

Irish Green Building Council Submission – Citizens’ Assembly’s Consultation on “How the State can make Ireland a leader in tackling climate change”

August 2017

Introduction

The Irish Green Building Council (IGBC) provides leadership for a sustainable built environment. IGBC is an independent non-profit inclusive organisation with [members](#) drawn from all parts of the value chain, from occupiers, design professionals, contractors, suppliers, academics and public authorities and affiliated with a global network of 70 national councils within the [World Green Building Council](#). This allows us to create workable solutions and tools to deliver transformative change towards a sustainable built environment.

The IGBC and its members believe that buildings must play a key role in reducing carbon emissions as they cross nearly all the sectors driving carbon emissions in Ireland. However, a more integrated approach is needed by government for lower carbon communities and buildings.

- **Buildings** - Energy efficiency can reduce carbon emissions of new and existing buildings to close to zero.
- **Transport** – Transport emissions in Ireland are extremely high. These could be significantly reduced through better planning of the location of buildings, minimising car use and enabling healthy active citizens.
- **Manufacturing** – Reductions in carbon emissions from manufacturing are possible with a move towards lower carbon construction materials and optimisation of resource use through better design and construction of buildings, as well as increase reuse of existing buildings and materials.
- **Low carbon life styles** – Better planned and designed homes and offices can enable lower carbon and lower resource consumption by Ireland’s citizens. For instance, design for water efficiency reduces the very high carbon emissions associated with water treatment and use of hot water in the home; larger homes consume more resources at every stage of their life cycle including demand for fittings and higher levels of maintenance; the layout of waste facilities in apartment blocks influences quality of recycling, etc.

Beyond climate targets, tackling climate change can have a positive impact on job creation and a myriad of social benefits.

An integrated cross-departmental approach, and better integration of national and local initiatives, are needed to make Ireland a leader in tackling climate change.

Historically, poor policy coordination at the right level and high administrative fragmentation have contributed to urban dispersal in Ireland. A national spatial plan for all future development, and better linkage between national policies, regional guidelines and development plans, to minimise car dependency, is required. This should be further

complemented by integrated design and life cycle thinking that cuts carbon at every stage of the building life cycle from cradle to grave.

However, it is not sufficient to talk about this in vague terms, it must be measured. The IGBC, with the support of the Environmental Protection Agency (EPA), has developed a portfolio of tools for the construction and property sector to measure and reduce their environmental impacts. Further details on these is provided below, but these include a [National Environmental Product Declaration database](#) which enables manufacturers of construction products to provide information on the environmental impacts of their products and the [Home Performance Index](#), Ireland's first national certification system for quality and sustainable residential development. These tools can simplify the process of specifying and encourage achievement of lower carbon communities and buildings for procurement authorities.

When talking about the built environment, the Government must go beyond energy efficiency and include both manufacturing and transport related emissions. For instance, to reduce carbon emissions from new builds it is key to look at energy efficiency, as well as at proper planning (including density and proximity to public transport) and at embodied impact of materials.

- **New Residential Construction**

Considerable progress towards the Nearly Zero Energy Building (NZEB) standard has been made in the residential sector with revisions in 2008 and 2011 to Building Regulations Part L – residential. However, one further step of a 10 -30% improvement is required to bring building regulations in line with the NZEB requirement.

Furthermore, it is no longer sufficient to measure only the carbon associated with the operational energy used during the building's life. For instance, the embodied impacts of the construction of a new building can account for between 30 and 50% of the overall lifecycle impacts. It thus becomes increasingly important to achieve the optimal energy and carbon savings over the life of the building rather than just at the operational stage. All carbon emissions must be considered: Transport carbon emissions associated with access to the location; embodied carbon emissions associated with the construction impacts of the dwelling; and carbon impacts associated with the water consumption and with change of land use.

The [Home Performance Index \(HPI\)](#) can be used at the planning and procurement stage for reporting on all these indicators. In fact, the HPI is a system for reducing carbon emissions associated with residential development over its full life cycle. Relevant indicators include land use, sustainable location, embodied impact of materials and energy use. A copy of the HPI technical manual can be [downloaded here](#).

[Organisations involved in certified projects](#) found HPI a useful and simple exercise in gathering together the existing documentation and using it to benchmark against current best practice.

For all these reasons, we suggest that the Government requires all new developments to work towards compliance with these HPI indicators.

- **Reducing Embodied Carbon in Construction - Manufacturing Sector**

To encourage a move towards the circular economy and construction of buildings with lower embodied carbon the Irish Green Building Council makes the following recommendations:

- It is no longer sufficient to measure the energy efficiency of new buildings through the BER. It is also essential to measure the carbon emissions over the full life cycle including embodied carbon of the materials used to construct the buildings as this can account for as much as the regulated carbon used in the building over its life cycle.
- The [Environmental Product Declaration Programme - EPD Ireland](#) can be used to encourage manufacturers to declare the global warming impacts of their construction products and to work towards reducing these. By including a requirement for EPDs for all public procurement of products, this can happen more quickly. Enterprise Ireland's support of smaller Irish manufacturers of construction products & materials who wish to develop EPDs must be continued.
- Procurement and planning needs to work together to reduce carbon in an integrated way. All cases where demolition of substantial buildings are proposed should require comparative calculations for carbon to justify demolition. IGBC has facilitated this by the development of [EPD Ireland](#) and the promotion of Life Cycle Assessment (LCA). IGBC hopes to provide a comprehensive tool for LCA for free use of the public sector in the next year, however this needs commitment from the procurers to use it and requires its use by private developers in all part 5 procured housing.

- **Existing Buildings**

For existing buildings, the IGBC has developed a comprehensive set of recommendations on the actions required to enable the full decarbonisation of the Irish Building Stock by 2050. Nearly 200 business, civil and public organisations took part in a [consultation process](#) which led to the publication of these recommendations in February 2017.

A copy of this document – *Towards large scale deep renovation – Unlocking Ireland's Potential* – can be [downloaded here](#). More specifically, the following steps should be taken in relation to energy renovation if Ireland is to become a leader in tackling climate change:

1. Develop a comprehensive national framework
2. Provide long-term certainty
3. Invest in Deep energy renovation now
4. Make deep energy renovation desirable
5. Facilitate deep energy renovation
6. Make sure we have the right skills
7. Set the right standards
8. Develop quality data
9. Collaborate and engage.

The IGBC is currently working to help the implementation of a number of these recommendations, including:

- The [development of Green Mortgages with the European Mortgage Federation](#),
- The [development of Green leases with the Society of Chartered Surveyors \(SCSI\)](#),
- The publication of a [Construction Worker Skills Register](#),
- The [development of a customer-friendly accreditation system for construction professionals](#).

However, government support is required to ensure the success of these initiatives.