



Brussels, 18.6.2019
SWD(2019) 227 final

COMMISSION STAFF WORKING DOCUMENT

Assessment of the National Energy and Climate Plan of the Netherlands

Accompanying the document

Commission Recommendation

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

{C(2019) 4419 final}

Table of contents

1. SUMMARY	2
Main observations	2
Preparation and submission of the draft plan	4
Overview of the key objectives, targets and contributions.....	4
2. ASSESSMENT OF THE AMBITION OF OBJECTIVES, TARGETS AND CONTRIBUTIONS AND ADEQUACY OF SUPPORTING POLICIES AND MEASURES	5
Dimension decarbonisation	5
Greenhouse gas emissions and removals	5
Renewable energy	6
Dimension energy efficiency.....	7
Dimension energy security	7
Dimension internal energy market	8
Dimension research, innovation and competitiveness.....	10
3. COHERENCE, POLICY INTERACTIONS AND INVESTMENTS	10
4. REGIONAL COOPERATION	12
5. COMPLETENESS OF THE DRAFT PLAN.....	12
Information provided.....	12
Robustness of the draft National Energy and Climate Plan of the Netherlands.....	14

1. SUMMARY

Main observations¹

- ✓ The draft integrated National Energy and Climate Plan (NECP) is based mainly on existing policy of the Netherlands, notably the 2017 Coalition Agreement and the **2013 Energy Agreement (Energieakkoord)**. The **Climate Agreement** will form the basis for the final NECP. As this was not yet finalised during the preparation of the draft NECP, the extensive work done there was **not yet reflected in the draft NECP**. Depending on the finally adopted National Climate Agreement, the national contributions might still vary and the information on planned policies and measures as well as their expected impacts could be reinforced substantially.
- ✓ The Netherlands' 2030 **target for greenhouse gas (GHG) emissions** not covered by the EU Emissions Trading System (non-ETS) is -36 % compared to 2005, as set in the Effort Sharing Regulation (ESR)². The draft NECP also includes a national total GHG emission target of -49 % by 2030 compared to 1990. This high ambition of climate policy is well noted. The draft NECP mainly describes existing policies and measures without setting out additional policies and measures. Based on this, the binding target for 2030 under the ESR could be missed by a short margin of 4.6 Mt CO₂eq.
- ✓ Additional emission reduction measures are foreseen to be included in the final plan, following the outcome of the Climate Agreement. Such additional clarity will be needed for an assessment of whether the national ESR target and the indicative sectoral targets will be met. The extent to which the planned measures will be sufficient to achieve the 'no-debit' commitment (i.e. **land use, land-use change and forestry (LULUCF)** emissions do not exceed removals) in accordance with LULUCF accounting rules also remains to be clarified.
- ✓ The draft NECP contains a bandwidth of a 27 to 35 % share of energy from renewable sources as contribution to the EU **renewable energy** target for 2030. This potential range is above the share of 26 % in 2030 that results from the formula in Annex II of the Governance Regulation³. A specific national contribution to the EU targets for renewable energy has yet to be provided. The indicative trajectory to reach the Dutch contribution in 2030 – reaching the reference points of 18 % by 2022, 43 % by 2025 and 65 % by 2027 of that contribution – is not yet included in the draft NECP. 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.
- ✓ The **energy efficiency** contribution is set in primary energy consumption of 1950 petajoules PJ by 2030, which in primary energy can be considered sufficiently ambitious. However, the potential contribution on final energy consumption seems to be only of

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) 2018/1999 on the Governance of the Energy Union and Climate Action.

rather modest ambition. The final plan would benefit from more details on adequate policies and measures.

