Baltics States which has very concrete objectives and measures. Nevertheless, the draft plan sets as well an important aim to abandon the regulated prices but without concrete timeframe and measures foreseen to achieve it.

An improved description of the current situation of the domestic electricity and gas markets, in particular for the **wholesale market** would set the scene for setting targets and designing policies and measures. This would require presenting more information on general market functioning (wholesale market concentration levels, indicators for market liquidity such as traded volumes and market participants). Similarly, on the **retail side**, information on real-time price signals, flexibility, demand response, aggregation, distributed generation and overall competitiveness in the retail energy sector would enrich the final plan.

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 draft plan describes the situation regarding **energy poverty**, and how it is dealt with by using social policy and heating compensation. The draft plan mentions that the percentage of citizens in energy poverty increased by 1.8 percentage points since 2008. It seems that the most vulnerable consumers are located in urban areas and live in multi-apartment blocks. The renovation of these buildings foreseen in the draft plan can contribute to mitigate energy poverty. The final plan would benefit from setting adequate objectives to mitigate energy poverty by including specific additional policies and measures for the period 2021-2030.

Dimension research, innovation and competitiveness

The ongoing national smart specialisation programme serves as the guideline for public investment to research, development and innovation. This programme includes a priority on energy and sustainable environment. The draft plan also mentions the innovation development programme for 2014–2020, the national industry digitalisation programme and the green industry innovation programme. An overall funding target for investment in research, development and innovation of 1.9 % of GDP by 2020 has been provided, but it is not clear whether this extends also to 2030, and which share of this funding would be attributed to energy research and innovation related activities. Therefore, clear identification of research and innovation objectives to be achieved by 2030 through the indicated programmes are needed in the final plan.

As regards competitiveness, reference is made to the Lithuanian Innovation Program 2014-2020, to the high potential of solar energy sector and to the importance of digitisation, without however providing clear objectives to be achieved by 2030. The NECP would benefit from presenting a comprehensive analysis on where the 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.

There is no information provided on Lithuania's participation in the Strategic Energy Technology (SET) Plan and how the SET Plan objectives are being translated to a national context.

3. COHERENCE, POLICY INTERACTIONS AND INVESTMENTS

The draft plan attempts to establish the interactions between different policies and measures, and in particular regarding the non-ETS sector, energy efficiency and renewable energy, for which GHG savings are provided for some policies and measures. The draft plan also acknowledges the importance of renewable energy and energy efficiency measures to energy security. However, more details could have been provided on consistency between existing and planned policies and measures across the Energy Union dimensions.

Additionally, there is little information on how possible challenging interactions would be addressed. For example, the draft plan states that the planned increase in biomass use for energy will not have a significant impact on the LULUCF sector. However, it is not clear whether this statement assumes the application of the accounting rules as set out in the LULUCF Regulation (i.e., accounting based on the Forest Reference Level).

Considering the relevance for greenhouse gas emission reductions, the final plan could reflect interactions with the **circular economy**. The National Sustainable Development Strategy could be mentioned with its target for 2020 that the growth of the consumption of natural resources will be half that of the growth of production and services, as well as the National Waste Prevention Programme.

The need to preserve **biodiversity** and reduce vulnerability of **ecosystems** is mentioned in the plan. However, including analysis of the synergies and trade-offs between climate and biodiversity policies and actions (e.g. role of ecosystem services for mitigation and adaptation) would benefit the final plan.

The draft plan lacks quantitative information on the interactions with **air quality and air emissions policy**, while the projected increase in bioenergy would make air impacts especially important to consider. The issue of a **just transition** to a climate neutral economy could be better integrated throughout the plan by considering social and employment impacts related to a green/circular economy. For example shifts in sectors/industries (and skills impacts), distributional effects (and energy poverty) and revenue recycling. The draft plan would benefit from providing more details on the question of skills and training. It would also benefit from considerations in terms of costs and benefits as well as cost effectiveness of planned policies and measures. Energy prices projections and developments would also be beneficial additions.

