

# Croatia

Submitted on 24 June 2021

## Summary of main findings

Metric	Value	Further information																								
<b>Overall goal of the LTS</b>	'To initiate changes in the Croatian society that will contribute to reducing greenhouse gas emissions and that will decouple economic growth from greenhouse gas emissions'	<ul style="list-style-type: none"> <li>The goal includes all main greenhouse gases.</li> <li>The goal covers all sectors, with the exclusion of LULUCF and international aviation. It is not specified if it includes international maritime transport.</li> <li>Measures under the LTS aim at ensuring that the LULUCF sector does not become an emission source.</li> <li>Low-carbon scenarios assume a prudent exit from nuclear energy by 2043.</li> </ul>																								
<b>Scenarios presented in the LTS</b>	<ul style="list-style-type: none"> <li>The LTS presents three scenarios for GHG emission reductions:               <ul style="list-style-type: none"> <li><b>Reference scenario:</b> continuation of the current practice, in line with the legislation in force and the agreed targets until 2030, while accounting for technological advancement and increased RES and EE market share;</li> <li><b>Gradual transition scenario (NU1):</b> calibrated to meet the goals of the Paris Agreement through a number of cost-effective measures, strong incentives for EE and the deployment of RES.</li> <li><b>Strong transition scenario (NU2):</b> calibrated with the objective of achieving GHG emission reduction of 80% in 2050 compared to 1990.</li> </ul> </li> </ul>																									
<b>GHG reductions</b>	<p><b>Modelling results:</b></p> <p>GHG emission reductions by 2050 compared to 1990 (excluding removals): -56.8% to -73.1%<sup>1</sup> (i.e. under the gradual and strong transition scenarios)</p> <p><b>Targets:</b></p> <p>No indicative milestones set for 2050.<sup>2</sup></p>	<p><b>Emission reductions by sector:</b></p> <table border="1"> <thead> <tr> <th>% compared to 1990 GHG emissions</th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td><b>Power</b></td> <td>(-49.7, -53.3)</td> <td>(-61.0, -93.3)</td> </tr> <tr> <td><b>Industry</b></td> <td>(-54.1, -57.5)</td> <td>(-64.4, -83.0)</td> </tr> <tr> <td><b>Transport</b></td> <td>(51.4, 44.0)</td> <td>(-28.3, -55.4)</td> </tr> <tr> <td><b>Buildings</b></td> <td>(-30.2, -34.0)</td> <td>(-55.3, -73.8)</td> </tr> <tr> <td><b>Agriculture</b></td> <td>(-44.5, -46.3)</td> <td>(-50.9, -55.8)</td> </tr> <tr> <td><b>Waste</b></td> <td>(35.0)</td> <td>(-29.4)</td> </tr> <tr> <td><b>LULUCF</b></td> <td>n.a.</td> <td>n.a.</td> </tr> </tbody> </table> <p><i>Notes: (1) Values in parenthesis refer to gradual and strong transition scenarios, respectively. (2) Modelling results also include a fuel production and processing sector: projected reductions -55.8 to -56.0, by 2030; -74.7 to -75.9, by 2050. (3) Buildings includes households, services and energy consumption in agriculture, forestry and fisheries.</i></p>	% compared to 1990 GHG emissions	2030	2050	<b>Power</b>	(-49.7, -53.3)	(-61.0, -93.3)	<b>Industry</b>	(-54.1, -57.5)	(-64.4, -83.0)	<b>Transport</b>	(51.4, 44.0)	(-28.3, -55.4)	<b>Buildings</b>	(-30.2, -34.0)	(-55.3, -73.8)	<b>Agriculture</b>	(-44.5, -46.3)	(-50.9, -55.8)	<b>Waste</b>	(35.0)	(-29.4)	<b>LULUCF</b>	n.a.	n.a.
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<b>Renewable Energy Sources</b>	<p><b>Modelling results:</b></p> <p>Share of renewables in gross final energy consumption in 2050: 53.2% to 65.6% (i.e. under the gradual and strong transition scenarios)</p>	<p><b>Main drivers and features:</b></p> <ul style="list-style-type: none"> <li>Up to 93% increase in RES share among energy sources by 2050.</li> <li>Projections included for RES in energy, transport and general consumption sector, and qualitative descriptions of other sectors' measures to support specific targets.</li> </ul>																								

<sup>1</sup> The LTS indicates that the 73.1% emission reduction under the strong transition scenario is based on the today's known measures, including those that are socio-economically acceptable for agriculture. The remainder of up to 80% counts on new technologies that are not yet in operation today, i.e. underdeveloped technologies.