- ✓ Regarding **energy security**, the draft NECP mentions markets as the main instrument for ensuring a secure supply of gas, electricity, coal and oil. New objectives on increasing diversification of energy sources and supply from third countries or on reducing import dependency from third countries to be achieved by 2030 have not been set out.
- ✓ The draft NECP includes a detailed overview of the current and projected interconnection level with neighbouring Member States. The inclusion of the required necessary quantitative core parameters in the **internal market** dimension would allow assessing the functioning of the market and identifying possible remaining obstacles. The final NECP would benefit from a dedicated assessment of **energy poverty** and any related objectives or specific policies or measures, apart from the general statement that energy poverty is treated through social policy in general.
- ✓ **The research, innovation and competitiveness** dimension would benefit from more concrete and quantifiable objectives and measures with a view to 2030. Currently, the draft NECP mainly describes the current state of affairs without being forward-looking. Competitiveness objectives have not yet been formulated.
- ✓ The draft NECP does not contain an assessment of the **investment needs** (including infrastructure needs in gas and electricity, hydrogen or CO₂ networks) to meet 2030 objectives and targets and thus does not yet fully take advantage of the role NECPs can play in providing clarity to investors and attract additional investments in the clean energy transition. Expenditures, funding sources, market risks and barriers or other relevant information are also not yet addressed.
- ✓ The final NECP would be more robust by providing a clear description of the additional measures and policies envisaged, giving due consideration to the interactions between dimensions, accompanied by an **impact assessment**, as well as with additional measures projections.
- ✓ The final plan would benefit from complementing the analysis of the interactions with **air quality and air emissions** policy and presenting the impacts of policies and measures on air pollution.
- ✓ The final plan would benefit from details in the **just transition** aspects and relevant issues such as the need for structural changes needed for energy transition that can affect jobs and social coherence in particular sectors, such as the petro-chemical industry.
- ✓ 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.
- ✓ Some **good practices** are a) the broad stakeholder engagement as part of the preparation of the National Climate Agreement, using round tables/consultation platforms for different sectors, such as electricity, mobility, agriculture and land use, industry, and the built environment; b) the structural area-based approach that is followed for making the housing stock more sustainable and moving away from fossil fuel heating; c) that circular economy policy is implemented as an integral part of addressing the climate challenge, including the recycling of resources, green purchasing and sustainable production and consumption; d) the promising plans to proceed with developing a truly integrated research and innovation strategy; e) the approach set up under the Pentilateral Energy Forum by the Political declaration of 4 March 2019, which is also a good practice that could be followed by other Member States.

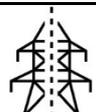
Preparation and submission of the draft plan

The Netherlands notified their draft National Energy and Climate Plan (NECP) to the Commission on 21 December 2018. The draft NECP was developed under the responsibility of the Ministry of Economic Affairs and Climate.

Consultations with stakeholders have taken place as part of the National Climate Agreement process, which is planned to be the basis for the final NECP. The Netherlands foresees using existing regional platforms in order to discuss and align its climate strategy with its **neighbouring countries**, notably the Pentalateral Energy Forum and the North Seas Energy Cooperation.

Overview of the key objectives, targets and contributions

The following table presents an overview of Netherlands' objectives, targets and contributions under the Governance Regulation⁴:

	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) (%)	-21	-16	-36	As in ESR. Total GHG 2030 -49 % to 1990
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	6.6	14	27-35	Above 26 % (result of RES formula)
	National contribution for energy efficiency: Primary energy consumption (Mtoe) Final energy consumption (Mtoe)	64.5 50.3	60.7 52.2	46.6 44.5	Sufficient Modest
	Level of electricity interconnectivity (%)	18	26.5 ⁵	34.8 ⁶	N/A

Sources: EU Commission, ENERGY STATISTICS, Energy datasheets: EU28 countries; SWD(2018)453; European Semester by country⁷; COM/2017/718; Dutch draft NECP.

⁴ 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 .

⁵ Level indicated in the Netherlands' draft NECP

⁶ Projection included in the Netherlands' 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 the Netherland's binding **national target for reducing GHG emissions in the non-ETS sectors** by 36 % by 2030 compared to 2005. It also includes a national total GHG emissions reduction target of -49 % by 2030 compared to 1990.

Annual binding national limits⁸ have been estimated and provided in graphical form in the draft plan. Based on the National Energy Outlook of 2017, on which the projections used in draft plan are based, the Commission estimates that the non-ETS target for 2030 will be missed by 4.6 Mt CO₂eq (around 3.5 percentage points), unless additional measures are taken⁹. The final plan is planned to be based on the new 2019 Energy Outlook and include new measures as an outcome of the National Climate Agreement.

