



Fit to succeed?

An assessment of the Spanish draft energy and climate plan

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Executive summary

As part of the European Union's 2030 climate and energy package, EU member states are required to develop energy and climate strategies to plan and to report on their 2030 climate and energy objectives.

The LIFE PlanUp project (for more information, see Annex II), analyses the draft national energy and climate plans (NECPs) from five countries - Romania, Poland, Hungary, Italy and Spain.

Divided into four sections, this briefing assesses the draft plan of Spain. An overall score is provided at the end of the assessment (for more information, see Annex 1 on assessment criteria).

The first section covers the scope of the plan and the ambition and plausibility of its overall objectives.

Spain published its draft NECP in February 2019, almost two months after the legal deadline. It respects the mandatory template and uses consistent, comparable and harmonised greenhouse gas (GHG) emission targets and related baselines. The plan is in line with the EU legislation and goes even beyond the EU climate targets (e.g in renewable energy and the transport sector). The net-zero emission reduction target for 2050 is embedded throughout the plan, and the sectoral targets for 2030 have been calculated taking into account how to achieve the 2050 target.

The second chapter provides an in-depth analysis of the transport, buildings and agricultural sectors with regard to proposed objectives and policy measures.

Transport is the largest source of greenhouse gas emissions in Spain. The draft plan sets an implicit target of 43.5% GHG emission reduction (compared to 2005) by 2030 and mentions - without making it mandatory - that by 2040 all cars sold on the market will be zero-emission vehicles (ZEVs). On the other hand, the Spanish NECP is not clear on what alternatives will be promoted for heavy-duty vehicles. While including electric buses, the plan consider only advanced biofuels as a viable option to reduce emissions from trucks and omits the potential of electrification. With regard to the buildings sector, the Spanish NECP recognises the need to achieve a highly energy-efficient and decarbonised building stock by 2050.

The 2050 decarbonisation targets for this sector will be detailed in the 2020 long-term renovation strategy, which will be presented before 10 March 2020 and which will include intermediate targets for 2030 and 2040.

In the agricultural sector, Spain expects a 13% reduction of greenhouse gas emissions (1990 baseline) by 2030. However, such reduction would not be sufficient to decarbonise the economy by 2050, and more effort might be needed from the other Climate Action Regulation (CAR) sectors (i.e. transport, buildings).

The third section focuses on public participation and transparency. Overall, the process lacked transparency and inclusiveness, as the Spanish government did not provide early opportunities for stakeholders to input in the development of the plan.

Finally, the last section looks at the impact assessment of planned policies with regard to co-benefits such as job creation, air quality improvement and reduction of energy poverty.

The Spanish draft plan includes investments in low-carbon industries and sees the clean energy transition as an important employment opportunity.

Moreover, while the draft NECP addresses energy poverty, it was only after its publication that the Spanish government released a National Energy Poverty Strategy (NEPS) that outlines main measures and action points to reduce energy poverty.

Overall, the Spanish draft NECP scores quite high on all the most important criteria. The country should continue the direction set by the draft plan and reinforce its climate promises.

An assessment of the Spain draft national energy and climate plan



Scope, ambition and credibility

The Spanish draft national energy and climate plan (NECP) was published on the 20th of February 2019, almost two months after the established deadline. It follows the template as outlined in the EU Governance Regulation and its content is well detailed and coherent.

Greenhouse gas emission target

The draft plan foresees a reduction of 20%-21% in greenhouse gas (GHG) emissions by 2030 compared to 1990 levels. This means a reduction of 60% compared to 2005 for the sectors covered by the EU Emissions Trading System (EU ETS), and a reduction of 38% by 2030 (2005 baseline) for the Climate Action Regulation (CAR), or “non-ETS” sectors (agriculture, transport, buildings, waste).

The plan includes a 2050 GHG emission reduction target of 90% compared to 1990 levels. The sectors that will contribute the most to emission reductions will be electricity production (44 MtCO₂), transport (28 MtCO₂), and buildings (7MtCO₂).

Reductions in emissions from electricity production will come mainly from two measures:

- Phasing out coal-fired power plants (five out of nine already in 2019)
- Increasing the share of renewables in electricity production to 74% in 2030

The Spanish draft NECP recognises the importance of tackling transport emissions and sets an implicit target for the transport sector of 43.5% GHG emission reduction (compared to 2005) by 2030.

