

The new Spanish Building Code requires measuring the carbon footprint of an entire building for the first time

The 2026 CTE introduces a structural change: building efficiently is no longer enough, it will also be mandatory to measure the CO₂ generated across the building's whole life cycle, from construction to demolition.

The new Basic Document on Environmental Sustainability (DB-HSA) introduces life-cycle carbon criteria and formalises the definition of a «zero-emissions building». The deadlines are specific: mandatory from January 2028 for new buildings over 1,000 m², and from January 2030 for all new construction.

Adapting a conventional project to these requirements can mean an increase of around 18,000 euros per home. For those who already build passive houses with low-impact systems, the difference will be minimal. For those who keep to conventional methods, the extra cost will be hard to absorb.

It is worth analysing exactly what changes, because the implications for anyone who builds, develops or invests today are considerable.

From energy consumption to carbon footprint: a profound shift in approach

Until now, Spanish regulation focused on one main variable: how much energy a building needs to operate. Heating, cooling, hot water, lighting. The new CTE broadens that scope considerably.

The DB-HSA requires assessing the building's global warming potential over its entire life. That includes the emissions linked to manufacturing materials, their transport, the construction process and the building's end of life. Building something that consumes little is no longer enough if the process of erecting it has generated a disproportionate amount of CO₂. The assessment becomes comprehensive.

The DB-HE energy-saving requirements are reinforced and the new HE 6 appears, requiring solar generation to be installed in certain buildings. From May 2026, every new residential construction must include infrastructure for electric-vehicle charging.

The deadlines matter. January 2028 for public buildings and large-scale new construction. January 2030 for the rest. A project that starts being designed today may face these requirements while it is under construction. Designing without taking this into account is a risk worth measuring.

The renovation passport: a roadmap for every existing building

The regulation is not limited to new construction. It also reaches the existing building stock through a new instrument: the renovation passport.

Spain must have it in place before 29 May 2026, under Directive EPBD 2024/1275. It is a digital document that maps out a personalised plan to take each building towards zero emissions before 2050. It is not a fixed snapshot like the current energy certificate. It is a staged plan: which interventions are needed, in what order and what benefit each one brings.

For those who already own a home, the passport will directly affect the asset's valuation. A building with a viable roadmap will hold its position in the market. One whose passport reveals costly interventions will struggle to be sold or rented on favourable terms.

Here appears one of the strongest arguments for building a passive house today: a home that is born meeting the most demanding standards needs no future renovations to adapt. Its passport is, from day one, in the best possible position. It is protection against a regulation that will only tighten over time.

Passive houses do not adapt to the new CTE. They surpass it. Anyone building today to this standard already complies, de facto, with the 2030 regulation.

Passive house and dry construction: the coherent answer to the carbon footprint

The fact that regulation now measures the carbon footprint of the full life cycle has a technical consequence that is not obvious at first glance: how the building is constructed matters, not only how it works afterwards.

Conventional wet construction carries a fundamental problem in this equation. Cement production generates close to 8% of global CO₂ emissions. Firing ceramics, transporting heavy materials and the waste from wet construction add an impact that, under the new regulation, will have to be accounted for and justified. For the traditional method, the new framework means a considerable increase in cost.

At PAPIK Group, our dry-construction system with an industrialised structure offers direct advantages in this new equation. The elements are manufactured in a controlled environment, with higher material efficiency and waste generation that can be 90% lower than conventional construction. Dry assembly eliminates curing processes and their associated emissions. The precision of industrialised manufacturing makes it possible to optimise insulation and airtightness, reducing emissions both in the use phase and in the construction phase.

Combining that system with the design of a passive house (minimal energy demand, high-performance envelope, ventilation with heat recovery), the life-cycle carbon footprint is between 40% and 60% below an equivalent conventional home. Under the new regulation, that difference translates directly into a competitive advantage.

For developers and investors: regulatory risk as a decision variable

A developer assessing a residential project in 2026 faces a variable that until recently did not exist: the possibility that the project becomes obsolete before it is finished.

The calendar explains it. A project that starts its design now and obtains a licence in mid-2027 may complete its execution in 2028 or 2029. By then, the new CTE requirements will already be partially or fully in force. Designing to meet today's minimum can require a costly redesign tomorrow.

Real-estate investment funds have already integrated this reality. Energy efficiency and carbon footprint are entering due-diligence models and the ESG criteria that condition access to financing. An asset aligned with the 2030 regulation obtains better credit terms, is marketed more quickly and holds its value in a regulatory framework that will tighten progressively.

For an individual building their own home, the logic works the same way: a passive house today means not having to worry about any regulatory reform for the next thirty years. That has real economic value, even if it never appears in any budget.

The window to get ahead is open. It will not stay open indefinitely

Every regulatory cycle follows a recognisable pattern. First comes resistance: the sector sees it as an unjustified extra cost. Then comes reactive adaptation, with partial and costly adjustments. And in the end, those who positioned themselves early keep an advantage that the rest take years to close.

With the new CTE and the full transposition of the EPBD directive, Spain is at the start of a particularly ambitious cycle. There is still room to position oneself with an advantage. But the 2028 and 2030 deadlines are fixed, and every month that passes reduces that margin.

Passive houses built with industrialised, dry systems are, today, the most complete answer to this new framework. Not because they were designed to comply with a specific regulation, but because they follow a rigorous construction logic that the regulation has, finally, decided to require.