<sup>2</sup> According to the LTS, Croatia aims for greenhouse gas emission trajectories to be in the range between the two low-carbon scenarios, with aspiration towards the more ambitious' one (i.e. strong transition scenario). The LTS states that 'In view of the ambitious impulse of the new European Green Deal of 2019 and in the context of increasing the EU's collective target of reducing greenhouse gas emissions to -55 % by 2030, adopted by the European Council on 11 December 2020, the next review of the Low Carbon Strategy will set out how net-zero greenhouse gas emissions will be achieved by 2050 and increase ambition by 2030.'

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<b>Energy Efficiency</b>	<b>Modelling results<sup>3</sup>:</b> FEC: 5.38 to 4.53 Mtoe in 2050 (i.e. 25%-37% reduction to 2005 <sup>4</sup> ) PEC: 6.85 to 5.99 Mtoe in 2050 (i.e. 25%-34% reduction to 2005 <sup>4</sup> ) (i.e. under the gradual and strong transition scenarios, respectively)	<b>Main drivers and features:</b> <ul style="list-style-type: none"> <li>• The most powerful impacts on EE are expected in buildings and transport.</li> <li>• Gradual increase in the annual building renovation rate from 1.0% in 2021 to 3.0% in 2030, up to 4.0% in 2050.</li> <li>• Legal obligation for all newly constructed buildings from 2021 onwards to be in nearly zero-energy (NZEB) standard</li> <li>• Expected 85% increase in the share of hybrid and electric vehicles</li> </ul>
<b>Estimated investment needs</b>	Additional investment € 8.7 billion for the period 2021-2030 and € 22.2 billion for the period 2031-2050 (i.e. strong transition scenario)	<ul style="list-style-type: none"> <li>• Investment needs are additional to the reference scenario for respective periods.</li> <li>• The LTS provides a non-exhaustive list of potential funding sources.</li> </ul>
<b>Socio-economic impacts of transition</b>	n.a.	<ul style="list-style-type: none"> <li>• The LTS states that the impact on the economy is reflected through complex structural changes.<sup>5</sup></li> <li>• In the initial period, the strategy is expected to create approx. 40'000 green jobs.</li> </ul>
<b>Adaptation Policies and Measures</b>	Yes	<ul style="list-style-type: none"> <li>• The LTS refers to the Climate Change Adaptation Strategy.</li> <li>• Adaptation measures are envisaged for LULUCF and agriculture sectors.</li> </ul>
<b>Public consultation</b>	Yes	<ul style="list-style-type: none"> <li>• Several stakeholder and public consultations were carried out during the preparation of the LTS. Results are shortly summarised in the LTS.</li> </ul>
<b>Legal status of the LTS and targets</b>	Yes	<ul style="list-style-type: none"> <li>• LTS is regulated by the Croatian Climate Change and Ozone Protection Act. The LTS was adopted as a strategy document by the Parliament in June 2021.<sup>6</sup></li> </ul>

### Overall completeness of the LTS

- The LTS does not specify a clear goal for 2050, pending the definition of policies and national targets at the EU level.
- 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) Emission reductions and removals in LULUCF;
  - b) Socio-economic impact assessment.
- The LTS includes most of the non-mandatory contents (e.g. adaptation policies and measures, projections on renewable energy, energy consumption, etc.). However, there is no or little information on the expected emission reductions by industrial sectors, transport types, or emission by sources from agriculture or LULUCF sectors.

<sup>3</sup> The LTS presents final and primary energy consumption (i.e. FEC and PEC) as indicative energy efficiency targets for 2030, 2040 and 2050.

<sup>4</sup> 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.

<sup>5</sup> Economic activity, employment and innovation are growing in clean energy producing sectors, supported by significant long-term investments. At the same time, increases in energy costs and the declining of sectors using traditional fossil fuel-based technologies have a negative impact on the economy.

<sup>6</sup> The LTS states that "the greenhouse gas emission reduction targets for 2030 and 2050 will be implemented in the Republic of Croatia within the policy framework adopted by the European Union".