The draft plan mentions that significant **investments** are needed to implement the planned policies. The overall investment figures for decarbonisation and energy efficiency dimensions

seem to add up to EUR 7.6 billion over 2021-2030. This corresponds to average annual investments in the order of magnitude of 1.5 - 2 % of GDP. No figures are provided for the other Energy Union dimensions for this period. More consistent information on investment needs would be needed for the final plan, including the assumptions behind the provided figures and the mechanisms to promote the necessary investments. Lithuania has not reflected on the use of its projected ETS revenues including its share from the Modernisation Fund (8 million allowances in 2021-30, corresponding to around EUR 159 million at current carbon price)[12]. Some investment needs could partly be covered by cohesion policy funding, notably in line with the investment guidance for 2021-2027 of the 2019 European Country Semester Report for Lithuania and with any other relevant legislation.

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 Lithuania, published on 27 February 2019[13], the European Commission's recommendation for a Council recommendation for Lithuania issued on 5 June 2019[14], in the context of the European Semester, highlights in particular the need to invest in '*energy and resource efficiency, sustainable transport and energy interconnections*'.
- When preparing its overview of investment needs and related sources of finance for the final plan, Lithuania should take into account these recommendations and links to the European Semester.

Lithuania describes **energy subsidies**, including support schemes to renewable energy and to the use of fossil fuels although noting that estimates are not available. The Energy Prices and Costs report[15] of the European Commission identifies and estimates energy subsidies in Lithuania and might be useful reference to develop further this section. More detailed description of existing energy subsidies and of the national policies, timelines and measures to phase out energy subsidies (particularly for fossil fuels) is also an important element to be included in the final plan.

4. REGIONAL COOPERATION

Lithuania is part of the Baltic Energy Market Interconnection Plan (BEMIP). BEMIP's main objectives are to develop an internal and regional energy market between the EU Member States in the Baltic Sea region and integrating it fully into the EU's energy markets thus increasing security of supplies. There is also the Baltic Energy Technology Scenario study (BENTE) and the Nordic Energy Technology Perspectives (NETP) which are all platforms used by Baltic and Nordic governments to exchange and involve industry and civil society.

[12] The figure is based on the amounts established in Directive (EU) 2018/410 and is subject to various uncertainties, such as the possibility to transfer allowances available pursuant to Article 10c to the Modernisation Fund.
[13] SWD(2019) 1014 final: Country Report Lithuania 2019.
[14] COM(2019) 515 final: Recommendation for a Council recommendation on the 2019 National Reform Programme of Lithuania and delivering a Council opinion on the 2019 Stability Programme of Lithuania.
[15] 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.

The draft plan states the need to further consider other Member States' draft NECPs and explore synergies, in particular with the other Baltic and Nordic countries. Lithuania intends to use the existing regional cooperation platforms (BEMIP, BENTE and the Baltic Environment Ministers Council) in the finalisation of the plan.

There is a significant potential to strengthen regional cooperation in the areas of security of supply and for example update the 2012 regional joint assessment of the risks affecting the security of gas supply. On the internal market, where the draft plan already highlights the regional dimension, further cooperation could include, for instance, a regional approach when assessing system adequacy as foreseen in the new Electricity Regulation. This is relevant view to the expected shutdown of Estonian oil shale generation capacities, combined with an increase in intermittent renewable generation which can impact ensuring electricity generation adequacy, with implications for the regional electricity market.

As mentioned by Latvia in its draft plan, it could be relevant for the Baltic States to cooperate on certain aspects of the climate policy, including policies and measures to reduce greenhouse gas emissions from transport. Decarbonisation of the transport sector plays a significant role in achieving the long-term climate and energy targets. This is a challenging area for the Baltic states as evidenced for example by the recent figures on the shares of renewable energy in transport (0.4 % in Estonia, 2.5 % in Latvia and 3,7 % in Lithuania in 2017, compared to the 2020 target of 10 %[16]). Harmonising development of charging and refuelling infrastructure between neighbouring countries, also between the Baltic and the Nordic countries, is highly beneficial.

Research is another area in which regional cooperation based on the draft NECPs could effectively be pursued further, taking into account the work of existing cooperation platforms such as the Nordic Energy Research can be effective in promoting the achievement of Energy Union objectives of driving the energy transition and improving competitiveness.

To also note that Lithuania was the first Member State to conclude an agreement on statistical transfer to sell some of its renewable energy surplus (related to its 2020 target) to another Member State (Luxembourg).

5. COMPLETENESS OF THE DRAFT PLAN

Information provided

The Lithuanian draft NECP is structured according to Annex I of the Governance Regulation[17]. All sections are easily identifiable, but vary in length and detail.

