



# Catalonia and the climate crisis

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## **Abstract**

*The challenge of the climate crisis calls for action from all levels of government. Within our multilevel governance, the role of subnational administrations is crucial and becoming increasingly important, even within the framework of international negotiations. This article outlines the main actions carried out by the Generalitat de Catalunya (Government of Catalonia) over the course of the last five years, beginning with its Law on climate change, a pioneering piece of legislation within the European Union. The aim is to highlight our commitment and will to contribute, on the basis of solidarity, to the building of a carbon-neutral development model that is both less vulnerable to the impact of the climate crisis and more socially just.*



This past 1 August marked the fifth anniversary of the publication of Law 16/2017 on climate change, which made Catalonia one of the first European regions to adopt specific legislation on the issue of the climate crisis. It was passed almost unanimously by the members of the Parliament of Catalonia (with only one parliamentary group abstaining) and constituted a milestone and an ambitious response to the challenge of the climate crisis.

Recent years have seen us having to deal with a pandemic that has enormously upset our lives as well as with an armed conflict that continues today. Russia's attack on Ukraine, in addition to the human cost, has had a serious impact upon energy and thus on policies for reducing greenhouse

The Catalan Parliament approved the Law 16/2017 on climate change on 27 July 2017 with 122 votes in favour and 11 abstentions.

**Law 16/2017 on climate change made Catalonia one of the first European regions to adopt specific legislation on the issue of the climate crisis**

gas emissions on both a European and an international level.

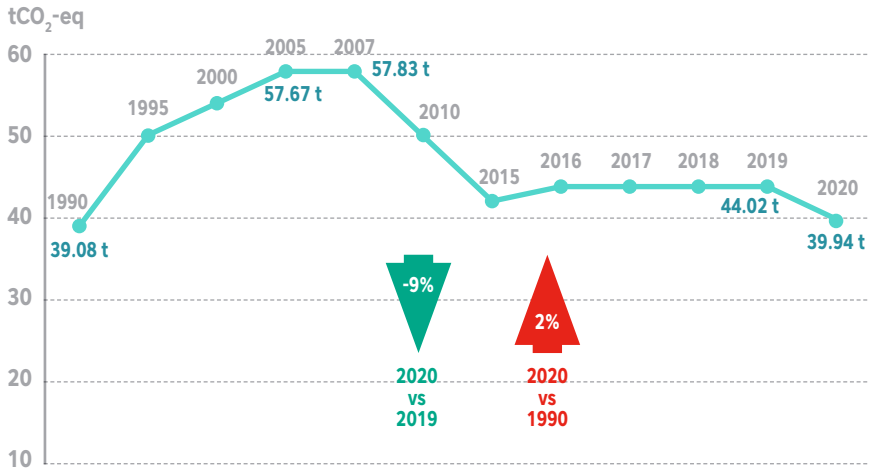
It is true that the five-year period since the passing of the Law on climate change has not been long enough for us to be able to gauge its impact on Catalan society. Although the climate crisis has already become a grim everyday reality, more time is needed to be able to properly assess the effectiveness of climate policies. Nevertheless, we can provide a preliminary assessment of the state of this legislation's progress and implementation.

While Law 16/2017 of 1 August is very cross-cutting in nature, encompassing a wide range of fields, we shall concentrate on its five key points of focus: greenhouse gas emissions, adapting to the climate crisis, governance, taxation and sector-based energy policies.

Traffic jam in Barcelona  
Gran Vía avenue.



## GHG emissions in Catalonia, evolution 1990-2020



In 2020, greenhouse gas emissions in Catalonia stood at 39.9 tCO<sub>2</sub>-eq. After a sharp drop between 2007 and 2012, the trend was reversed and they once again increased from 2013 to 2017. Emissions remained relatively stable in 2018 and 2019 (at around 44 tCO<sub>2</sub>-eq), to then fall drastically in 2020, at only 2.2% above the figure for 1990. Taking as our point of reference Catalonia's contribution to the EU's reduction targets and applying the same methodology as that used for apportioning targets in Europe, 2020 saw the reduction targets met.

The effect of the pandemic is obviously an important factor in this drop in emissions, but, without wishing to boast, emission trends in the years immediately prior to 2020 already put Catalonia on the road to meeting its targets. Looking to the future, including 2030 and 2050, the year in which the Law sets the target of carbon

**Looking to the future we need to intensify and increase the implementation of transformational policies to achieve effective reductions in greenhouse gases**





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neutrality and a completely renewable electricity generation model, we need to intensify and increase the implementation of transformational policies to achieve effective reductions in greenhouse gases.

In terms of overall emissions in Catalunya, 30% come from transport and, of the latter, more than 90% are associated with road transport. We need to electrify goods transport, working to enhance this mode of transport with the leading ports. In this regard, we can only lament the delays in infrastructures, like the Mediterranean Railway Corridor that is to connect the east and south of Spain with France.

However, we are making progress in public transport intermodality in the metropolitan area of Barcelona and fostering the use of electric vehicles. We now have 33,000

registered electric vehicles and thousands of public and private charging points, including 130 fast-charging stations.

Moving forward, we must not forget the need to improve energy efficiency, reduce our dependence upon fossil fuels and improve air quality in the sector that consumes most energy in Catalonia: road transport. There is a crucial need to expand and improve the electric vehicle charging station network, which means stressing the need to be able to recharge vehicles in the best-located petrol stations in Catalonia.