The plan also promotes the need to achieve a highly energy-efficient and decarbonised building stock by 2050. The 2050 decarbonisation targets for this sector will be detailed in the 2020 long-term renovation strategy, which will be presented before 10 March 2020 and which will include intermediate targets for 2030 and 2040.

According to the figures presented in the draft NECP, the Spanish government expects a 13% reduction in greenhouse gas emissions from the agricultural sector (compared to 1990) by 2030. However, such a reduction would not be sufficient to decarbonise the economy by 2050 and would require a higher contribution from other sectors.

Renewable energy

Spain sets the following renewable energy targets, both for the medium and long-term:

- By 2030: 42% of final energy consumption will come from renewables and 74% of electricity will be produced with renewable energy
- Increasing the share of renewables in electricity production to 74% in 2030

The plan foresees a total installed capacity in the electricity sector of 157GW by 2030:

- The main source will be wind power (50GW) - 27GW new capacity representing a growth of 114%
- The greatest increase in capacity will be in solar energy: 37GW photovoltaic and 5GW solar thermal, which represents an increase of 530% compared to the current capacity
- Other renewable technologies will add another 5GW

To boost renewable energy deployment, it will be important to ensure that nuclear plants are closed by 2024.

Energy efficiency

Spain endorses the EU energy efficiency goal of 32.5% and expects to reach a 39.6% reduction in primary energy consumption with planned policies and measures.

The reduction in energy consumption will equal 1.9%/year from 2017 to 2030. Considering the expected growth of gross domestic product (GDP) by 1.7% a year, the total improvement of primary energy intensity is projected to reach 3.6% a year until 2030.

The plan also proposes that public administrations exercise proactively their responsibility in the area of energy savings and efficiency. Thus, it proposes initiatives for the fulfilment of renovation objectives of the public building stock as established by the EU Energy Efficiency Directive and promotes energy savings that could be obtained from the additional renovation of 300,000 m²/year of the state administration's public buildings.

Criterion	Indicator	Indicator description	Score
Scope	Consistency with Energy Union governance regulation	Does the plan follow the mandatory template as outlined in the Governance Regulation? ¹	4/4 = to a moderate extent
	Sectors/policies coverage	Does the plan include policies covering all required sectors?	4/4 = to a great extent
	Deadline	Has the plan been published on time/respecting deadline?	1/4 = considerable delay

Criterion	Indicator	Indicator description	Score
Ambition/ plausibility	Greenhouse gas (GHG) emissions	Does the plan include an economy-wide GHG emissions reduction target for 2030?	3/4 =to a moderate extent
	Consistency among targets	Does the plan utilise consistent and harmonised GHG emission targets and related baselines?	4/4 = to a great extent
	Renewable energy	Does the plan include a national 2030 renewable energy target? ²	4/4 =to a great extent
	Energy efficiency	Does the plan include a national 2030 energy efficiency target?	4/4 =to a great extent
	Alignment with 2050 decarbonisation objective	Is there a clear commitment to the Paris Agreement's objectives?	4/4 =to a great extent

Criterion	Indicator	Indicator description	Score
Consistency and credibility	Adaptation plan	Has an adaptation plan been devised? Is it reflected in the NECP? ³	3/4 = yes, but limited
	Use of loopholes	Does the plan include use of loopholes in achieving GHG emission targets? ⁴	1/4 = yes, large use
	Policy projections Impact assessment	Does the plan use a strong and effective model used for the impact assessment of planned policies and measures?	4/4 = yes, very strong and detailed model used

1 <http://data.consilium.europa.eu/doc/document/PE-55-2018-INIT/en/pdf>

2 <https://www.ecofys.com/en/publications/national-benchmarks-for-a-more-ambitious-eu-2030-res-target/>

3 Art. 19 Governance Regulation: <http://data.consilium.europa.eu/doc/document/PE-55-2018-INIT/en/pdf>

4 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0842&from=EN>

In-depth analysis of sectors

Transport



The Spanish draft plan recognises the importance of tackling transport emissions. Investments, measures, and incentives for electric vehicles are well articulated and unlike in some other countries, there is no mention of using natural gas - which is a very positive development.

However, the targets for zero-emission light-duty vehicles and public transport utilisation should be made mandatory.

The draft plan sets an implicit greenhouse gas emission reduction target of 43.5% (compared to 2005) by 2030 for the transport sector.

The target for renewable energy sources is set at 22 % without a clear indication of how it will be achieved. Overall there seems to be a decrease in the use of 1st generation biofuels and an increase in advanced biofuels. To understand the reality of the target, the plan should include more information on the use of multipliers, which is currently not provided.

