

Technical Report on National Policies and Measures

Under Article 18.º of Regulation (EU) 2018/1999 of the
European Parliament and of the Council and Article
37.º of the Commission Implementing Regulation (EU)
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Acronyms

ENAAC 2020	National Strategy for Adaptation to Climate Change
GHG	Greenhouse Gas
INERPA	National Emissions Inventory
NECP 2030	National Energy and Climate Plan 2030
RNC2050	2050 Carbon Neutrality Roadmap
SNIERPA	National System of Inventories of Emissions and Remotions of Atmospheric Pollutants
SPeM	National System for Policies and Measures and for Projections
UNFCCC	United Nations Framework Convention on Climate Change
WAM	With Additional Measures
WEM	With Existing Measures

Introduction

This report aims to respond to the provisions of Article 18 of the Regulation (EU) n.º 2018/1999 of 11st December, concerning integrated reporting on greenhouse gas (GHG) policies and measures and projections, and it concerns to the reporting on national policies and measures.

In 2016, the Portuguese government committed to achieve carbon neutrality by 2050, outlining a clear vision of decarbonisation of the national economy and contributing to the most ambitious objectives under the Paris Agreement. To support this commitment, the government decided to draw up a 2050 Carbon Neutrality Roadmap (RNC2050) with the aim of exploring the feasibility of trajectories that lead to carbon neutrality, identifying the main decarbonisation vectors and estimating the carbon reduction potential of various sectors of the national economy, such as energy and industry, mobility and transport, agriculture, forests and other land uses, and waste and waste water.

Decarbonisation of the economy is an ambitious goal that demands the broad engagement and participation of society as a whole, which is why RNC 2050 motivated an unprecedented participatory process of involvement of the main sectors and mobilisation of Portuguese society.

This new roadmap (RNC 2050) was approved through the Council of Ministers Resolution n.º 107/2019 of 1st of July and is also the national strategy for long-term low-GHG development submitted to the United Nations Framework Convention on Climate Change (UNFCCC) under the Paris Agreement and to the European Commission under the Regulation on the governance of the energy union and climate action (EU/2018/1999). It is a forward-looking document of where to go, contributing to the definition of trajectories, not being a policy and measures planning document. The targets previously set for 2030 were revised in light of the conclusions of the IPCC Special Report on 1.5°C and sustained by the path that Portugal has taken in the past and new national targets for 2040 and 2050 were also defined, aligned with a carbon neutrality trajectory until 2050.

In line with this vision and developed in conjunction with the RNC2050, Portugal's 2030 integrated National Energy and Climate Plan (NECP 2030) is the main energy and climate policy instrument for the period 2021-2030.

The National Energy and Climate Plan, approved through the Council of Ministers Resolution n.º, 53/2020, of 10th of July, is based on a strategic vision for the 2030 horizon of "Promoting the decarbonisation of the economy and the energy transition towards carbon neutrality in 2050 as an opportunity for the country, based on a democratic and

fair model of territorial cohesion that enhances wealth generation and the efficient use of resources”, and was decisive for the definition of the priority objectives and concrete policies and measures and actions for the next decade.

National System on Policies and Measures

Monitoring the implementation of policies and measures, as well as actions developed by Portugal is one of the key elements in the management of the NECP, as it not only monitors progress but also ensures compliance with the obligations assumed, at both Community level under the Energy and Climate Action Union Governance Regulation and the Effort Sharing Regulation, and internationally under the UNFCCC.

Table 1 presents the policies and measures which are already implemented and planned to be implemented in a near future to accomplish an economy-wide emissions reduction target.

In this context, it was therefore important to take advantage of existing monitoring structures at national level, adapting them to this new reality which is more integrating between energy and climate policies. To this end, the existing National System of Policies and Measures (SPeM), created by the Council of Ministers Resolution n.º 45/2016, of 26th of August, will still be used and remains the same in relation to the previous reporting. in place and.

However this national system (SPeM) is being adapted, following the approval of the NECP2030, to include the monitoring of policies and measures and projections, that impact on the energy transition and will enable progress in the implementation of sectoral policies and mitigation measures to be assessed, enhancing sector involvement and sectoral accountability, in integrating the climate dimension into sectoral policies, ensuring:

- Managing the process of identifying and designing policies and measures, or groups of policies and measures, to limit or reduce greenhouse gas emissions and other air pollutants by sources, or to intensify their removals by sinks, compliance with national obligations;
- Monitoring and reporting the implementation of policies and measures and their effects, as well as the reporting of projections in accordance with the requirements and the European and international guidelines, and ensure its agreement with the national inventory of anthropogenic emissions by sources and removal by sinks of atmospheric pollutants (INERPA);
- The preparation of national projections of greenhouse gas emissions and other air pollutants by sources and their removals by sinks, as well as the expected effects of the policies and measures being implemented and to be implemented, in accordance with the requirements and guidelines European and international, in conjunction with INERPA;

- Assessment of compliance of national obligations, including sectoral targets under the climate and energy package of the European Union and the air in the horizons policies in 2020, 2025 and 2030, as set out in the national strategic documents of climate change policies and air.

In addition, given the synergies between climate and energy policy and air policies and measures (SPeM) will continue to support monitoring, as well as projections in this area, while ensuring proper articulation with the National Emissions by Sources Inventory System, the Removal by Atmospheric Pollutant Sinks (SNIERPA) and the monitoring and reporting system provided for under the National Climate Change Adaptation Strategy (ENAAC 2020).

