DON'T WAIT - FUTURE PROOF NOW!

The transition to Near Zero Energy Buildings for new Commercial and Non-Domestic Buildings is underway.

40%
Better by:
2015

In order to comply with this directive the Department of Environment Community and Local Government intends to revise Building Regulations to achieve a 40% improvement over the current standards. They will issue a draft Part L Technical Guidance Document, Conservation of Fuel and Energy – Buildings other than dwellings in 2014, which should come into force by 2015/2016.

Near Zero Energy Buildings
▸ Public Sector
60%
2019

From the 31st December 2018 public bodies can only buy or let new buildings that are Near Zero Energy.

Near Zero Energy Buildings
▸ Mandatory for all
60%
Better by:
2021

By the 31st December 2020 a second revision of the standards to comply with the requirement for Near Zero Energy Buildings will have come into force.

THE TRANSITION
WHAT YOU NEED TO KNOW…

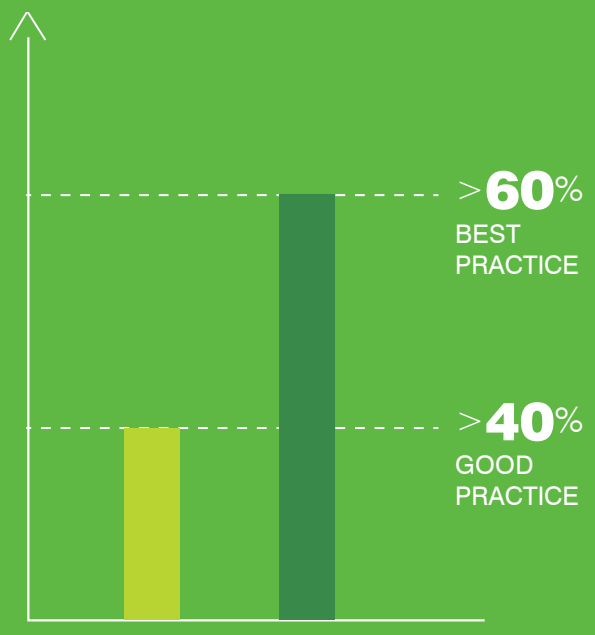
The European Energy Performance of Buildings Directive Recast (EPBD) requires all new buildings to be Near Zero Energy Buildings by **31st December 2020.**

The Near Zero Energy Building standard for Ireland is expected to be a 60% improvement over current standards. Buildings Standards for the residential sector are already at this level.

WE ADVISE….

Do not wait for the new standards to come into place. Minimum compliance with current regulations in place since 2008 is no longer good practice, and carries an asset value risk for any new construction offered for sale or letting after 31st December 2018 as it reduces the potential market for the building.

Given the long lead in time for new development, it is best to design and build to improved standards now. This will help future proof your building after the 31st December 2018 watershed. At minimum you should immediately design for the proposed 40% improvement without waiting for the revised regulations to come into force in 12- 18 months' time. However we advise that a stretch goal of a 60% improvement is best practice. This is achievable and shown to be cost optimal at today's costs, though challenging for certain building types.



WHAT YOU NEED TO DO NOW...

Financial institutions and Investors

When investing make sure developer has future proofed the new development.

Property Advisors

Advise your clients of the implications of the improving standards.

Public Sector

Be aware of your requirement to procure only NZEB buildings after 2019.

Architects, Engineers, Construction Professionals

Skill up now to meet the requirements of Near Zero Energy Buildings.

Developers

Instruct your design team not to wait for new mandatory standards but to design to higher levels now. Make sure your design team have the required skills.

Manufacturers

Ensure you can deliver improved products to meet the need for more energy efficient components, including services and fabric.

ADDITIONAL INFORMATION

WHAT ARE THE COST IMPLICATIONS?

A cost optimality study was submitted to the European Commission in March 2013, by the Irish Government into improvements to energy efficiency standards of new buildings as required by the EPBD. This concluded that improving energy efficiency standards by 60% for non-residential buildings was cost optimal, as the additional capital costs are recouped over the life cycle of the building. This study can be downloaded at: http://www.buildup.eu/publications/36202

WHAT ARE THE ASSET VALUE IMPLICATIONS?

Not only does a more energy efficient building reduce running costs, but international experience shows the asset value of the building is enhanced in the short term. A study by the World Green Building Council – The Business Case for Green Buildings, demonstrated that there was a significant value and rental premium for BREEAM and LEED certified building. These certification systems require a considerable improvement in energy efficiency over national codes.

HOW IS THE IMPROVEMENT MEASURED?

NEAP (Non domestic Energy Assessment Procedure) uses the software iSBEM to assess compliance with Part L Technical Guidance Document, Conservation of Fuel and Energy – Buildings other than dwellings in 2014. This can be used to calculate improvements over current building regulations for smaller buildings. Suitable software has yet to be developed for the Irish market to more accurately demonstrate compliance for larger, more complex buildings which may create some difficulty.

WHAT DOES THIS MEAN FOR THE BUILDING DESIGN?

A combination of some of the following are likely to be needed to achieve both the 40% and 60% improvement.

- Building insulation levels will be greatly improved.
- Glazing ratios need to be considered.
- Insulation standards of the glazing itself will be considerably improved.
- Airtightness standards will be introduced, including mandatory airtightness testing on every building.
- Calculation of linear thermal bridging required particularly for the 60% improvement.
- The use of renewables and free cooling will be required.
- The use of solar shading
- For the 60% improvement, renewables will need to cover a substantial part of the remaining energy demand.
- More efficient lighting and services will be needed.

WHAT SKILLS ARE NEEDED FOR IMPROVED STANDARDS?

There is a steep learning curve to achieve the improved standards. Demonstrating compliance will become more technical and require considerable skilling-up by the professions. Design teams need to understand the software to demonstrate compliance, though more guidance from Government is still required. Achieving higher level improvements will require more integrated design teams fully engaged at an earlier design stage. The emphasis on the fabric of the building, requires in-depth understanding of designing for solar shading, thermal bridge free construction, air tightness and glazing ratios etc. Detailed and up to date knowledge is required of more efficient lighting, services and renewables.

IGBC
IRISH GREEN BUILDING COUNCIL

63 Lower Mount Street, Dublin 2. Telephone +353 1 681 58 43 info@irishgreencouncil.ie