



RECOMMENDATIONS

by the Energy Community Secretariat

on the Draft National Energy and Climate Plan of North Macedonia

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Energy Community Secretariat

Recommendations

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1. Procedure

1. In 2018, the Ministerial Council of the Energy Community adopted Recommendation 2018/01/MC-EnC which considers that

“the development of integrated national energy and climate plans by the Contracting Parties would support the attainment of the long-term energy and climate policy objectives, reduce the administrative burden and enhance transparency while promoting investor certainty in the region. The framework for regional cooperation established by the Energy Community and the assistance offered by its institutions and bodies is essential to prepare the successful development of integrated national energy and climate plans.”

2. Article 1 of Recommendation 2018/01/MC-EnC sets out in more details the structure and content of the national energy and climate plans covering the period from 2021 to 2030. Articles 2 to 5 of Recommendation 2018/01/MC-EnC describe the process of their adoption and review. Moreover, the Policy Guidelines 03/2018 of the Secretariat on the development of National Energy and Climate Plans under Recommendation 2018/01/MC-EnC incorporate the European Commission’s Communication COM(2015) 572 final which provided guidance to EU Member States to start developing national plans for the period 2021 to 2030.

3. Article 5(2) of Recommendation 2018/01/MC-EnC stipulates

“In view of the submission of the final national plans by Contracting Parties, the Secretariat should issue recommendations on draft national plans.”

4. In March 2019, North Macedonia established a national working group to work on the NECPs. The national working group submitted the draft national energy and climate plan to the Secretariat for assessment under Recommendation 2018/01/MC-EnC on 29 July 2020.
5. Following a detailed assessment of the draft national energy and climate plan, the Secretariat provides the following general remarks and recommendations.

2. General Remarks

6. At the outset, the Secretariat commends the achievements of North Macedonia in setting up and conducting a robust drafting process for the national energy and climate plan (“the draft NECP”). North Macedonia has conducted several working group meetings with the participation of a wide range of stakeholders, including public institutions, local and international experts, private sector, academia and civil society, making the process a transparent and inclusive one.

7. The Secretariat notes that contrary to the situation in the European Union, the Energy Community has not committed to common targets on GHG emissions, energy efficiency and renewable energy to date. Article 1(2) of Recommendation 2018/01/MC-EnC suggests that the Contracting Parties

“should ... set out the direction of national energy and climate objectives and policies in a way that is coherent with the commitments made by Contracting Parties under the Paris Agreement as well as with other possible long-term energy and climate targets for 2030 applicable to Contracting Parties.”

8. That said, the Secretariat is also conscious of the current European Union commitments towards the Paris Agreement, as well as the ongoing discussions on updating these

commitments. It recalls that the Contracting Parties have the possibility to modify their NECPs upwards anytime in case the national legislation or the Energy Community acquis develops further with regard to targets on GHG emissions, energy efficiency and renewable energy in line with a higher level of ambition in the European Union.

9. On the current ambition level of the draft plan of North Macedonia, the Secretariat welcomes the general targets proposed, namely an 82% greenhouse gas (GHG) net emissions reduction relative to 1990 levels by 2030, a 20.8% savings of final energy consumption and 34.5% savings of primary energy consumption relative to the business as usual (BAU) scenario, and a 38% share of renewable sources in gross final energy consumption by 2030.
10. The Secretariat also commends the plan for gradual decommissioning of the existing coal power plants and accelerating the utilization of renewable sources in the electricity generation mix in conjunction with energy efficiency measures in all sectors. Furthermore, the envisaged introduction of a CO₂ tax that *“will speed up the phasing-out of conventional fuels, fossil fuel subsidies and at the same time stimulate the investments in RES and implementation of energy efficiency measures”* will be an important achievement. The Secretariat agrees that these are crucial measures of a clean energy transition of North Macedonia.
11. The draft NECP rightly accounts for the energy efficiency first principle. Demand side energy savings will usually be more cost-effective than investments in (additional) energy infrastructure and thus support energy security, reduce consumers’ energy expenditure and help to reduce greenhouse gas emissions from energy usage. The Secretariat welcomes that the plan outlines quite a number of policies and measures on energy efficiency addressing a wide range of topics including the building sector, appliances, green procurements and awareness-raising programmes, which altogether rightly underline the importance of this dimension.
12. Besides the overall target on renewable energy sources, the draft NECP includes sectoral targets for renewable energy. The sectoral goal for the share of renewable energy in final energy consumption in the electricity sector is 66% by 2030, while the target for the share of renewable energy in final energy consumption in the heating and cooling sector is 45% by 2030. The Secretariat welcomes that the policies and measures on renewable energy sources in the draft NECP are correctly accompanied by specific timeframes, sources of finance, implementation and a monitoring entity.