To reduce GHG emissions in 2030 by 49 % below 1990 levels, (equivalent to 49 Mt CO₂eq), the draft plan sets a number of indicative sectorial targets. For the **transport** sector, the indicative reduction target is 7.3 Mt CO₂eq. This is planned to be achieved by additional measures supporting electromobility, making logistics more sustainable, advanced biofuels and other alternative fuels (green hydrogen, e-fuels and synthetic fuels). All new cars are to have zero emissions by 2030. This is to be achieved primarily by tax incentives that are to be gradually phased out over time. Alternative fuels will be incentivised and innovation encouraged (toward zero emissions in 2050) for heavy goods road transport, inland shipping, maritime shipping and aviation. More details on the specific measures would be welcome for all modes and alternative fuels.

For **agriculture** the draft plan includes an indicative reduction target of 3.5 Mt CO₂eq by 2030 (including 1.5 Mt from land use not counting toward achieving the 49 % reduction). The draft plan describes measures to stimulate circular agriculture, reduce GHG emission from the horticulture sector and from livestock due to smaller herds.

For the **industry** sector, GHG reductions are sought in the order of 14.3 Mt CO₂eq, while the **electricity** sector is to reduce GHG emissions by 20.2 Mt CO₂eq by 2030. The draft NECP also sets an indicative GHG reduction target of 3.4 Mt CO₂eq for the **built environment**, where a significant measure will consist of switching away from natural gas in a substantial part of the building stock.

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 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.

⁹ The draft plan uses for the AEA calculation a 2005 base year of 122.8 Mt. This differs from the Commission's published effort sharing sector 2005 base year data of 127.8 Mt (SWD(2018)453 final, Table 4), which also used in the Dutch Energy Outlook 2017 itself, With the draft NECP base year the cumulative deficit 2021-30 with existing measures is 22 MtCO₂eq, otherwise 12 Mt CO₂eq.

The draft plan does not include a detailed description of the **policies and measures** to be applied in order to reach its objectives. This lack of clarity prevents an assessment of whether the national ESR target and the indicative sectoral targets will be met.

Unchanged policies could result in **LULUCF** debits (i.e. under-achievement of the LULUCF no-debit commitment¹⁰). To avoid such debits, the Netherlands will strive to achieve 1.5-2 Mt in performance improvements in the LULUCF category through smarter land use. Several measures are considered such as adjustments in the management of peat meadows, agricultural soils and forests, as well as planting new forests. This would generate sufficient credits to balance the debits, and hence respect the no-debit commitment.

However, the extent to which the no-debit commitment will be achieved in accordance with LULUCF accounting rules is not clear yet, and is expected to be included in the final NECP. With respect to the National Forestry Accounting Plan including the national Forest Reference Level, submitted by the Netherlands 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 draft NECP has a reference to the National **Adaptation** Plan and action plan that focus on agriculture, nature and the built environment. It describes well the governance structure with interdepartmental cooperation and consultation with stakeholders.

Renewable energy

The draft NECP includes a **share of renewable energy** between 27 and 35 % in gross final energy consumption by 2030. The precise contribution to the Union's binding target of at least 32 % renewable energy in 2030 is expected to be established following the finalisation of the National Climate Agreement. The draft NECP does not set a clear national contribution to the Union's binding target of at least 32 % renewable energy in 2030. The range between 27 and 35 % is above the share of 26 % in 2030 that results from the formula in Annex II of the Governance Regulation.¹¹ The indicative trajectory to reach the Dutch contribution in 2030 reaching the reference points of 18 % by 2022, 43 % by 2025 and 65 % by 2027 is not yet included in the draft NECP.

Specifically for heating and cooling, the ambitions, trajectories and measures are still being developed. The expected share of renewable energy in 2021 and 2030 are not defined. The role of waste heat and cold remains unclear. There is no information on policies and measures leading to an increase of renewable energy in heating & cooling by an indicative 1.3 percentage points as an annual average calculated for the periods of 2021 to 2025 and 2026 to 2030, respectively.

On the transport target, the draft plan mentions that the use of electric vehicles will increase. The final plan would benefit from including the contributions of all eligible fuels, setting out the limits for conventional fuels produced from food and feed crops, addressing applicable

¹⁰ 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.