The plan foresees that by 2040 all cars sold on the market will be zero-emission vehicles (ZEVs) , and five million electric vehicles (EVs) will be sold by 2030. However, the final plan should set targets for each type of electric vehicles such as battery electric vehicles (BEV), plug-in hybrid electric vehicles (PHEV) or hydrogen vehicles.

The draft NECP does not specify the role that EVs could play in integrating large amounts of variable renewables into the electricity grid, both to regulate demand and to provide electricity back into the grid (V2G).



The Spanish draft NECP considers only advanced biofuels as an alternative fuel for the heavy-duty sector, neglecting the potential of alternative available technologies such as electrification

The establishment of low-emission zones in cities above 50,000 inhabitants is a step in the right direction and might encourage more public transport utilisation and cycling. However, it would need to be accompanied by measures to improve non-polluting modes of transport.

Investments are also expected in rail infrastructure, with the aim of transferring some freight to rail (7,5% share) which is above the current national requirements (6%) included in the Infrastructure, transport and residential plan (PITVI) 2012-2024.

To encourage a shift away from private cars, the plan includes measures on changing car ownership taxes, in coordination with local authorities. Taxing fuel to fund other types of sustainable mobility is also mentioned.

The shipping and aviation sectors are barely covered in the plan. Taxation or alternatives to biofuels, such as synthetic fuels, should be included in the final version of the plan.

Criterion	Indicator	Indicator description	Score
Sectoral policy: Transport	Alignment/plausibility with 2030 goals	Are transport policies included in the plan plausible to reach 2030 national climate goals? ⁶	4 /4 = to a great extent
	Inclusion of long-term strategy	Do plans include transport policies beyond 2030?	0/4= not at all
	Consistency with EU legislation	Are transport policies consistent and in line with EU legislation? ^{7,8,9,10}	3/4 = to a moderate extent
	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals?	3/4 = to a moderate extent
	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	3/4 = to a moderate extent

5 The ZEV program certifies passenger cars, light-duty trucks and medium-duty vehicles as ZEVs if the vehicles produce zero exhaust emissions of any criteria pollutant (or precursor pollutant) under any and all possible operational modes and conditions.

6 https://ec.europa.eu/clima/policies/effort/proposal_en

7 https://eur-lex.europa.eu/resource.html?uri=cellar:609fc0d1-04ee-11e8-b8f5-01aa75ed71a1.0001.02/DOC_1&format=PDF

8 https://eur-lex.europa.eu/resource.html?uri=cellar:3eb9ae57-faa6-11e6-8a35-01aa75ed71a1.0007.02/DOC_1&format=PDF

9 https://ec.europa.eu/transport/themes/urban/vehicles/directive_en

10 https://ec.europa.eu/transport/themes/urban/cpt_en

Recommendations

- Find a balance between ambition and sustainability, i.e. set a target for renewables in transport that is ambitious but does not risk driving the use of unsustainable biofuels.
- Include details about the type of renewable fuels planned to be used to meet the 22% target and ensure that first-generation biofuels are not included in the target.
- Consider other technologies such as electrification for heavy-duty vehicles instead of relying only on advanced biofuels.
- Include measures to reduce emissions in the aviation and shipping sectors, as they are currently barely covered in the plan.

Buildings

The Spanish draft energy and climate plan recognises the need to achieve a highly energy-efficient and decarbonised building stock by 2050. The 2050 decarbonisation targets for this sector will be detailed in the 2020 long-term renovation strategy, which will be presented before March 2020 and which will include intermediate targets for 2030 and 2040.

Spain has set a higher emission reduction target for the buildings sector than its binding target under the EU law, but this is still linked to an overall emission reduction of only 20% compared to 1990 levels by 2030. However, projections based on existing measures indicate reaching a 15% emission reduction by 2030.

The Spanish housing stock includes around 13.8 million homes. Up to 1980, they were built without energy efficiency criteria. With the proposed objective of energy rehabilitation, 1,200,000 homes, which is only 8.7% of the housing stock, will be renovated by 2030. The plan proposes a gradual increase in the rate of renovation of 30,000 homes in 2021 to 300,000 in 2030. However, if this rate of renovation were maintained from 2030 to 2050, only 52% of the existing buildings would be renovated by 2050, not the 100% foreseen by the EU Energy Performance of Buildings Directive (EPBD).

Energy renovation objectives are set for both the residential sector and buildings of the general state administration but not for buildings in the tertiary sector.

