

Spain

Submitted on 11 December 2020

Summary of main findings

Metric	Value	Further information																								
Overall goal of the LTS	Climate neutrality by 2050	<ul style="list-style-type: none"> • The goal includes all the main greenhouse gases. • The goal covers all sectors, excluding international aviation. • Remaining emissions in 2050 compensated by natural sinks. • The use of international carbon credits is excluded. 																								
Scenarios presented in the LTS	<ul style="list-style-type: none"> • The LTS presents two alternative scenarios: <ul style="list-style-type: none"> - The Baseline Scenario is only used as a reference scenario and does not reach climate neutrality by 2050. - The Climate Neutrality Scenario reaches Climate Neutrality by 2050. It is a fixed strategy up to 2030. After 2030, the technologies and strategies used to reach climate neutrality in 2050 might change, depending on the specific technological improvements and breakthroughs that could take place in the different sectors of the economy. 																									
GHG reductions	<p>Modelling results:</p> <p>GHG emission reductions by 2050 compared to 1990 (excluding removals):</p> <p>-90%</p> <p>(i.e. under the 'climate neutrality' scenario)</p> <p>Targets:</p> <p>No indicative milestones for 2040.</p>	<p>Emission projections by sectors:</p> <table border="1"> <thead> <tr> <th>Mio.tCO₂ eq</th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Power</td> <td>21</td> <td>0</td> </tr> <tr> <td>Industry</td> <td>62</td> <td>7</td> </tr> <tr> <td>Transport</td> <td>60</td> <td>2</td> </tr> <tr> <td>Buildings</td> <td>19</td> <td>0</td> </tr> <tr> <td>Agriculture</td> <td>30</td> <td>19</td> </tr> <tr> <td>Waste</td> <td>10</td> <td>3</td> </tr> <tr> <td>LULUCF</td> <td>-34</td> <td>-37</td> </tr> </tbody> </table> <p><i>Notes: (1) Under the 'climate neutrality' scenario. The LTS also refers to 'other' sectors – not included in the table – with projected GHG emissions of 1 Mio.tCO₂ eq in 2050.</i></p>	Mio.tCO ₂ eq	2030	2050	Power	21	0	Industry	62	7	Transport	60	2	Buildings	19	0	Agriculture	30	19	Waste	10	3	LULUCF	-34	-37
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Renewable Energy Sources	<p>Modelling results:</p> <p>Share of renewables in total final energy consumption in 2050:</p> <p>97%</p> <p>(i.e. under the 'climate neutrality' scenario)</p>	<p>Main drivers and features:</p> <ul style="list-style-type: none"> • Electricity production from 100% renewable sources by 2050. • Renewables in the transport sector: 28% in 2030 and 79% in 2050. • Renewables in the 'heating and cooling' sector: 97% in 2050. 																								
Energy Efficiency	<p>Modelling results:</p> <p>FEC¹: 55 Mtoe in 2050 (i.e. 44% reduction compared to 2005²)</p> <p>PEC¹: 80 Mtoe in 2050 (i.e. 41% reduction compared to 2005²)</p> <p>(i.e. under the 'climate neutrality' scenario)</p>	<p>Main drivers and features:</p> <ul style="list-style-type: none"> • Primary energy consumption projected to decrease by around 50 % from 2020 to 2050. • The use of autonomous and electric vehicles will bring about significant efficiency gains in the transport and mobility sector. • The use of heat pump, energy saving and efficiency in heating and cooling sector are promoting through tax benefits. 																								

¹ Includes non-energy uses.

² Calculation based on data in the LTS supplemented, as required, with data from other Member State reporting under the EU Regulation on Governance of the Energy Union and Climate Action

Metric	Value	Further information
Estimated investment needs	€ 300 billion (additional to achieve carbon neutrality, cumulative 2031-2050)	<ul style="list-style-type: none"> • Additional to € 200 billion of cumulative investment under the baseline scenario over the same period. • 80% of investments expected to be made by the private sector and 20% by the public sector.
Socio-economic impacts of transition	GDP in 2050: +1% compared to BAU Employment in 2050: +1.6% compared to BAU	<ul style="list-style-type: none"> • Strong reduction on external energy dependency ratio from 73% (2017) to 13% (2050). • Savings due to the reduction of fossil fuel imports expected to increase disposable income. • Measures to achieve climate neutrality will result in lower pollutant emissions from which urban areas are the main beneficiaries. • Measures to adapt to climate change expected to halve the mortality attributed to heat waves.
Adaptation Policies and Measures	Yes	<ul style="list-style-type: none"> • The LTS refers to the adaptation strategy in the National Adaptation Plan to Climate Change (PNACC). • The LTS clearly mention policies and measures for adaptation to climate change, including list of PaMs per sector (e.g. coastal protection, the energy system, transport and mobility, etc.) and impact of climate change by regions.
Public consultation	Yes	<ul style="list-style-type: none"> • A public consultation took place in 2019. The results are summarised in the Annex.
Legal status of the LTS and targets	Yes	<ul style="list-style-type: none"> • The LTS makes reference to the 'Draft Climate Change and Energy Transition Law' as the institutional framework to achieve climate neutrality by 2050. On 22 May 2021, Spain's Act 7/2021 on Climate Change and Energy Transition came into force.

Overall completeness of the LTS

- The LTS defines a clear goal for Spain, aiming to be climate neutral by 2050.
- In general, the strategy is developed in detail and projections have been completed up to 2050.
- The LTS includes most of the mandatory contents. Gaps in mandatory elements are:
 - a) Aggregate CO₂ intensity of GDP;
 - b) Agriculture and waste projected GHG emissions are presented aggregated.
- The LTS includes most of the non-mandatory contents (e.g. adaptation policies and measures, projections on renewable energy, energy consumption, drivers for energy use and transport decarbonisation options). However, expected emission reductions for industrial subsectors are not provided.