Turning to adaptation, climate change due to human behaviour is an undeniable fact. The average global temperature now stands at around 1°C higher than that for the pre-industrial era (1855-1900). It is important to bear in mind that the Mediterranean is, alongside the Arctic, Antarctic and the world's mountain regions, one of the areas most sensitive to the effects of this change. According to figures from the Meteorological Service of Catalonia's annual report on climate indicators, since the middle of the 20th century, average temperatures have increased by 1.8°C and summer precipitation has fallen at a rate of 4.8% per decade. This trend will only increase in coming decades: sea levels will rise and we shall suffer from more extreme weather events (heatwaves, droughts and greater impact from coastal storms). This will worsen existing environmental problems caused by a combination in changes in land uses, increased pollution and the loss of biodiversity.





Effects of the Gloria storm on the seafront in Malgrat de Mar (Catalonia), January 2020.

**This autumn, the Catalan Government plans to pass its new strategic climate change adaption framework for 2030, which is more focused on action**

Prior to the passing of the Law, as far back as 2012 Catalonia had already possessed a climate change strategy with a view to 2020. The Law boosted the importance of this strategic framework, which is designed to encourage the different sectoral plans to incorporate the climate aspect. Many plans and strategies have already done this, including the Coastal Protection and Management Plan, the Catalonia River Basin Flood Risk Management Plan, the Roadmap for Policy Coherence for Development and the Natural Heritage and Biodiversity Strategy of Catalonia.

This autumn, the Catalan Government plans to pass its new strategic climate change adaption framework for 2030, which is more focused on action and places greater emphasis on the link with

conservation and enhancing biodiversity and which should become one of our most effective tools in helping to mitigate the effects of the climate crisis.

Additionally, Catalonia also has a Global Climate Change Impact Adaptation Indicator. This is updated every five years, with 2018 being the latest available. The indicator expresses adaptation using a base figure of 100 for the benchmark year of 2005, and points to a moderately positive trend during ten years (2005-2014): it grew 8.74% over the period, reflecting the commencement and implementation of adaptation measures and actions across Catalonia.

In the field of governance, Law 16/2017's objective was and is to boost coordination between the Catalan Government's different ministries, bolstering the role of the Inter-ministerial Committee on Climate Change and improving transparency and participation. In this latter field of participation, the Law contemplated, firstly, the creation of the Taula Social (Social Board), featuring the presence of the most representative organisations from different social and economic spheres and, secondly, a committee of independent experts appointed by the Parliament with the mandate of formulating Catalonia's carbon budgets. In the former case, the associated regulatory implementation has been concluded prior to the board's constitution and, in the latter, the committee is fully operational, with its first provisional results being made available at the end of this year.



**Our new renewables-based energy model prioritises local distributed generation models, given their contribution to guaranteeing energy security and progress towards the democratisation of energy**

The Catalan Government's strategy of a new renewables-based energy model prioritises local distributed generation models, given their contribution to guaranteeing energy security and progress towards the democratisation of energy. The distributed model chosen by the Government is that of implementing those renewable generation facilities that entail:

1. greater electricity resilience in the face of increasingly extreme weather events;
2. reduced network losses, by bringing generation closer to consumption;
3. greater enablement of local participation in funding and/or ownership, given the maximum investment amount of €6 million;
4. power evacuation lines that are always underground and that could also, with appropriate changes in legislation, form a new distribution network interconnecting towns and cities.

However, we cannot implement this model on our own. We need to do it hand-in-hand with our rural areas and all our local administrations and stakeholders. And that is why work has begun on executing the Sectoral Territorial Plan for the Implementation of Renewable Energies (PLATER) throughout Catalonia. This will act as a planning and management tool to further the use of renewable energies in Catalonia, encompassing energy infrastructure requirements (wind power, photovoltaic solar power, the associated power lines, etc.) in open spaces, as well as the storage and management technologies needed by the power system.



In addition to PLATER, the Catalan Government has also created the Renewable Energies Social Dialogue Board. This body brings together some 50 social agents from all fields. Their mission is to identify and analyse offset measures between rural areas and densely-populated urban zones that cannot guarantee achievement of the target of meeting 50% of electricity demand with locally-generated renewable electricity by 2030.

With regard to tax matters, the Law sets out a risky but necessary strategy, establishing two new taxes, whose collection will feed the newly-created Climate Fund, which has the mission of supporting projects and actions in the fields of both reducing greenhouse gas emissions and adaptation to the impact



**Law 16/2017 establishes two new taxes: on the CO<sub>2</sub> emissions of passenger cars, light commercial vehicles and motorcycles, and on the greenhouse gas emissions of certain economic activities**

of the climate crisis. One tax is on the CO<sub>2</sub> emissions of passenger cars, light commercial vehicles and motorcycles, and has been fully operational since 2021. The other is to be based on the greenhouse gas emissions of certain economic activities, and the publishing of its draft provisions is planned for the end of this year. The Fund currently consists of some €70 million, and has assisted in the start-up of more than 30 projects in the fields of research, business innovation, support for local bodies, the implementation of renewables and awareness-raising and dissemination activities for the 2021-2025 period.

Lastly, with regard to the international arena, the Generalitat de Catalunya has long been aware of the advantages of sharing knowledge and experiences regarding public policy planning and implementation with other regions around the world. Establishing links, exchanges

and partnerships with other European and international public administrations can help identify new opportunities, jointly establish innovative projects, improve the efficiency of and return on actions and even replicate Catalan projects and initiatives in other countries. Thanks to this international outlook, the Generalitat of Catalunya contributes to numerous international organisations (such as the Under2 Coalition, the Regions4 network, Four Motors for Europe, etc.), learns from the experience of others and shares its expertise and “can-do” approach and a firm conviction of the usefulness of working shoulder-to-shoulder with its partners. ■