¹¹ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

multipliers and the sub-target for advanced biofuels in accordance with Articles 25-27 of Directive 2018/2001.

As regards the **policies and measures**, only a general description of existing measures is provided. The document acknowledges that those measures are being evaluated and that depending on the conclusion of the National Climate Agreement, they are to be reformed or additional measures are to be provided in the final NECP. To demonstrate adequacy to reach the proposed level of ambition, and notably the first reference point of 2022, a detailed description of the policies and measures proposed is needed, including their timeframes and envisaged impact. While information is provided on some existing policies and measures, the final plan is an opportunity to set out, in more detail, the enabling framework to develop renewable self-consumption and promoting renewable energy communities.

Dimension energy efficiency

The Netherlands' **energy efficiency contribution in primary energy consumption** is projected to reach 46.6 Mtoe in 2030. It would be beneficial for the robustness of the final plan, if it was explained how this target was established and if any circumstances affecting energy consumption levels were taken into account.

The contribution represents a sufficient reduction of energy consumption compared to 2017 levels (almost 28 %) and to the 2020 target. When translated into **final energy consumption** (44.5 Mtoe), the proposed contribution would mean further reduction compared to the 2017 data, but of lower magnitude (-12 %). As such, the primary energy contribution can be regarded as sufficiently ambitious and the final energy contribution as modestly ambitious compared with the efforts required at the EU level to collectively reach the Union's 2030 efficient targets.

The Netherlands has not determined the **cumulative energy savings** for the period 2021-2030 due to 2018 data not being available yet, though it is noted that this will be established as a 0.8 % decrease per year, based on the average final energy consumption of the years 2016, 2017 and 2018.

As regards **policies and measures**, the document clarifies that most measures are yet to be agreed as part of the National Climate Agreement, apart from three already existing measures to be continued after 2020 on taxation, investment deduction, and environmental management act. These measures are presented rather briefly and there is no assessment of the expected impacts from the main measures in the coming decade. Information on all other measures is yet to be included, including notably those related to building renovation. The final plan would moreover benefit from details on expected impact (in terms of energy savings), implementation period, target sectors etc. As regards transport, the draft plan mentions incentives to more efficient organisation of the mobility system such as e.g. support for sustainability improvements in logistics and sustainability improvements for passenger mobility (including active modes, public transport and MaaS). Other measures (e.g. incentivising multimodality and modal shift, intelligent transport systems, digitalisation and automation) could also be considered. More details on the specific measures would be welcome.

Dimension energy security

The draft NECP does not set out new objectives on increasing **diversification** of energy sources and supply from third countries or on **reducing import dependency** from third countries to be

achieved by 2030, with the exception of an objective to increase the import of advanced sustainable biofuels.

The phase out of the exploration of the Groningen gas field is mainly addressed through measures to reduce low caloric gas consumption in industry, heating of residential buildings, neighbouring countries combined with the construction of a new nitrogen installation to convert high caloric gas and the stimulation of new investments into smaller gas fields in the North Sea. The final NECP would benefit from a more detailed analysis setting out the foreseen impact of these various measures.

Markets are explicitly mentioned as the main instrument for ensuring a secure supply of gas, electricity, coal and oil. In particular, for electricity supply, reliance on market forces is justified, while also setting out the existence of flanking policy measures with regard to natural gas and oil. Whereas reliance on a well-functioning market can be a perfectly valid policy choice, the connection between the objective and the use of this ‘instrument’ remains unclear.

It would be useful to include information on measures on cybersecurity, existing risk preparedness plans for electricity in the final NECP as well as existing preventive actions and emergency plans for gas and to oil stocks and emergency procedures. The final plan should include measures to ensure long term supply of nuclear materials and fuel enrichment capabilities.

Dimension internal energy market

As regards **electricity interconnectivity**, the draft plan gives a detailed description of the current and projected (until 2030) interconnection with neighbouring Member States. Considering the Netherlands in 2016 is already at a level of electricity interconnectivity of 16 %, no further targets have been included. Nonetheless, the draft plan notes that a doubling of interconnection capacity is foreseen from 5.55 GW in 2016 to 10.8 GW in 2025 through implementation of PCIs. In order to maximise the potential for regional cooperation from the draft NECPs, it would be beneficial if the final NECP defined a precise level of interconnectivity aimed to be achieved by 2030.