3. Recommendations

13. In the following, the Secretariat, gives its recommendations on the draft NECP as requested by the Ministerial Council of the Energy Community by Article 5(2) of Recommendation 2018/01/MC.

3.1. Overall Recommendations

14. At the outset, the Secretariat recalls that the NECPs should integrate and streamline current energy and climate planning and reporting requirements (Article 1(4) of Recommendation 2018/01/MC-EnC), foster cooperation among different sectors and provide a level of planning that will ease public and private investment. This integrated approach requires that the interactions between chapters are thoroughly assessed and elaborated in the NECP. While the different chapters themselves are elaborated in a detailed manner in the draft NECP, the targets and objectives addressed by different chapters are not yet integrated enough, their interlinkages are not sufficiently addressed and the potential of supporting each other is not described in detail. To give an example, the interlinkages between market integration, the introduction of carbon pricing and their effects on GHG emissions and renewables deployment would benefit from a more thorough assessment.

1 The Secretariat recommends that the interlinkages between different chapters are better identified and assessed in the final NECP.

15. The increase of energy efficiency and renewable sources (RES) in energy generation are key components to decarbonizing the economy and to provide clean and sustainable energy to consumers. The draft NECP includes thoroughly described support schemes and fiscal system in general, however there are also support schemes for small hydropower plants (sHPP) present with no capacity threshold. The absence of such a threshold could be considered as a direct incentive to develop sHPPs.

2 The Secretariat recommends that the final NECP should further elaborate on schemes supporting the deployment of renewables, in particular in relation to small hydropower, and to ensure that the incentives provided do not favour specific renewable energy resources which either do not require support or have disproportionate environmental impact. The Secretariat's Policy Guidelines on small hydropower plants can serve as a reference when finalising the NECP.

16. In terms of diversifying the sources of energy and ensuring energy security, the Secretariat welcomes that medium to long term objectives on energy security are well defined in the draft NECP, including better integration in the regional and European market, improved energy efficiency, increased flexibility through the combination of existing and newly constructed power plants etc. However, there are no policies and measures specific to the energy security dimension in the draft plan.

3 The Secretariat recommends that the final NECP elaborates policies and measures specific to the energy security dimension.

17. A fully integrated energy market is an indispensable precondition for achieving targets and objectives proposed for other dimensions of the plan. The Secretariat commends that the draft NECP gives this integration an important role. Market integration indeed plays an important role for reaching the ambitious renewable energy target of 66% in gross electricity generation, as well as for ensuring system adequacy and energy security through limiting import dependence to 59% in 2030.

4 The Secretariat recommends that in the final NECP targets and objectives for regional and pan-European market integration on different timeframes are defined.

18. The draft NECP emphasizes important co-benefits of decarbonisation, such as the creation of green jobs or the health benefits of reduced air-pollution. The notion of just transition is mentioned, yet concrete indicators and targets, as well as the interactions among different sectors of the economy and society are not well described.

5 The Secretariat recommends that the just transition dimension is analysed on the basis of indicators and targets in the final NECP, including socio-economic impact and energy poverty.

19. Article 3 of Recommendation 2018/01/MC-EnC suggests that NECPs should complement and where possible reinforce each other. In this respect, the Secretariat observes that the draft NECP lists several regional and cross-border cooperation possibilities and builds on the existing frameworks and fora on knowledge exchange (including in the framework of the Energy Community). The draft NECP also contains a detailed list of possible topics of cross border relevance. However, the document does not contain an assessment of the impacts of these plans on the neighbouring countries.