Objectives for the residential sector are:

- Improvement of insulation of a total of 1,200,000 homes over the decade.
- Improvement of heating systems (individual and centralised) and warm water installations of 300,000 homes per year.

Although the proposed rate of renovation of the housing stock is increased by a factor of 4.8 compared to the current rate (25,000 homes per year), this is not enough to achieve the objectives required by the EPBD directive.

Training and awareness campaigns on building rehabilitation are also foreseen.

For non-residential buildings of public administrations, the plan proposes to go beyond the objectives set by the EU Energy Efficiency Directive, planning a renovation of 2,220,000m² in order to ensure the level of ambition consistent with a decarbonised scenario by 2050.

The Spanish draft NECP foresees district heating and cooling for buildings to improve the overall electricity system. It plans to foster electrification and increase renewable energy for thermal uses (heating and cooling). It places the focus on local renewable energy communities, proposing a regulatory development that allows them to exercise their right to generate, consume and sell renewable energy along with a boost of administrative and economic measures. It also proposes to increase the use of electricity in heat production.

The plan also includes a measure to promote residential equipment renewal. Priority will be given to appliances whose energy consumption has a greater weight on the overall household consumption (such as refrigerators, refrigerator-freezers and freezers, washing machines, dishwashers and ovens)

Energy efficiency in tertiary and public buildings is also addressed by promoting renovation and energy efficiency in large cooling generators and air conditioning installations.

Renovation of biomass equipment is still considered in spite of their negative impact on air quality and the availability of sustainable renewable sources. The draft plan does not include a phase-out of fossil fuels for individual heating systems.

References to building renovation passport and database to record and share information on building performance are missing.

Criterion	Indicator	Indicator description	Score
Sectoral policy: Buildings	Alignment/plausibility with 2030 goals	Are buildings policies included in the plan plausible to reach 2030 national climate goals?	2/4 = to some extent
	Inclusion of long-term strategy	Do plans include buildings policies beyond 2030?	2/4 = to a small extent
	Consistency with EU legislation	Are buildings policies consistent and in line with EU legislation? ^{11 12 13}	3/4 = to a moderate extent

11 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0844&from=EN>

12 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0761&from=EN>

13 [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0767R\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0767R(01)&from=EN)

Criterion	Indicator	Indicator description	Score
Sectoral policy: Buildings	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals? ^{14 15}	0/4 = not at all
	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	0/4 = not at all

Recommendations

- Set up a database to record and share information on building performance.
- Include intermediate targets for 2030 and 2040 and provide precise measures, policies and financial incentives to achieve an energy-efficient and decarbonised building stock by 2050.
- Carry out a back-casting exercise in view of a 100% share of renewables in heating and cooling by 2050 at the latest and include milestones for 2030 and 2040.
- Focus on the industrialised and scalable "model types" renovations developed for each climate zone and building type.
- Create dedicated instruments for the regional supply chains for "model types" to ensure transparency and financing, and establish specific financial instruments for vulnerable households.
- Train accredited "technical developers" for the tertiary sector and neighbour associations to manage the energy rehabilitation on behalf of the building owners and act as intermediators towards the financial sector

Agriculture

The Spanish agricultural sector has a greenhouse gas emission reduction target of 18% (2005 baseline). Bioenergy consumption in the agricultural sector is expected to increase from 94Ktoe to 278Ktoe.

According to the figures presented in its draft energy and climate plan, the Spanish government

¹⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012L0027&from=EN>

¹⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0844&from=EN>

expects the GHG emissions from agriculture to reduce by 13% (1990 baseline) by 2030. However, such a reduction would not be sufficient to decarbonise the economy by 2050 and this low ambition would require a higher contribution from other sectors.

Emissions projections (CO₂Mtoe)

Mtoe	1990	2005	2015	2020*	2025*	2030*
Transport	59.199	102.310	83.197	85.722	74.638	57.695
Electricity generation	65.864	112.623	74.051	63.518	27.203	19.650
Industry (combustion processes)	45.099	68.598	40.462	40.499	37.246	33.530
Industry (process related emissions)	28.559	31.992	21.036	21.509	22.026	22.429
Residential, commercial and institutional sectors	17.571	31.124	28.135	26.558	23.300	19.184
Livestock	21.885	25.726	22.854	23.247	21.216	19.432
Crops	12.275	10.868	11.679	11.382	11.086	10.791
Waste	9.825	13.389	14.375	13.657	11.898	9.650
Refining industry	10.878	13.078	11.560	12.247	11.607	10.968
Other energy industries	2.161	1.020	782	721	568	543
Other sectors	9.082	11.729	11.991	14.169	13.701	13.259
Fugitive emissions	3.837	3.386	4.455	4.715	4.419	4.254
Product use	1.358	1.762	1.146	1.231	1.283	1.316
Fluorinated gases	64	11.465	10.086	8.267	6.152	4.037
Total	287.656	439.070	335.809	327.443	266.343	226.737