As regards **energy transmission infrastructure**, a description is provided of existing internal electricity transmission network reinforcements and of the plans to connect offshore wind parks to the grid. For the final NECP to provide a complete picture of infrastructure development, a description of all key projects (Projects of Common Interests or national projects) that will be needed to enable the achievement of the objectives and targets under the five dimensions of the Energy Union is needed. As regards natural gas infrastructure, the draft NECP notes that discussions are currently on-going as to whether gas network infrastructure, including connections, needs to be expanded as a consequence of the decrease of supply from the Groningen gas field by 2030. It would be beneficial to provide additional information on the on-going assessment, linked with the above-mentioned assessment on the measures foreseen to mitigate the consequences of the phase out.

No plans for the development of hydrogen or Carbon Capture and Storage or Use (CCS/U) infrastructure are yet included in the draft NECP, even though the draft plan hints at the possibility of using such infrastructure to meet decarbonisation targets.

As regards **the wholesale market**, the draft NECP does not contain a clear analysis on the current and projected market ‘situation’, concrete objectives for how the market should develop

in the future, or a complete description of how different policies will contribute to the achievement of these objectives. The analysis is currently limited to a description of price developments, price components and main drivers on a high level. The draft NECP is to be completed with the necessary quantitative core parameters for assessing the functioning of the market and to identify possible remaining obstacles¹².

As regards **the retail market for electricity**, the draft NECP sets the target for roll-out of smart meters at 80 % in 2019. This is important, given that smart meters constitute a pre-condition for introduction and take-up of the flexibility-related services. The final NECP would benefit from an update on this target, as well as from additional information as to whether the regulatory framework will allow the use of the data from smart meters in the most optimal way. In addition, the draft NECP sets out the relatively high switching rate for consumers (16 % in 2017) as well as the high level of suppliers in the retail market (currently 58) and their licensing requirements ensuring reasonability of tariffs. Whilst these indicators give useful insights into consumer engagement and market structure respectively, retail competition is multifaceted, and so it may also be beneficial to consider indicators for consumer choice, consumer satisfaction, and price trends for final customers. This would allow the final NECP to build a more complete and nuanced picture of the state of the retail market, and set clear benchmarks for progress, if deemed necessary. Information is also added on protection from disconnection.

In order to render the final NECP more robust and comprehensive, a more structured approach to retail markets and system flexibility is warranted. Building on analytical data on the actual situation with respect to barriers for new market participants (e.g. aggregators) and the uptake of the different sources of flexibility (demand response, storage, and distributed generation), concrete objectives and supporting policies and measures could be established. Specific indicators could be developed so that the policy objectives can be benchmarked in the areas such as real-time price signals; increase of system flexibility; demand response and aggregation; storage; distributed generation; consumer protection; competitiveness in the retail energy sector.

The draft plan does not put forward a dedicated assessment of **energy poverty** as required by the Governance Regulation. No objectives have been defined and no specific policies or measures have been provided, apart from the general statement that energy poverty is treated through social policy in general. The final NECP would benefit from a detailed explanation as to how social policy does so, notably by clarifying whether measures listed are aimed at providing financial assistance or are attempting to secure electricity supply for each individual. Specific consideration could be given in this regard to energy efficiency measures to alleviate energy poverty such as the provision of basic information. It would be beneficial to provide supplementary information as to how energy poverty is taken into account in the renovation strategy.

¹² Including but not limited to in the following areas, pursuant to Article 23(1)(d) of Regulation (EU) 2018/1999: i) increasing system flexibility; ii) market integration and coupling; iii) aiming to increase the tradeable capacity of existing interconnectors; iv) smart grids; v) aggregation; vi) demand response; vii) storage; viii) distributed generation; ix) mechanisms for dispatching, re-dispatching and curtailment; and x) real-time price signals.

Dimension research, innovation and competitiveness

In this dimension, reference is made again to the National Climate Agreement, which should set the baseline for an "Integrated Knowledge and Innovation Agenda for Climate and Energy" to be adopted in the future. This is a promising ambition.