6 The Secretariat recommends to start bilateral and/or regional exchanges with interested Parties on the effects of the NECP on them, and include a description of the outcome of such consultations in the final NECP. The Secretariat further recommends

that the final NECP contains an assessment of how the envisaged objectives and policies will affect other Parties, and how cooperation across policy areas and sub-sectors can be strengthened.

20. While the process of drafting the NECP in North Macedonia was exemplary, a political and public validation of the main elements of the plan at the national level has to be achieved. According to Article 1(6) of Recommendation 2018/01/MC-EnC, Contracting Parties should ensure comprehensive public participation in the preparation of national plans. This means that the plan has to undergo public consultations, and should also be shared with parliamentarians in line with Articles 10 and 11 of the Governance Regulation.

7 The Secretariat recommends that before NECP adoption, North Macedonia carries out a strategic environmental assessment in line with Article 3 of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, including transboundary consultations stipulated in Article 7 of the same Directive.

21. The draft NECP does not contain a 2050 outlook as envisaged by Annex I of the Governance Regulation and the Paris Agreement. The draft NECP also foresees a rise in GHG emissions after 2030, mainly ascribed to the transport sector. With such a rise of emissions after 2030, the long term objectives of the Paris Agreement would not be met.

8 The Secretariat recommends that the final NECP contains a long term outlook up to 2050 which provides also an overview of how the government intends to address the anticipated rise of GHG emissions in order to ensure that the goals of the Paris Agreement are met.

22. The quantitative assessment of the draft NECP in chapters 4 and 5 is largely in line with Annex I of the Governance Regulation (with the exception addressed in the recommendation). The draft NECP also reports on the parameters and indicators stipulated in Annex I of the Governance Regulation. Information on the impact and budget is included for the vast majority of individual policies and measures, and their impact on different dimensions is established.

9 The Secretariat recommends that a more detailed and comprehensive elaboration is added in the final NECP for the current potential for the application of high-efficiency cogeneration, efficient district heating and cooling, and cost-optimal levels of minimum energy performance requirements.

3.2. Specific Recommendations

A) Decarbonisation

a) GHG emissions and removals

Targets and objectives

23. The transport sector plays an important role in energy and climate in terms of energy use/demand and growth. The share of emissions of transport in the energy sector has increased from 8% in 1990 to 28% in 2016 in North Macedonia. The transport sector targets seem to follow a lower level of ambition in comparison to the impact of the sector on GHG emissions. The targets and the policies and measures do not seem to be sufficiently ambitious and are missing critical areas of action. A review and a focus on electro-mobility (powered by renewable electricity) is justified both from a decarbonisation and a security point of view, since only 30% of electricity is currently imported (compared to 99% of oil imports).

10 The Secretariat recommends to review the objectives for the transport sector in the final NECP. This may include a higher penetration of electric vehicles (EVs) and biofuels for heavier vehicles.

24. Carbon sinks are expected to continuously increase by 2030 and will play a significant role in achieving the proposed sectoral targets of 29% emissions reduction in the agriculture sector, and a 95% increase in removals in the forestry and land-use and land-use change sectors. 30% of all emissions reductions will come from these sectors according to the draft NECP.

11 The Secretariat recommends to elaborate in the final NECP on how to incentivize the full participation, behavioural changes and practice by all stakeholders needed for the implementation of these objectives in the sectors concerned, along with adequate financial support needed.

25. The waste sector targets for 2030 are ambitious. The GHG emission reduction target set for 2030 in the waste sector equals 21% below 1990 level, which would result – if achieved - in total waste sector emissions of 323 Gg CO₂eq in 2030. However, the text refers to an upward trend in waste sector emissions up to 2035 under the reference scenario, while the corresponding graphs do not show a major growth. Absolute numbers describing projected 2030 and 2040 emissions from waste are not specified in the text.

12 The Secretariat recommends to harmonize in the final NECP the text and corresponding graphs on the waste sector and resolve the discrepancies.