In this context a platform for monitoring and reporting the impacts of cross-sectoral policies and measures on climate change and energy transition will be developed in conjunction with the sectors through the development of indicators and the identification of the respective regulatory, financing, tax and other.

Planned Additional Policies and Measures

Since the last report, Portugal finalized the 2050 Carbon neutrality Roadmap and the 2030 National Energy and Climate Plan.

These planning processes delivered a new and more ambitious emission reduction target for 2030 (45-55% compared to 2005) and also a trajectory for 2050 (65-75% by 2040; 85-90% by 2050) and allowed the identification of additional measures to be deployed. Some new measures that will deliver a significant emission reduction will be the end of coal-fired electricity production, but also the promotion of renewable gases, the promotion of new energy storage solutions like batteries and hydrogen, and the promotion of industry decarbonisation through eco-innovation and cleaner production processes and industry digitization.

PaM 20 - Phase-out electricity production based on coal by 2021 and 2023.

The phasing out of fossil fuel use for electricity generation, in particular coal, is essential to ensure the energy transition to a carbon neutral society. Thus, in 2016 Portugal made a commitment to stop producing electricity from coal by 2030 at the latest. To this end, and taking into account the existence of factors that strongly discourage coal-fired power generation, such as the increase in the price of CO₂ emission allowances, the end of the Tax on Oil Products (ISP) exemption and the increase in the price of coal, as well as security of supply studies already carried out, Portugal was able to anticipate the closure of the two last coal fired power plants - Pego and Sines. So, at the beginning of 2021 one of the plants ceased its operation (Sines) and the other one started to prepare for its reconversion to biomass use.

PaM 27 - To promote the production and consumption of renewable gases.

Renewable gases, in particular hydrogen and biomethane, have the potential to play an important role in leveraging the decarbonisation of sectors of the economy that currently have few alternative technological options and where electrification in the short to medium term could result in significant costs. Renewable gases have the potential to replace fossil fuels in industry (e.g., combustion processes and even as a raw material), in road transport, in rail transport (avoiding line electrification costs), and in inland waterway passenger and freight transport.

In this context, the Government is promoting an industrial policy on hydrogen and renewable gases, which is based on the definition of a set of public policies that guide, coordinate and mobilize public and private investment in projects in the areas of production, storage, transport and consumption of renewable gases in Portugal. A National

Hydrogen Strategy was developed and approved through the Council of Ministers Resolution n.º 63/2020, of 14th of August, and it establishes concrete targets for the incorporation of green hydrogen in the final energy consumption and of production capacity installation.

This new approach stems from the fact that Portugal has very favourable conditions for setting up a green hydrogen production industry with export potential, the main advantage being the low costs of producing electricity from renewable sources. The development of a green hydrogen production industry in Portugal has the potential to boost a whole new economy, coupled with the huge potential for decarbonisation of various sectors.

PaM 21 - Promote new energy storage solutions (batteries and hydrogen).

For a better management of the national energy system in its various sub-sectors, the existence of storage systems in their different forms is considered fundamental, and with a crucial role, as a tool for flexibility and stability of the national electrical system. It is therefore important to maintain the investment in reversible pumping systems in hydroelectric power stations and also seek to develop other technological solutions that will involve the application of battery technology and the technologies associated with hydrogen. A significant part of the new storage capacity should be directly associated with renewable power stations.

PaM 18- To promote decarbonisation of industry through eco-innovation and cleaner production processes and to promote industry digitization.

The paradigm shift in industry necessary for energy transition and carbon neutrality follows a more incremental path compared to other sectors. Eco-innovation, digitisation and more sustainable business models are driving tools for decarbonisation, differentiating in terms of competitiveness and their promotion can translate into economic and environmental gains.

Links between different Policies and Measures and the Contribution of those Policies and Measures to different Projections Scenarios

Since the last report, the main changes are the new policies and measures, explained above: PaM 20 - Phase-out electricity production based on coal by 2021 and 2023; PaM 27 - To promote the production and consumption of renewable gases; PaM 21 - Promote new energy storage solutions (batteries and hydrogen); PaM 18- To promote decarbonisation of industry through eco-innovation and cleaner production processes and to promote industry digitization.

These new policies and measures, are in an adopted or planned status of implementation and are include in the WAM scenario.

The remaining PaMs corresponds to all the mitigation actions, which were reported in previous report. They were only renamed or regrouped, so as to be in line with the National Energy and Climate Plan for 2030 (NECP). The current description of measures translates the results of the planning processes and in some instances, it was found the need for reinforcing the implementation of measures already underway in order to increase its efficiency and scale - e.g. support to electric vehicles and public transports, promotion of renewable energy.

All the existing policies and measures previously reported are currently implemented and are included in the WEM scenario. Even in this scenario, policies and measures continue to be increased, as it is necessary to continue to develop and implement policies that follow up and expand their implementation and scope.

The scenarios for existing policies and for additional policies (or neutrality scenario), allow an assessment of the effort required for each sector in order for the objectives set to be achieved in general, but do not accurately reflect typical scenarios for assessing the impact of planned policies and measures.

Additional Information

Table 1 (Quantified objective and Indicators used to monitor and evaluate progress over time - ex-post or ex-ante); Table 2 and Table 3 – indicators still under development.

As mentioned before, for the purpose of this indicators it is under development a platform, within the scope of the national system (SPeM), to monitor and report the impacts of cross-sectoral policies and measures on climate change and energy transition. The platform will be developed in conjunction with the sectors through the development of indicators and the identification of the respective regulatory, financing, tax and other.