*2020, 2025 and 2030 data are estimations based on the target scenario of the Spanish NECP

Source: Spanish Ministry of Ecological Transition, 2019
Based on own translation

Several sources of GHG emissions in the agricultural sector were not considered, such as pesticide production, consumption choices or farming intensity.

The draft plan includes several climate measures that are proposed to be financed via the EU's common agricultural policy (CAP). Nevertheless, no specific budget has been allocated. The proposed measures include:

- The promotion of non-irrigated oilseed and leguminous crop in the crop rotation: Leguminous crops have mitigation potential in the sense that they reduce the use of fertilisers and improve the soil structure if not conducted intensively.



- **A fertilizer plan: this measure should be compulsory for any farmer receiving public money and should not be incentive-based.**

- Manure management: it can improve the current situation, however, it seems that the measure only targets intensive pig and bovine production while it should cover all animal production type.

- Direct sowing (or bascen of tillage): this is a controversial measure. While science shows that tillage practice releases GHG emissions, the absence of it might increase the use of herbicide. Hence the relevance of this type of measure is still to be demonstrated.



- Maintenance of soil cover and crops residuals: this practice is known to be beneficial for the climate

The production of renewable energy from biomass and waste from the agricultural sector is promoted, however, there is no information on the budget or resources allocated to incentivise this.

While in its simulation exercise the draft NECP makes a reference to the atmospheric pollution control program and the nitrate directive that may impact the agricultural sector, none of the proposed measures is assessed in function of the current environmental legislation. For instance, the promotion of renewable energy from slurry may have an indirect impact in terms of increasing livestock production (in the area of the methanisation unit), nitrate leach into water, and air pollution.

Criterion	Indicator	Indicator description	Score
Sectoral policy: Agriculture	Alignment with 2030 goals	Are agricultural policies included in the plan plausible to achieve 2030 climate goals?	1/4 = to a small extent
	Inclusion of long-term strategy	Do plans include agricultural policies beyond 2030?	0/4 = not at all
	Consistency with EU legislation	Are agricultural policies consistent and in line with EU legislation?	2/4 = to some extent
	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals?	0/4 = not at all
	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	0/4 = not at all

Recommendations

- Ensure that agricultural mitigation measures cover all sources of emissions from the sector.
- Ensure that all measures are environmentally proofed (air - water - biodiversity).
- Allocate specific budget for each measure and put forward the number of farmers expected to enrol.
- Foresee structural measures to help farmers to transition away from the intensive mode of production, as only a reduction of total livestock numbers (which implies also a change in export and consumption patterns) would put the agricultural sector on the right path towards the zero-emission target.

Transparency and public participation

Prior to the elaboration of the draft energy and climate plan, the Spanish Ministry for the Ecological Transition (MITECO) only held informal consultations with (energy) businesses. Hence, there was no real public participation during the drafting phase of the plan.

The draft NECP was submitted to the European Commission on the 22nd of February 2019, after the official deadline. A public consultation was opened on the same day and lasted until March 22nd¹⁸.

In parallel, a strategic environmental assessment procedure was launched.

The plan states that a multilevel dialogue will be established for the implementation of the NECP measures, involving citizens, local and regional authorities and all sectoral stakeholders, but there are no details provided on how the participatory process through the multilevel dialogue will occur.

Criterion	Indicator	Indicator description	Score
Transparency	Public participation	Does the plan include early and effective opportunities for public participation? ¹⁹	2/4 = no, public consultation took place, but too short a time was given to provide input
	Publication	Is the draft plan publicly available? ²⁰	3/4 = yes

18 <https://www.miteco.gob.es/es/cambio-climatico/participacion-publica/marco-estrategico-energia-y-clima.aspx>

19 Art. 10 Governance Regulation: <http://data.consilium.europa.eu/doc/document/PE-55-2018-INIT/en/pdf>

20 Art. 3.4, 9.4 Governance Regulation: <http://data.consilium.europa.eu/doc/document/PE-55-2018-INIT/en/pdf>

Criterion	Indicator	Indicator description	Score
Transparency	Multilevel dialogue	Does the plan cater for a multilevel dialogue where local authorities, NGOs, business, investors and the general public can actively engage and discuss the climate and energy policy scenarios, and review progress? ²¹	2/4 = only limited to very few stakeholders

Recommendations

- Provide details on how the participatory process through the multilevel dialogue will occur.
- Make the timeline for the remaining NECP process publicly available, so that citizens and stakeholders can receive early and effective information on how they can contribute.
- Organise a broad public consultation following the European Commission recommendations in June.