26. The Secretariat welcomes the latest governmental statements on phasing out coal/lignite. The government also announced its intention to converting the existing Bitola Lignite Thermal Power Plant (TPP) to gas. However, these efforts may be inconsistent with previously adopted administrative decision in relation to new lignite mines, refurbishment of the Bitola TPP and proposed amendments to the Law on Environment concerning large combustion plants. Besides, the objective of gradually phasing out coal for electricity generation does not include a detailed action plan and is not reflected in the graphs showing the planned consumption of coal. According to several graphs, coal consumption remains stable between 2020 and 2030/2040.

13 The Secretariat recommends that coal phase out plans, in particular related to the decommissioning of coal-fired power plant Bitola are elaborated in more details in the final NECP. This should include replacement plans for coal-fired power plants, where considered necessary. The Secretariat recommends that in this respect the final NECP contains an economic assessment, considering the adoption of a carbon price in the future, as well as an environmental assessment in line with the emission limit values set in Directive 2010/75/EU on Industrial Emissions.

27. Energy subsidies are only mentioned in relation with energy poverty measures. The draft NECP does not address the phasing out of energy (in particular, fossil fuel) subsidies to producers of electricity which are lower in North Macedonia, compared to the region. An Analysis of Direct Subsidies to Coal Electricity Production in the Energy Community Contracting Parties of 2020 found that direct subsidies to coal-fired electricity generation in North Macedonia amounted to EUR 3,83 million in the period 2018-2019.

14 The Secretariat recommends that the final NECP includes “national policies, timelines and measures planned to phase out energy subsidies, in particular for fossil fuels” in line with the Governance Regulation, and that a phase-out target and measures are set.

28. The draft NECP contains no target for the reduction of energy poverty, only a plan to establish indicators for assessing the number of households in energy poverty by end 2021.

15 The Secretariat recommends that the final NECP includes a target on the reduction of energy poverty, once indicators are defined. The Secretariat also recommends that measures to address energy poverty are added and linked to the ones envisaged for the (narrower) category of vulnerable customers. The final NECP should elaborate further on social implications of decarbonization, such as the impact of the coal phase out on employment and consumer energy prices, with a particular focus on energy poverty.

Policies and Measures

29. Market integration combined with carbon pricing could bring coal phase-out much earlier and more effectively. The Secretariat welcomes therefore that carbon pricing and its possible impacts are addressed in the draft NECP.

16 The Secretariat recommends that more information on concrete policies and measures is included in the final NECP, including plans on the use of revenues, proposed tax or emission price levels, budgetary implications of the tax or emission price, and more concrete indicators on the carbon pricing effects. The Secretariat recommends to use the findings of the Study on Carbon Pricing Design for the Energy Community as a point of reference for this purpose. The Secretariat further recommends that the final NECP considers the regional aspects of introducing a carbon pricing mechanism, which could have significant impact on the electricity production and energy mix of other Contracting Parties and Member States in the region as well.

30. In terms of budgetary estimations, the total spent on the seven transport-related policies and measures account for 44% with existing measures, or 55% with additional measures, of the total envisaged expenditures, depending on the scenario. Yet in terms of results, the total savings from the transport sector appear to be just 5% of overall GHG savings in the 2016-2030 period. They may thus not be sufficient and/or efficient for meeting the objectives in a 2030 perspective. The draft NECP also foresees a rise of emissions coming from the sector after 2030.

17 The Secretariat recommends to increase the ambition level of the transport related policies and measures in the final NECP. Furthermore, the Secretariat recommends to review the high dependency on diesel vehicles in the passenger car sector in line with increasing phase-out policies and bans on diesel vehicles all over Europe.

31. On policies and measures on forestry, such as the establishing of integrated management of forest fires and on afforestation, the measures seem appropriate. However, more clarity on the methodology would benefit the final NECP.

18 The Secretariat recommends that a specification on the methodology used for the calculation of emission savings is introduced in the final NECP, and that the interlinkages of the forestry sector with other dimensions, such as the use of biomass production, are assessed.

32. The quantified impacts of the policies and measures on the agriculture sector seem appropriate. However, because of the methodology used for some of the calculations, their quantified impacts on GHG emissions seem to be difficult to prove, which makes the foreseen effects not understandable in a straight-forward manner.