As it stands, the draft NECP does not provide specific research and innovation objectives and funding targets to be achieved by 2030 or 2050, or associated policies and measures, although the importance of such areas as carbon capture and storage, biomass and circular economy are recognised.

While the Netherlands provides a general description on its participation in the work under the Strategic Energy Technology (SET) Plan, the draft NECP does not provide information as to how the draft NECP will actually contribute to the delivery of the respective Implementation Plans.

As regards competitiveness, reference is made to macro-economic competitiveness, noting that no national objectives have been adopted on this in the Netherlands. The final plan would benefit from expanding in this regard to cover specifically the low-carbon technologies sector, including for decarbonizing energy and carbon-intensive industrial sectors. 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 draft plan does not consider coherence of adaptation in the decarbonisation dimension with other dimensions of the Energy Union. There is no information on how climate change risks might affect energy supply (e.g., wildfires and storms destroying 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 draft NECP does not explain how the use of (domestic) **biomass** and forestry raw materials will impact direct and indirect land use change and sink capacity. The level of the impact will depend on the pending national Climate Agreement and an estimate will be included in the final NECP.

It is not apparent in which way the targets and objectives are being translated to **infrastructure needs** in natural gas and electricity, hydrogen or CO₂ networks. The draft plan does not explain how the integration of these different sectors is to be taken into account already by 2030 – and which actions are being undertaken in research and innovation to develop the knowledge base on system integration with a view to ensure the necessary infrastructure is deployed by 2050.

It is not clear from the draft NECP whether the **energy efficiency first principle** has been considered. Due to the absence of objectives, policies and measures to stimulate demand response and storage, it is not clear whether the ambition for renewable energy will be accompanied with the needed increased in system flexibility.

The draft plan refers to the interaction between the climate, circular economy and sustainability policies. It raises the awareness and concerns of citizenship about these issues, and explicitly mentions the potential contribution of the **circular economy** to GHG emissions reductions, which effects are even quantified.

The plan acknowledges pressures on **biodiversity** as a problem. It explains that the use of (only sustainable) biomass for the transition “must not adversely affect ecosystems, soils or the availability of food”. This implies priorities, not yet established.

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 draft NECP does not contain an assessment of the **investment needs** to meet 2030 objectives and targets and expenditures, funding sources, market risks and barriers or other relevant information. Apart from a reference to the roles of the Connecting Europe Facility (CEF) and the European Fund for Strategic Investment as potential sources of finance, this information is apparently to be provided in the final NECP.

Links with the European Semester

Identifying financing needs and securing the necessary funding will be essential to deliver on the Netherlands’ energy and climate objectives. The Commission had addressed this question as part of the 2019 European Semester process. Based on the 2019 Country Report for the Netherlands, published on 27 February 2019¹³, the 2019 European Semester country-specific recommendations to the Netherlands issued on 5 June 2019¹⁴ highlight the need to invest in ‘renewable energy, energy efficiency and greenhouse gas emissions reduction strategies and on addressing transport bottlenecks’. When preparing its overview of investment needs and related sources of finance for the final plan, the Netherlands should take into account these recommendations and links to the European Semester.

As regards **energy subsidies**, the draft NECP states (in section 3.1.3.iv) that the Netherlands has no (grants) or subsidies for fossil fuels; which appears inconsistent with some policies and measures set out in the draft NECP (e.g. section 3.3.i of the draft NECP). At the same time, it describes (in section 4.6.4) a number of tax exemptions that may affect the consumption of fossil fuels and could thus be considered energy subsidies. Moreover, the Commission report on Energy Prices and Costs in Europe, based on internationally used definitions, identifies in the Netherlands significant fossil fuels subsidies in the form of tax expenditures (as well as subsidies for renewable energy). As such, the elaboration on national policies, timelines and measures planned to phase out energy subsidies, in particular fossil fuel subsidies (section 3.1.3.iv) and the description of energy subsidies (section 4.6.4) are currently incomplete. When providing such plans for phasing out of subsidies, consideration could be given to preventing sudden impacts of shifting prices on consumers by ensuring a gradual phase out with long term visibility for consumers. Specific attention also could be given to mitigating the impact on vulnerable consumers through energy poverty measures, including where these are part of social policy.