Co-benefits

The Spanish government used an elaborated assessment to analyse the draft NECP's impacts on employment, vulnerable families, air quality and health

Air quality

According to the Spanish NECP, 22,200 premature deaths will be avoided by 2030 through the implementation of the plan. However, data from the European Environment Agency (EEA) from 2015 reports that premature deaths in Spain due to air pollution account for 38,600 deaths/year. Thus, the target is insufficient to fully tackle the problem.

20 Art. 11 Governance Regulation: <http://data.consilium.europa.eu/doc/document/PE-55-2018-INIT/en/pdf>

Energy poverty

After the publication of the draft NECP, the Spanish government presented its national energy poverty strategy (NEPS) (2019-2024) that aims to reduce energy poverty by at least 25% by 2025.

The strategy has four main action points:

- Defining energy poverty and increasing knowledge about it
- Introducing a new social bonus and a ban on disconnections to protect vulnerable consumers
- Carrying out low-cost or express renovations of buildings as a first step and Integral rehabilitation in a mid-term, and establishing special funding schemes for vulnerable consumers
- Carrying out social awareness and communication campaigns to inform about energy-efficient habits, energy savings and energy efficiency measures with a website to disseminate general information about the topic

Job creation

The draft plan includes investments in low-carbon industries and sees the clean energy transition as an important employment opportunity. At the same time, it takes into account the negative effect of disinvestment in nuclear and coal plants.

According to the figures provided in the impact analysis, the implementation of the plan will create between 250,000 and 364,000 jobs per year and the unemployment rate will be reduced by 1.1%-1.6%. The investments in renewable energy alone will create between 102,000 to 182,000 jobs while investments in energy savings and energy efficiency will generate between 42,000 to 80,000 jobs/year.

Criterion	Indicator	Indicator description	Score
Co-benefits	Air quality	Do proposed policies improve air quality?	2/4 = small improvement
	Energy poverty	Do proposed policies reduce energy poverty?	3/4 = moderate improvement
	Job creation	Does the plan include investments in low-carbon industries, thus promoting job creation in these industries?	4/4 = great improvement

Recommendations

- Ensure that the final plan reflects the measures and policies outlined in the national energy poverty strategy.
- Adopt more ambitious measures to improve air quality.

Overall score and conclusions

Criteria	Weight	ES points
Scope	5	8/12
Ambition	20	18/20
Consistency and credibility	20	8/12
Transport policies	10	13/20
Buildings policies	10	11/20
Agriculture policies	10	3/20
Transparency	20	6/12
Co-benefits	5	9/12

Total score: 58%

The Spanish draft energy and climate plan scores quite high on all the most important criteria, except for agriculture and transparency. The plan is in line with the EU legislation and even goes beyond the EU targets. However, a more transparent process where all relevant stakeholders and the general public are consulted on the country's climate objectives and planned policies would ensure greater support and commitment from all parties involved.

With regard to sectoral objectives and policy measures, the draft plan recognises the importance of tackling transport emissions. On the other hand, it should provide precise measures, policies and financial incentives to achieve an energy-efficient and decarbonised building stock by 2050.

The agricultural sector's role towards meeting the goals of the EU Climate Action Regulation should be reevaluated and the final plan should account for greenhouse gas emission reduction potential from pesticide production, consumption choices and farming intensity.

The draft plan goes in the right direction. If properly implemented, it would set Spain on the right path to significantly reducing its emissions and contributing to the achievement of the Paris Agreement objectives. Therefore, it is of paramount importance that the incoming government maintains the climate promises in the final version of the plan.

Annexes



Assessment criteria

Methodology

To develop the used set of criteria, we conducted desk research and looked mainly at two examples: the criteria used in the LIFE Maximiser Project and the criteria developed by Climate Action Network (CAN) Europe.