19 The Secretariat recommends that the basis upon which the "baseline" and "with measures" calculations are carried out in terms of emissions factors per unit under the agriculture-related policies and measures are clarified.

33. While the policies and measures on agriculture, forestry, land use and land use change are described in the draft NECP, their timeline goes until 2040. There are currently no 2030 targets set in the draft NECP, which makes monitoring more difficult.

20 The Secretariat recommends to set targets for 2030 driving the policies and measures on agriculture, forestry, land use and land use change in the final NECP.

34. The impacts, timeline and budget of the individual policies and measures related to the decarbonisation dimension seem mostly appropriate. However, the interlinkages among and potential reinforcement of different measures are not elaborated in the draft NECP.

21 The Secretariat recommends that the interlinkages and the possible reinforcements among the policies and measures of the decarbonisation chapter are further elaborated in the final NECP.

b) Renewable Energy

Targets and objectives

35. Besides the overall target for the share of energy from renewable sources in gross final consumption of energy in 2030 of 38%, the draft NECP sets sectoral targets for the share of renewable energy in final energy consumption in the electricity sector of 66% and 45% for the share of renewable energy in final energy consumption in the heating and cooling sector. Regarding the sectoral target of renewables in transport (RES-T), the draft plan sets a target of a 10% share in the final energy consumption by 2030. The draft explains that electric vehicles can contribute to an increase of renewables share in transport by 8 percentage points, reaching 17% RES share in transport in 2030 according to the Energy Strategy of North Macedonia. The draft NECP considers that the 10% share of renewables in transport by 2030 will be reached only by using biofuels.

22 The Secretariat recommends to more clearly elaborate the potential for and determine an electromobility target in the final NECP. The study Modalities to Foster use of Renewable Energy Sources in the Transport Sector by the Energy Community Contracting Parties may serve as a point of reference for this purpose. It is also recommended that North Macedonia develops and adopts a legal framework that includes all major elements required for establishing renewable energies in transport.

Policies and Measures

36. Current incentives for the support of electricity generation from renewable energy sources are described in the draft NECP. However, an analysis of their efficiency, effectiveness, impact and costs is missing. Noting that feed-in tariffs are still being kept as an option, such an analysis would have to include also alternative support schemes of the kind more widely used in Europe now.

23 The Secretariat recommends to add more details on cost-efficiency, market-compatibility and impact of the support scheme, including a potential full switch from administratively set feed-in tariffs to market-based support scheme and allocation through auctions.

37. The market integration dimension includes policies and measures on the further development of the distribution system network to integrate more renewable energy sources.

24 The Secretariat recommends that measures for increasing flexibility (such as smart grids, aggregation, demand response, storage, mechanisms for dispatching, re-dispatching and curtailment, real-time price signals, including the roll-out of intraday market coupling and cross-border balancing markets) are elaborated in the final NECP,

in line with the recommendations provided in the chapter on the internal energy market below.

38. The main purpose of using guarantees of origin is to show the final consumer that a given share of energy is produced from renewable sources. However, there are several other externalities making the certificates attractive. Implementation of the system of guarantees of origin can bring benefits facilitating the achievement of targets, including extra revenue for support scheme costs, additional income and increase in renewable energy investment.

25 The Secretariat recommends that the final NECP introduces a policy and measures tapping the potential associated with guarantees of origin.

39. The policy and measure on the development of a biofuels market envisages a 10% target on the share of renewables in transport by 2030, which should be achieved by biofuels. There is, however, no reference that this excludes first generation biofuels. Furthermore, decarbonisation of the transport sector is foreseen by electrification and by biofuels, without other technologies, such as hydrogen fuel cell vehicles.

26 The Secretariat recommends that a cap for first generation biofuels is introduced in the corresponding measure of the final NECP, and it is further clarified by which fuels the total biofuels target should be achieved.

B) Energy Efficiency

Targets and objectives

40. The overall 2030 energy efficiency target is described as 34.5% in primary and 20.8% in final energy consumption by 2030 compared to the business as usual scenario, with absolute figures included. However, the draft NECP sets annual targets to be achieved through energy efficiency obligation schemes lower than under existing Energy Community law, let alone in Energy Efficiency Directive (EU) 2018/2002, namely at 0.3% p.a. for 2021-2030 and 0.2% p.a. for 2031-2040.