The final plan would benefit from details in the **socially just transition** aspects and relevant issues such as the need for structural changes needed for energy transition that can affect jobs and social coherence in particular sectors, such as the petro-chemical industry.

¹³ SWD(2019) 1018 final.

¹⁴ COM(2019) 519 final.

4. REGIONAL COOPERATION

In the draft NECP, the Netherlands sets out its intention to cooperate with neighbouring countries in existing fora – such as the Pentalateral Energy Forum, the North Seas Energy Cooperation and the Green Growth Group – on topics of common interest. This includes specifically the intention to achieve more ambitious GHG reduction agreements with like-minded (north-western) European countries, ensuring security of supply, the deployment of renewable energy, the accelerated phasing in of electric vehicles, as well as the common development of CCU/CCS and the use of hydrogen.

The declaration signed on the 4 March 2019 by the Ministers of Energy of Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland provides a political mandate to the Pentalateral Energy Forum to act as a forum for regional cooperation regarding the development and monitoring of the final NECP in particular on issues with substantial cross-border effects. The approach taken, including the setting up of a dedicated Committee to coordinate regional cooperation on the NECPs can be regarded as a good practice that can inspire other Member States. Regional cooperation has a key role in assessing regional system adequacy as foreseen in the Electricity regulation¹⁵. This will become even more important in the light of increasing shared of renewable energy and corresponding need for system flexibility.

The platform for exchanges provided by the North Seas Energy Cooperation allowed developing concepts for potential joint wind offshore projects and coordinated electricity infrastructure.

Further regional cooperation, notably on mobility and research and innovation, could be warranted, in order to create synergies in addressing common challenges.

The final NECP would benefit from including existing sectorial cooperation across borders. One such example is the "Trilateral strategy for the chemical industry" setting out cross-border cooperation between the Netherlands, Flanders and North Rhine-Westphalia. The setting up of a joint industry-academia-government partnership under this strategy to coordinate development and implementation of climate and energy related policies is a **good practice**, as it enables dynamically and efficiently tackling the common challenges, creating synergies while endeavouring to preserve a level playing field.

5. COMPLETENESS OF THE DRAFT PLAN

Information provided

The draft NECP submitted by the Netherlands follows the structure of Annex I of the Governance Regulation¹⁶ covering all five dimensions of the Energy Union, at least partially, although the NECP has to be completed with the impact assessment of planned policies and the with additional measures projections . The document itself recognises that several elements are still to be added once the National Climate Agreement is finalised.

On **greenhouse gases**, the draft NECP provides a good level of information on effort sharing sectors. The document is to be completed with an explanation on how the Netherlands intends to

¹⁵ Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity.

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

comply with the LULUCF no-debit target by applying the accounting rules set out in the LULUCF Regulation¹⁷.

With respect to **renewable energy**, the draft NECP sets a good level of ambition on the basis of which a precise national contribution is to be determined. The trajectories on biomass supply, the estimated trajectories for sectoral shares of renewable energy and the estimated trajectories by renewable energy technology are still to be provided, with the exception of the trajectories for offshore wind. For heating and cooling and transport no technology contributions to final energy consumption up to 2030 are included in the draft plan. Planned capacities are not provided for the electricity sector and not split between new and re-powering. Information was not included for the increase of 1 percentage points of renewable energy share in district heating and cooling and related infrastructure. The draft plan does not provide trajectories for the bioenergy demand, disaggregated between heat, electricity and transport. Furthermore, there is no inclusion of trajectories of bioenergy demand, their disaggregation between heat, electricity and transport, and on biomass supply, by feedstocks and origin and trajectories for forest biomass, an assessment of its source and impact on the LULUCF sink. As regards policies and measures, several elements still to be added to complete the NECP.

Measures regarding power purchase agreements (PPAs) and specific measures to introduce one or more contact points, streamline administrative procedures are not included. Additional information on each policy and measure, such as quantified objective, expected result, indication on the timeline, would also facilitate the assessment by the Commission.