The LIFE Maximiser project analysed EU Member States' 2050 low-carbon development strategies (LCDS). For this purpose, LIFE Maximiser developed a complex technical tool²¹ to assess and score the quality (in terms of substance, credibility and process) and status of the EU Members' LCDS. The tool was broken down into 10 criteria, and based on these criteria, further into 48 indicators and sub-indicators. The overall approach used by LIFE Maximiser was normative, meaning that their tool was designed with the primary purpose to measure what elements should be included in the LCDS they analysed. Of the 10 criteria, the most relevant for our work were: ambition, scope, integration, public transparency and process transparency.

The guidelines developed by CAN Europe (part 1²² and part 2²³) are intended to serve as a tool to empower civil society organisations across Europe to engage actively and effectively in the process of the development of the NECPs; to demand ambitious targets and policies from their governments; to check on the accuracy and coherence of governmental proposals; and to hold them accountable for what they have committed to do. They are meant to provide an understanding of the plans and how they work. The guidelines are composed of five pillars, one per topic analysed. Each pillar is underpinned by a set of criteria and indicators. For our work, we looked at all the pillars and selected the relevant criteria and indicators.

Additionally, we developed sector-specific indicators to analyse sectoral policies that are the focus of our project. Each sector - agriculture, buildings and transport - was given a set of indicators that explore the ambition level of sectoral policies, their alignment with EU legislation and the level of their infrastructure investment.

User manual

The result of this methodology was a set of eight criteria, underpinned by a total of 38 indicators. In addition, a scaling system was introduced to measure and evaluate the indicators.

The participatory assessments shall be conducted on the basis of the eight criteria listed below.

21 <https://static1.squarespace.com/static/57050297356fb0e173a11732/t/5b3107a96d2a73fc7bbaaa28/1529939892483/final+tool+concept+Maximiser+formatted.pdf>

22 <https://docs.google.com/document/d/1A4qGHLX2ThnlwlrnkHjJHRZTdh0jghlV6PxUjqxDzI0/edit>

23 <https://docs.google.com/document/d/1tLOHUF1T0gYWPMU7SeBpybw1AvPwH3L-TLGPmbozDnA/edit#heading=h.2nusc19>

These criteria should be used to provide a general indication of the strengths and weaknesses of the specific NECP section on a scale from 0 to 4. The score should be properly justified in a dedicated paragraph.

These criteria, and related indicators, rely exclusively on existing data provided within the NECPs. Lack of data or sections in the NECPs should be highlighted but not compensated for. The lack of details and data shall instead be translated into concrete policy asks to be submitted to Member States in public consultations.

When impact assessment of policies and measures is missing in the NECP, the following national projections may be used to explain the point assigned to each indicator: Climate and Energy country profiles.

Assessment criteria template

Criterion	Indicator	Indicator description	Score
Scope	Consistency with Energy Union governance regulation	Does the plan follow the mandatory template as outlined in the Governance Regulation?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Sectors/policies coverage	Does the plan include policies covering all required sectors?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Deadline	Has the plan been published on time/respecting deadline?	0 = no publication 1 = considerable delay 2 = no, reasonable delay 3 = yes, some delay 4 = yes, no delay

Criterion	Indicator	Indicator description	Score
Ambition/plausibility	Greenhouse Gas (GHG) emissions	Does the plan include an economy-wide GHG emissions reduction target for 2030?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Consistency among targets	Does the plan utilise consistent and harmonised GHG emission targets and related baselines?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Ambition/ plausibility	Renewable energy	Does the plan include a national 2030 renewable energy target?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Energy efficiency	Does the plan include a national 2030 energy efficiency target?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Alignment with 2050 decarbonisation objective	Is there a clear commitment to the Paris Agreement's objectives?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Sectoral policy: Transport	Alignment/plausibility with 2030 goals	Are transport policies included in the plan plausible to reach 2030 national climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Inclusion of long-term strategy	Do plans include transport policies beyond 2030?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Consistency with EU legislation	Are transport policies consistent and in line with EU legislation?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Sectoral policy: Transport	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Sectoral policy: Buildings	Alignment/plausibility with 2030 goals	Are buildings policies included in the plan plausible to reach 2030 national climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Inclusion of long-term strategy	Do plans include buildings policies beyond 2030?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Consistency with EU legislation	Are buildings policies consistent and in line with EU legislation?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Sectoral policy: Agriculture	Alignment/plausibility with 2030 goals	Are agricultural policies included in the plan plausible to reach 2030 national climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Sectoral policy: Agriculture	Inclusion of long-term strategy	Do plans include agricultural policies beyond 2030?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Consistency with EU legislation	Are agricultural policies consistent and in line with EU legislation?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Infrastructure	Are proposed infrastructure investments aligned with the long-term climate goals?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent
	Policies beyond or additional to EU requirements	Does the plan include policies that are additional or go beyond EU requirements?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = to a great extent

