

Greece

Submitted on 8 January 2020

Summary of main findings

Metric	Value	Further information																								
Overall goal of the LTS	Moving towards a climate neutral economy by 2050	- The goal does not specify whether it includes all main greenhouse gases. - The goal covers all sectors. It does not specify if it includes LULUCF and international bunkers. - Remaining emissions in 2050 can be compensated by natural and technical sinks. - The goal does not include offsets outside the national boundary.																								
Scenarios presented in the LTS	- The LTS presents four scenarios up to 2050, two of which correspond to strategies to achieve the 2°C climate target and two scenarios compatible with the 1.5°C climate target: - Energy Efficiency and Electrification for 2°C (EE2): 'very ambitious' measures for the electrification of energy uses in all sectors and the improvement of energy efficiency; - New Energy Carriers for 2°C (NC2): energy efficiency and electrification measures (at a lower level than EE2), complemented by 'very ambitious' EU policies to boost hydrogen, biogas, and synthetic methane. - Energy Efficiency and Electrification for 1.5°C (EE1.5); as for EE2, but at 'maximum ambition' level. - New Energy Carriers for 1.5°C (NC1.5): as for NC2, but at 'maximum ambition' level.																									
GHG reductions	Modelling results: GHG emission reductions by 2050 compared to 1990¹: -85% to -95% (i.e. under 2°C and 1.5°C scenarios, respectively) Targets: No indicative milestones for 2040 and 2050.	Emission projections by sectors: <table> <tr> <th>Mio.tCO₂ eq</th><th>2030</th><th>2050</th></tr> <tr> <td>Power</td><td>9.6</td><td>(1.4, -0.6)</td></tr> <tr> <td>Industry</td><td>11.3</td><td>(6.0, 0.0)</td></tr> <tr> <td>Transport</td><td>18.8</td><td>(3.5, 0.1)</td></tr> <tr> <td>Buildings</td><td>3.2</td><td>(1.4, 0)</td></tr> <tr> <td>Agriculture</td><td>"</td><td>"</td></tr> <tr> <td>Waste</td><td>n.a.</td><td>n.a.</td></tr> <tr> <td>LULUCF</td><td>n.a.</td><td>n.a.</td></tr> </table> <i>Notes: (1) 2050, emission ranges based on all four scenarios. (2) 2030, NECP targets. (3) Power includes both power generation and other energy sectors. (4) Industry includes also industrial processes. (5) Buildings and Agriculture are reported together. The LTS specifies that under the most ambitious scenario (NC1.5), CO₂ emissions in buildings will be reduced by 100% by 2050 compared to 2005 levels.</i>	Mio.tCO ₂ eq	2030	2050	Power	9.6	(1.4, -0.6)	Industry	11.3	(6.0, 0.0)	Transport	18.8	(3.5, 0.1)	Buildings	3.2	(1.4, 0)	Agriculture	"	"	Waste	n.a.	n.a.	LULUCF	n.a.	n.a.
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Renewable Energy Sources	Modelling results: Share of renewables in gross final energy consumption in 2050: 81.9% to 113.8% (i.e. under EE2 and NC1.5 scenarios, respectively)	Main drivers and features: - The LTS also presents projections of RES shares for heating and cooling, electricity generation, and transport under each scenario. - The increase of RES in heating and cooling is almost exclusively due to the increase in the use of heat pumps. - The increase of RES in transport is due to an increase in the use of biofuels, mainly from cellulosic biomass.																								

¹ The LTS does not specify if the emission reductions are with or without LULUCF.

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Energy Efficiency	Modelling results: FEC: n.a. PEC: 15 - 24 Mtoe in 2050 (i.e. 50%-21% reduction compared to 2005 ² under the EE2 and NC1.5 scenario, respectively)	Main drivers and features: • Under NC scenarios, the PEC increases after 2035 because of the development of hydrogen production and synthetic hydrocarbons. • Under the scenarios where the development of new climate neutral energy carriers is uncertain (EE2 and EE1.5), emphasis is put on lowering energy consumption and thus primary energy consumption falls in 2050. • Final energy consumption is estimated for specific sectors: buildings; industry and transport³.
Estimated investment needs	€ 38.1 bn. to € 39.1 bn. (average annual investment needs from 2031 to 2050 ⁴)	• The LTS clarifies that € 38 billion per year are required to continue financing the NECP policies. Achieving the 2°C climate target entails an additional cost of € 0.1 billion per year, while achieving the 1.5°C climate target requires an extra € 1 billion per year in addition to the cost of achieving the 2°C target.
Socio-economic impacts of transition	n.a.	• The LTS does not include any socio-economic impact assessment.
Adaptation Policies and Measures	No	• The LTS does not include elements concerning policies and measures for adaptation to climate change.
Public consultation	Limited	• A public consultation took place in 2019. However, the LTS does not provide a feedback summary.
Legal status of the LTS and targets	No	• There is currently no law that includes the LTS. • There are no legally binding targets specified in the LTS.

Overall completeness of the LTS

- The LTS presents alternative solutions and pathways to approach climate neutrality by 2050, without defining a specific goal.
- In general, the strategy is developed in detail and projections have been completed up to 2050, although not for all sectors.
- The LTS includes most of the mandatory contents. Gaps in mandatory elements are:
 - a) GHG and CO₂ intensity of GDP;
 - b) Emission reductions in agriculture and waste;
 - c) Emission reductions and removals in LULUCF;
 - d) Socio-economic impact assessment.
- The LTS includes most of the non-mandatory contents. However, there is no information on adaptation and policy measures and, similarly, for the recommended contents on the agriculture and energy sectors.

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.

³ For example, in 2050, the decline in final energy consumption in housing, compared with 2005, is between 42% and 46 % in scenarios of 2°C and between 45% and 57% in 1.5°C scenarios.

⁴ It includes the annual cost of investment and purchase of equipment, appliances and vehicles, as well as all energy operating costs of the equipment and purchase of energy products.