27 The Secretariat recommends that the final NECP sets an initial target at minimum 0.7% of annual final energy consumption in line with the Energy Efficiency Directive (EU) 2018/2002 until Directive (EU) 2018/2002 is incorporated in Energy Community.

Policies and Measures

41. While sectoral measures are well defined to allow the achievement of the headline energy efficiency target, development of the corresponding policies are missing. For instance, building renovation measures were included while a measure for development of a building renovation strategy was not. Similarly, a measure for improvement of the street lighting in the municipalities features in the draft, while the development of regulation and model energy performance contracts, as required also by the Law on Energy Efficiency, is missing.

28 The Secretariat recommends that corresponding policies are included in the final NECP to support the achievement of the sectoral measures.

42. Moreover, there are coherence issues between policies and measures on retrofitting of existing central government buildings and retrofitting of existing local self-government buildings or between construction of new buildings and construction of passive buildings. Furthermore, data validation is needed for policies and measures on energy efficiency obligation schemes, retrofitting of existing central government buildings, retrofitting of existing local self-government buildings and increased use of heat pumps. Information is missing on policies and measures on retrofitting of existing central government buildings.

29 The Secretariat recommends that the coherence between the above listed policies and measures is ensured, and the missing data for the proper assessment of the impact of these policies and measures is included in the final NECP.

C) Energy Security

Targets and objectives

43. The draft NECP acknowledges that in the medium and long-term North Macedonia will remain dependent on imports for more than half of its primary energy consumption. The target of 59% for import dependence in 2030 is one of the main strategic goals in the draft NECP. This is accompanied by the objective to improve the energy market integration, increase diversification of domestic energy sources, primarily through the implementation of a 2030 renewable energy target, and supply routes. The Macedonian electricity system is well interconnected and still improving, the target for an interconnectivity level of 45% in 2040 is sufficient to ensure security of electricity supply. With regard to natural gas supply, the objective is to develop and diversify supply routes by constructing additional pipelines with Greece, Kosovo* and Serbia.

30 The Secretariat recommends that security-specific objectives and measurable targets are included in the final NECP.

44. Given the high reliance on imports, the Secretariat considers that the security-specific objectives related to the preparedness for constrained or interrupted supply are insufficiently addressed, as are reliability standards and the necessary level of energy security. The draft NECP does also not distinguish between conditions for energy supply from third countries (i.e. outside the EU or Energy Community) and supply from the Energy Community Parties.

31 The Secretariat recommends to introduce risk assessment and security planning mechanisms on utility and national level, including regional components. It is further recommended that a regionally (and, where appropriate, pan-European) coordinated approach to ensuring energy security such as coordinated adequacy assessments, security analyses, preparedness and management of crisis on the basis of solidarity, including the necessary technical, legal and financial arrangements for the implementation of the regional or bilateral measures, is elaborated in the final NECP.

45. Improving cybersecurity measures in the energy sector, along with the increased digitalisation and smart energy facilities, has been recognised as an objective in ensuring energy security.

32 The Secretariat recommends to define measurable targets in the final NECP on improving cybersecurity and resilience in the energy sector.

46. The cross-cutting character of energy security makes it inevitable that the interlinkages of different dimensions of the NECP and their contributions to the implementation of energy security goals are assessed. This is in particular related to the development of a well-functioning and integrated energy market which is crucial in securing reliable energy imports.

33 The Secretariat recommends that the final NECP elaborates on the interlinkages between the proposed targets, objectives, policies and measures defined under other dimensions, and their contribution to the implementation of energy security objectives.

47. The draft NECP also discusses the energy security aspects of switching of fuel sources, however their environmental benefits are not described sufficiently. This includes the regional impact. For instance, switching from coal other fuels could also reduce the carbon footprint in neighbouring countries, which are exporters of electricity to North Macedonia.

34 The Secretariat recommends that the final NECP discusses in more detail the environmental benefits (decreasing GHG emissions and air pollutants) of switching from coal to less carbon-intensive fuels in power generation.