Criterion	Indicator	Indicator description	Score
Transparency	Public participation	Does the plan include early and effective opportunities for public participation?	0 = no opportunities/form of consultation 1 = no only limited and not public 2 = no, public consultation but too short time 3 = yes, several opportunities 4 = yes, several opportunities and ample time to participate
	Publication	Is the draft plan publicly available?	0 = no 1 = yes, 6 or more months delay 2 = yes, 2-3 months delay 3 = yes 4 = yes, plus summary in English

Criterion	Indicator	Indicator description	Score
Transparency	Multilevel dialogue	Does the plan cater for a multilevel dialogue where local authorities, NGOs, business, investors and the general public can actively engage and discuss the climate and energy policy scenarios, and review progress?	0 = no provision for dialogue 1 = very limited effort 2 = only limited to very few stakeholders 3 = yes, some effort in including multiple stakeholders and gather input 4 = yes, effective dialogue and high engagement

Criterion	Indicator	Indicator description	Score
Consistency and credibility	Adaptation plan	Has an adaptation plan been devised? Is it reflected in the NECP?	0 = no 1 = no, unclear adaptation strategy 2 = yes, but not clearly reflected in the plan 3 = yes, but limited 4 = yes, fully developed and integrated
	Use of loopholes	Does the plan include use of loopholes in achieving GHG emission targets?	0 = yes, full use/no alternative sought 1 = yes, large use 2 = yes, most opportunities used 3 = yes, but limited 4 = no loopholes used
	Policy projections Impact assessment	Does the plan use a strong and effective model used for the impact assessment of planned policies and measures?	0 = not at all 1 = to a small extent 2 = to some extent 3 = to a moderate extent 4 = yes, very strong and detailed model used

Criterion	Indicator	Indicator description	Score
Co-benefits	Air quality	Do proposed policies improve air quality?	0 = no effect 1 = minimal effect 2 = small improvement 3 = moderate improvement 4 = great improvement

Criterion	Indicator	Indicator description	Score
Co-benefits	Energy poverty	Do proposed policies reduce energy poverty?	0 = no effect 1 = minimal effect 2 = small improvement 3 = moderate improvement 4 = great improvement
	Job creation	Does the plan include investments in low-carbon industries, thus promoting job creation in these industries?	0 = no investment 1 = almost insignificant increase 2 = small increase 3 = moderate increase 4 = great investment and substantial job growth

The table below summarises the weight that each criterion has on the overall score of the NECP.

Given the difference in importance of the criteria in our analysis, a weight system helps us quantify this difference and ensure that it is reflected in the overall score of the NECP. For example, while the consistency between the NECP document and template provided in the Governance regulation is important, the plausibility of the policies listed, the ambition level in targets set for each sector and the dialogue with multiple stakeholders in the development of the NECP are much more relevant and important to the objective of this exercise, and therefore should be given more prominence in the overall assessment.

Hence, a good performance in particular in these criteria should be graded higher in the overall assessment of climate and energy policies.

Criteria	Weight	Points
Scope	5	12
Ambition	20	20
Consistency and credibility	20	12
Transport policies	10	20
Buildings policies	10	20
Agriculture policies	10	20
Transparency	20	20
Co-benefits	5	12

A NECP should obtain at least 65 points to be considered a good plan.

LIFE PlanUp project description

LIFE PlanUp supports the shift to a low-carbon and resilient economy through the development and implementation of effective and ambitious national 2030 energy and climate plans (NECPs) in Hungary, Poland, Romania, Spain and Italy. A key objective of the PlanUp project is to strengthen the climate and energy governance processes in these countries by increasing the involvement of local and regional authorities (LRAs) and civil society organisations (CSOs) in the development and implementation of the NECPs.

Aiming to support the five target countries in strengthening their national NECPs and to engage in their development, a core action of the PlanUp project is the participatory assessment of draft and final NECPs. In order to conduct meaningful and consistent analyses for all five Member States, we developed a set of assessment criteria that will guide the assessments and ensure their comparability.

LIFE PlanUp

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It is the overarching goal of the LIFE + programme to act as a catalyst for changes in policy development and implementation by providing and disseminating solutions and best practices to achieve environmental and climate goals, and by promoting innovative environmental and climate change technologies.

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the European Commission.

Further Information

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