Portugal

Objectives and targets

Greenhouse gas emission target

With a view of achieving carbon neutrality by 2050, the Portuguese draft national energy and climate plan (NECP), includes the following elements:

- Energy transition based on a complete decarbonisation of electricity production, including the closure of coal-fired power plants by 2030
- Considerable focus on energy efficiency in all sectors of activity, but particularly in relation to industry, housing, services and mobility
- Full decarbonisation of the transport sector - mainly road transport
- Emphasis on industrial sectors, including the agri-food industry
- A rethink of the entire food chain in agriculture
- The potential of carbon sinks, in particular, forests

The Portuguese government sets its 2030 greenhouse gas emission reduction target at 45% to 55% compared to 2005, going beyond the 17% emission reduction target mandated by the Effort Sharing Regulation (ESR).

Furthermore, objectives under the 2050 roadmap include reducing emissions by 65% to 75% by 2040, and by 85% to 90% by 2050, compared to the 2005 levels.

Despite the level of ambition set in this draft, the final plan would benefit from elaborating further on the policies and measures to achieve the set targets.

Renewable energy

Portugal plans to achieve a 47% share of renewable energy by 2030, with 80% of electricity produced with renewable energy by 2030. However, as underlined by the Commission staff working document published on June 18, 2019 "the policies and measures that support such contribution should be more detailed in order to demonstrate consistency with the proposed level of ambition[4]".

4 https://ec.europa.eu/energy/sites/ener/files/documents/pt_swd_en.pdf

Hydro, wind and solar represent the main renewable energy resources. In addition to more mature renewable energy technologies, Portugal is also developing other technologies including off-shore wind, ocean waves and geothermal power.

Estimated trajectories for renewables in Portugal for the 2030 horizon

		2020	2025	2030
Electricity	Gross final energy consumption (Mtoe)	4.6	5.3	6.1
	Renewables %	68%	76%	80%
Heating and cooling	Gross final energy consumption (Mtoe)	5.2	4.9	4.6
	Renewables %	34%	36%	38%
Transport	Gross final energy consumption (Mtoe)	5.4	5.0	4.6

Total effective contribution (installed capacity) of each renewable energy technology in the Electricity sector (GW) for the 2030 horizon [Source: DGEG]

	2015	2020	2025		2030	
Hydro	6.0	7.0	8.2		9.0	9.0
Wind	5.0	5.4	6.6	7.8	8.8	9.2
Solar	0.4	1.9	5.5	6.6	8.1	9.9
Other renewables [1]	0.3	0.5	0.5	0.5	0.7	0.6
Total [2]	11.7	14.7	20.8	23.2	26.6	28.6

Source: Portuguese draft National Energy and Climate Plan

[1] Includes Biomass, Biogas Waste (50% of production via waste is not renewable), Geothermal and Wave

[2] Does not include cogeneration

Energy efficiency:

Portugal endorses the EU energy efficiency goal of 32.5% and expects to reduce energy consumption by 35% compared to the business-as-usual projections of the European Commission's model for 2030.

Analysis of sectors

Transport

Portugal presents an emissions reduction target for the transport sector of 53% by 2030 compared to 2005, based on planned policies, and a 48% decarbonisation target based on existing policies.

With regard to renewables in transport, the plan sets a target of 20% by 2030. It's positive to see that the majority of this target will be achieved with renewable electricity; however, there are still plans to use both crop-based and advanced biofuels without specifying what feedstocks are going to be used. A very positive aspect of the plan is that Portugal doesn't foresee a role for gas in transport.

The draft NECP stresses the importance of electrification (mainly road transport), although without clear targets in terms of vehicle sales or differentiation between battery-electric vehicles and hybrids.

For heavy-duty vehicles, the plan mentions hydrogen as a solution but considers its contribution to be minimal in the next decade.

There are no measures to address emissions from aviation. The strategy for shipping focuses on LNG (liquified natural gas)[5], which represents no climate benefits compared to petroleum-based fossil fuels.

Finally, it is positive that Portugal lists a series of measures focusing on efforts to promote a modal shift (both freight and passengers), infrastructure for electrification, alternative fuels, sharing schemes, etc.

Recommendations

- Set a clear target for the decarbonisation of the transport sector; currently, it is not clear if the target is 48% or 53%.

- Clarify what feedstocks (origins and quantities) will be used for biofuels.

- Aim to phase out crop-based biofuels.

- Increase efforts to tackle emissions from heavy-duty vehicles, especially in urban logistics.

- Include clear measures for the aviation and shipping sectors.

- Recognise the crucial role of rail electrification in the decarbonisation of the transport sector.

Buildings

The Portuguese draft NECP identifies the building stock as one requiring major efforts but the plan would profit from further details and ambition in this regard.