Policies and Measures

48. Objectives and targets for energy security are envisaged to be fulfilled through policies and measures included in other dimensions, namely energy market integration, decarbonisation and energy efficiency. This includes retrofitting of existing and construction of new power plants (pump storage hydro power plant Chebren, other large hydro power plants, gas-fired power plants), and diversification of domestic energy sources and supply routes.

35 The Secretariat recommends that additional, energy security and cybersecurity specific policies and measures are defined (including priorities and projected impact), such as emergency response, solidarity, cross-border security mechanisms.

49. The draft NECP highlights the transport sector as the sector preventing the achievement of the 2020 targets for renewables on account of the major increase of the sector's share in primary energy consumption. The sector currently heavily relies on fossil fuels. While these fuels are all imported, measures to reduce this dependence are not sufficiently explained.

36 The Secretariat recommends that interlinkages between the major role of the transport sector in future energy consumption and import dependency are further elaborated in the final NECP.

D) Internal Energy Market

Targets and objectives

50. A fully integrated, competitive and flexible energy market is given an important role in reaching the ambitious renewable energy target of 66% in gross electricity production, and ensuring system adequacy and energy security through import dependency of 59%. Maintaining a high interconnectivity level, increasing market integration and decreasing energy poverty have been identified as key objectives.

37 The Secretariat recommends that objectives and targets to be defined for market integration in the final NECP include medium and long-term objectives for full regional and Pan-European market integration at all timeframes, together with measurable targets.

51. A well-functioning integrated energy market supports also the positive effects of carbon pricing on decarbonisation and the integration of renewable energy sources.

38 The Secretariat recommends that the benefits of linking a carbon price with a more ambitious integration in the internal energy market are assessed in the final NECP. It is also recommended that additional measures supporting such interaction (such as enhanced cross-border trade and flexibility) are included in the final NECP, and their impact is assessed.

52. The draft NECP envisages that system adequacy in electricity is ensured mainly through imports. The availability of interconnectors will also have an important impact on the system adequacy. Regional cooperation is envisaged for infrastructure and balancing in electricity.

39 The Secretariat recommends that regional balancing cooperation is considered also beyond cooperation with Serbia and Montenegro in the final NECP. The Secretariat also recommends to include maximization of the transmission capacity made available to the market (such as the 70% rule in Electricity Regulation 2019/943) as a target for

existing and future interconnectors. It is also recommended that a set of measures, such as coordinated capacity calculation, counter-trading, re-dispatching, bidding zone reconfiguration is envisaged in the final NECP to support the target.

53. In the draft NECP, gas market data is missing, and there is no sufficient elaboration on national gas market development, nor are reforms proposed. The draft NECP contains no information on big infrastructure projects, nor on gas operators. Moreover, no information on resolving the main problems in the gas sector (lack of unbundling of the gas TSO) and no vision of benefits of integration in the regional gas markets (benefits of increasing liquidity in the neighbouring markets) are currently available in the draft NECP.

40 The Secretariat recommends to address the data availability issues in the final NECP, elaborate plans on reforming and developing the national gas market and the integration into the regional market. The Secretariat also recommends to identify proper regional platforms for cooperation in the gas sector.

54. The draft NECP envisages major investments in developing the gas transmission and distribution networks, while not providing information on funding and a clear action plan. The draft also envisages a transit gas role for North Macedonia as a potential for additional income.

41 The Secretariat recommends to reconsider the gas transit role in the final NECP, since the gas transits would be limited to rather small quantities on a European scale, and utilise it as a possible tool to make its own gas infrastructure investment plans more credible and to put it in a context of gas market integration.

Policies and Measures

55. The policies and measures in the draft NECP on gas market and infrastructure foresee the continuation of an ambitious gasification plan, enabling access of natural gas for a diverse range of consumers and sectors on a large geographical scope. However, the Secretariat finds the impacts of these policies and measures, particularly the specific impacts on primary energy mix, electricity generation fuel mix, replacement of existing fuels, primary energy mix of different sectors and GHG impact, hard if not impossible to assess.