Regarding **energy efficiency**, the contribution in the draft NECP is clearly set and represents a good level of ambition, but at the same time it is indicated that the final contribution might vary depending on the Climate Agreement. Regarding the total floor area to be renovated, the draft NECP only mentions that an "alternative route" will be followed without further details on what this entails. The required elements on the long-term renovation strategy are not provided¹⁸. Although reference is made to the cost-optimal report sent in March 2018, the cost-optimal minimum requirements are not mentioned.

In terms of **energy security**, the draft NECP describes the existing situation in the energy markets and in storage capacity for oil and gas, from which it derives that no additional objectives on increasing diversification of energy sources and supply from third countries or on reducing import dependency from third countries are warranted. A noticeable exception to this is an objective to increase the import of advanced sustainable biofuels. Objectives related to increasing flexibility of the national energy system are also not included – as the Netherlands aims to ensure this through the market.

On **the internal market**, the draft NECP does not contain many objectives for 2030. It does not set a target for electricity interconnectivity for 2030, noting it has achieved 16 % in 2016. On energy transmission infrastructure, the draft NECP provides an overview of the existing plans related to electricity and gas infrastructure, without setting out a clear plan on how this should develop with a view to ensure 2030 objectives across dimensions are achieved. On market integration, information is limited. In particular on increasing system flexibility, the draft NECP

¹⁷ Regulation (EU) 2018/841 on greenhouse gas emissions and removals from land use, land use change and forestry.

¹⁸ The indicative milestones, the roadmap with measurable progress indicators, an estimate of the expected energy savings and wider benefits and the contribution of the renovation of buildings to the Union's energy efficiency target.

describes initiatives – including Demand Side Management, smart meters, dynamic tariff, removing barriers preventing energy storage - without providing quantified objectives for 2030 or a timeframe for when they will be met. On energy poverty, the Netherlands has not conducted the required analysis and no objectives have been defined.¹⁹

Regarding **research, innovation and competitiveness**, while identifying research domains that could potentially receive attention, the draft NECP does not provide objectives to be achieved by 2030. A general research and innovation funding target is identified, on the basis of which funding targets specifically for Energy Union related research at national level are not yet defined. While identifying Carbon Capture and Storage and Biomass as areas of future attention, the draft plan does not include specific national objectives to be achieved by 2050. The draft NECP does not include objectives related to competitiveness.

Because the Netherlands is still finalising a National Climate Agreement, the draft NECP only describes existing policies and measures without setting out additional policies and measures to achieve 2030 objectives. As such, the majority of elements required under section 3 of Annex 1 of the Regulation²⁰ are still to be added in the final plan.

Robustness of the draft National Energy and Climate Plan of the Netherlands

Most of the required elements of the **analytical basis** are present in the draft plan. Detailed reporting on the with existing measures projection in the voluntary template is appreciated. The with additional measures projection and the impact assessment of planned policies and measures are announced for the final plan, following the completion of the Dutch Climate Agreement. The report uses extensively official data from the national statistical institute and from Eurostat. When no official data are available, other sources are used and especially the National Energy Research Centre (NEV) of the Netherlands and the Netherlands Environmental Assessment Agency.

The **with existing measures projection** largely covers the five dimensions of the Energy Union and most of the required variables are present. Additional information would be desirable on: (i) GHG emissions from international aviation, (ii) non-GHG air pollutants, (iii) investment needs beyond 2020 and (v) renewable energy share in transport.

The projections are presented in a largely **transparent** way. References documenting the modelling approach and the models used are provided. Moreover, most key input parameters have been provided, including sources. Projections of technology costs will be updated in the final plan. More information regarding assumptions on GDP, the number of households, and transport data would further enrich the final Dutch plan.

According to the references provided, model sensitivity analyses have been carried out for previous analyses in the national context, which supports the robustness of the analysis. Primary energy consumption (including non-energy use) and final energy consumption are in line with EUROSTAT figures (according to the 2019 definitions) for the base year 2015. The draft plan follows its own fuel and emission price assumptions. Further details would be helpful on how the

¹⁹ The analysis required by Article 3.3.d of the Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

²⁰ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

policies and measures described in section 3 relate to with existing measures projections, possibly using the voluntary policies and measures template.

The **impact assessment** in the final plan should include an assessment of the macroeconomic impacts and, to the extent feasible, the health, environmental, employment and education, skills and social impacts, including just transition aspects.