The draft NECP sets a sectoral target for residential buildings of 35% reduction of greenhouse gas emissions (compared to 2005). The target for the share of renewables in heating and cooling is set at

5 https://ec.europa.eu/energy/sites/ener/files/documents/pt_swd_en.pdf

38% by 2030. Given that the renewable heating and cooling share in 2009 was already at 37% and has since dropped to 34%, this target needs to be revisited.

The long-term strategy for the renovation of the national stock of residential and non-residential buildings, both public and private as well as the indicative milestones for 2030, 2040 and 2050 have not yet been developed. The long-term renovation strategy is crucial for the decarbonisation of buildings, and should apply to public and private buildings. It needs to define measurable actions and indicators set at the national level, including financial mechanisms, incentives and the mobilisation of financial institutions for renovations.

The draft NECP identifies energy poverty as a key element of the national strategy for building renovation. This is of utmost urgency as Portugal is the 4th European country most affected by energy poverty.

The draft NECP lacks details on specific measures foreseen for the buildings sector and raises questions on regulatory measures to phase out fossil fuels including gas for domestic heating. It also lacks clarity regarding the type of biomass[7] that will be promoted while ensuring compatibility with a circular economy model.

Recommendations

- Accelerate the preparation of the long-term strategy for the renovation of buildings under the Energy Performance of Buildings Directive.

- Consider dedicated programmes of low-cost passive measures in the renovation of buildings (e.g. insulation of walls and efficient windows) which can ensure a considerable increase in energy efficiency and thermal comfort and create awareness of the potential for deeper and more structural measures.

- Address the skills gap for specialised technicians in the area of energy efficiency and renewable energies at the level of construction, materials, technologies and the installation of renewable energy systems in buildings.

- Ensure training of financial institutions to facilitate and accelerate capital investment and the ability to assess the viability of projects in these areas.

- Ensure clear rules concerning the type and volume of biomass that will be promoted, in order to ensure that it is truly sustainable.

- Outline specific measures for the renovation of the national stock of residential and non-residential buildings.

7 The use of wood for electricity or heat generation is seen as distortion to the use of biomass as feedstock within a circular economy model.

Agriculture

In spite of an ambitious objective to entirely rethink the food chain, the Portuguese draft NECP does not contain credible and specific policy measures to reach this objective. The plan also lacks specific greenhouse gas emission reduction targets for agriculture. Despite it acknowledging the increase in GHG emissions due to an increase in intensive livestock production for the export market, Portugal foresees the "evolution in CAP[8] in a similar manner to the current situation".

Portugal argues that the expansion of organic agriculture will reduce GHG emissions, while to date, there is no scientific evidence to support this claim. The promotion of new technologies, such as precision farming, will help to some extent but will not bring about the significant GHG emission reduction needed in the agricultural sector nor avoid an increase in emissions from agriculture. Finally, Portugal is currently largely affected by desertification, contributing to an increased risk of forest fires. Intensive farming is known to be one of the drivers of desertification, yet no policy measures are included in the draft plan to address this issue.

Recommendations

- Set a clear target for the decarbonisation of the agricultural sector.

- Set specific policy measures to truly respond to the ambitious goal of rethinking the entire food chain.

- Promote a system change of the agricultural sector by addressing the intensification of land use and the growing livestock numbers.

- End existing subsidies that are harmful to the climate.

Transparency and public participation

There was no public consultation for the development of the draft energy and climate plan in Portugal. The document was produced by the government with inputs from the Autonomic Regions of Madeira and the Azores. The Portuguese government has declared that the NECP will be formally analysed by the Portuguese parliament, the Local Authorities' National Association and the Local Parishes' National Association and will be put to a public hearing process in the course of 2019. Furthermore, a public consultation on the draft plan started in February 2019. However, the draft NECP does not specifically mention multilevel energy and climate dialogue.

8 Common Agriculture Policy

The draft NECP mentions the strong participation process for the 2050 roadmap, where several stakeholders and the public were actively involved. For the 2050 roadmap, many sectoral workshops have been organised since 2017. These events were divided according to the following thematic fields: mobility, forestry, food and agriculture, construction sector, solid waste and wastewater, cities and energy. These workshops involved experts in the mentioned fields, mainly working in public institutions and universities. In addition to this, a few public events were organised to discuss the 2050 roadmap.

Recommendations

- Organise an additional public consultation following the EU Commission recommendations for the finalisation of the NECP.

- Use existing local energy and climate initiatives, such as the Covenant of Mayors which gathers hundreds of Portuguese LRAs, to assess the potential contribution of LRAs to the final NECP.

- Establish multi-level energy and climate dialogue for the finalisation of the NECP, making use of existing formats like working groups, task force or other consultative bodies that involve all stakeholders; provide the dialogue with an administrative structure to ensure its duration and its involvement in regularly following up on the NECP implementation from 2020 onwards.

- Adopt a climate law to monitor policies and measures and form a social and political compromise for future generations and political cycles.