42 The Secretariat recommends to assess the potential impacts of the ambitious gasification plan on the factors described, and the reconciliation of this policy with the carbon emission goals in the final NECP.

56. Policies and measures in the draft NECP aim to increase electricity market integration, including day-ahead and intraday market coupling as well as cross-border balancing. However, the policy and measure on pursuing regional electricity market integration anticipates only day-ahead market coupling with the Independent Bulgarian Energy Exchange, and defines a timeline only up to 2023. Regional cooperation as a tool for meeting internal energy market and implementing policies and measures is missing.

43 The Secretariat recommends that the final NECP defines policies and measures to achieve a fully integrated and competitive market on all timeframes (forward/day-ahead/intraday/balancing) and borders. In addition, intraday market coupling and cross-border balancing as well as facilitating trade should be considered more explicitly in the policies and measures.

57. The draft NECP proposes policies and measures for the further development of the distribution system network to integrate more RES, including prosumers and more electric vehicles (EVs), as well as continuously improve network reliability and on price signal demand response.

44 The Secretariat recommends that deployment of smart metering is more explicitly addressed in the final NECP as an important measure to enhance customers' active participation in the market and optimal use of electricity, as well as other measures enabling consumers (such as facilitating access to the market and trading of flexibility for distributed generation, demand side, storage, prosumers, EVs, aggregators, energy communities).

E) Research, Innovation and Competitiveness

Targets and objectives

58. As regards the targets on research and innovation, the national level goals can be considered realistic, despite focusing on the research aspect and limited with regard to the innovation context. The quantitative indicators focus on the mobilized expenditure on research and development as a percentage of national GDP which seems realistic. However, the share of spending on research and innovation is low. The national policy strategies presented in the draft NECP are comprehensive and outline several measures to boost research and innovation activities, and contribute to achieving an energy transition.

45 The Secretariat recommends that besides the research aspects, the innovation focus should be developed further in the final NECP in areas like renewable energy and sustainable transport. It is also recommended that the targeted innovation goals respond to the current needs of local businesses and communities.

59. International cooperation on research and innovation is comprehensively described, with a focus on regional and EU cooperation. The potential funding sources are described realistically. The draft NECP focuses on building synergies between industry and research and technology institutions, however not all relevant stakeholders are involved in the process. With regard to innovation, research and development within the energy transition, the landscape of the stakeholders to engage should be broad, and multidisciplinary research, e.g. on the demand side management of energy consumption, adoption of sustainability practices by citizens etc., is key. Furthermore, it is important to consider civil society organizations, consumers' organizations' input as well.

46 The Secretariat recommends that building synergies between industry, research and technology institutions is developed further in the final NECP.

60. The proposed national-level objectives on competitiveness are realistic. The support mechanism for renewable energy enables for a competitive market and supports SMEs. Industrial policies are assessed to have a potential to generate impacts in terms of economic growth and jobs creation and also retain a key focus on reduction of GHG emissions. The energy system transformation needs a broader economic transformation and a mobilization of the major financing mechanisms. It also requires the engagement and wide participation of citizens.

47 The Secretariat recommends to assess more thoroughly the potential of a green transition in terms of jobs creations, and link this with targeted skills development and promotion of green and social entrepreneurship, as well as promotion of innovation and technological progress.

Policies and Measures

61. The policies and measures for this dimension are rather limited and do not contain crucial information on the expected results, indicators, etc. of these policies and measures.

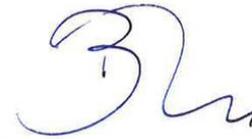
48 The Secretariat recommends to link policies and strategies related to digitalization (the research, innovation and the operationalization components) with the

energy system transformation in the final NECP. It is also recommended to reinforce communication between stakeholders and the related research project links related to energy transition. The Secretariat recommends that interlinkages between different sectors and policy areas with regards to their interlinkages with energy transformation (i.e. water-energy nexus, food-water-energy nexus, waste-energy, transport/mobility-renewable energy, etc.) are considered. The Secretariat also recommends to introduce further innovation policies and measures for topics such as R&D for small scale batteries, or even for future promising technologies and storage systems such as green hydrogen.

Vienna, 20th November 2020



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