The **decarbonisation dimension** of the draft NECP is partially complete**.** Information on Lithuania's LULUCF commitments and its annual emission limits in 2021-2030 under the Effort Sharing Regulation is missing. The draft plan does not apply the accounting rules as set out in the LULUCF regulation, which are necessary to assess whether Lithuania would achieve its overall non-ETS target.

Regarding **renewable energy**, the required elements are only partially provided. Trajectories for the bioenergy demand (and their disaggregation between heat, electricity and transport),

[16] Eurostat.
[17] Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

trajectories of supply (by feedstock and by origin), trajectories for forest biomass, and an assessment of its source and impact on the LULUCF sink need to be included in the final plan. Planned capacities are generally described but are not split between new capacities and repowering. It will also be important for it to include measures ensuring the sustainability of biomass production and use and measures to improve forest management techniques. For the policies and measures section, there is a comprehensive list of policy measures with brief general objectives and quantified impacts. Measures regarding power purchase agreements (PPAs) are not included.

The **energy efficiency** contribution, expressed in terms of energy intensity improvement, has not been clearly defined nor translated into absolute values for primary and final energy consumption. It is also not explained how the energy efficiency first principle was applied and only a generic description of planned measures is provided without indication of the expected impacts. Projections for primary and final energy demand for each sector at least until 2040 considering existing and additional energy efficiency policies, and measures and programmes are only envisaged for the final plan. No concrete information is provided on the key elements of the long-term renovation strategy under Article 2a of the Energy Performance of Buildings Directive[18]. The cost-optimal minimum energy performance requirements for buildings under Article 4 of the EPBD[19] are missing.

On the **energy security** dimension information is needed on how future electricity generation adequacy will be ensured in light of the renewable energy target, including on demand response and storage.

As regards the **internal market** dimension, the planned electricity interconnectivity level for 2030 is included. The draft plan contains limited information on core quantitative parameters on the functioning of the national retail and wholesale gas/electricity markets.

The information provided related to **research, innovation and competitiveness** is limited. A funding target for investment in research, development and innovation has been provided only for 2020. The draft plan notes that the 2050 national objectives related to the promotion of clean energy technologies and deployment of low carbon technologies are currently under development. No objectives related to competitiveness are included.

Robustness of the Lithuanian draft National Energy and Climate Plan

Elements of the **analytical basis are included in the draft NECP** with existing measures (WEM) projection is reported in the main document. Information on GHG emissions for with additional measures (WAM) projections is not fully provided in the draft plan. As far as documented, data sources include the Lithuanian Statistical Institute, the Lithuanian Energy Institute and the European Commission (country reports).

The **WEM projection** covers aspects of the five dimensions of the Energy Union. The greenhouse gas projections from 2017 are announced to be updated in the final plan. On GHGs, the final plan would benefit from having detailed numerical data for both WEM and WAM projections, including: (i) the differentiation of sectoral GHG emissions per IPCC sector, (ii) the

[18] Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings as amended by Directive (EU) 2018/844.
[19] Directive 2010/31/EU on the energy performance of buildings.

differentiation of sectoral GHG emissions per IPCC gas, (iii) the differentiation of sectoral GHG emissions between those covered by the EU ETS and those falling under the Effort Sharing Regulation, (iv) GHG emissions from international aviation, (v) GHG emissions and sinks from LULUCF, and (vi) non-GHG air pollutants.

There are WEM sectoral projections of final energy consumption and sectoral trends, e.g. the energy consumption in the residential sector. Detailed WEM and WAM projections covering renewable energy and energy efficiency would be desirable for the final plan including: (i) numerical data up to 2040 for all variables, (ii) numerical data for those values that are currently presented in charts, (iii) information on energy related investment needs. Also, numerical values for key parameters like (i) GDP, (ii) population, (iii) households, (iv) costs of technologies, fuels and emissions allowances would remove ambiguities regarding the modelling results.

The draft plan quantifies the impact of existing policies and measures on GDP. The completion of an **impact assessment** of policies and measures is announced for the final plan, which should complete the assessment of macroeconomic and, to the extent feasible, the health, environmental, employment and education, skills and social impacts, including just transition aspects.

Except for the final energy consumption and the renewable energy shares, other key model parameters are not calibrated to the EUROSTAT figures for the base year 2015. It is unclear whether the draft plan follows the fuel price projections recommended by the Commission. It does not follow the recommendations on carbon prices. A fixed value for the ETS price is assumed in the WEM scenario, but with no time horizon.