



Dispelling the seven myths of building nearly zero-energy homes



Myth 1:

Interest in sustainable homes is low

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At ROCKWOOL we believe you shouldn't have to compromise your business case or cost control when creating nearly zero-energy homes. The focus should be on reducing energy consumption and creating a sustainable future.

These goals already have great awareness amongst homeowners, local authorities and the EU, which has set a target for all new buildings to be nearly zero-energy efficient by 2020.

Yet there are still many misconceptions about sustainable homes. Within this guide we've highlighted some of the myths, to demonstrate that you don't need to compromise when building sustainable homes. This is especially true using Rockzero: the pioneering new wall system that integrates the natural benefits of stone wool insulation with the structural support of the home, to revolutionise the way homes are built.

Truth:

The figures paint a different picture. There's been a significant rise in the appeal of sustainable homes. For example, Leadership in Energy and Environmental Design (LEED) and Energy Star rated buildings attract a sales price premium of 25% and 26%¹ respectively. At the same time, building regulations are demanding, and enforcing higher energy efficiency standards – a trend which will lead to energy efficient homes becoming the norm. Those traditional builders who act now, may well lead the market, and gain the marketing advantages of being an established, sustainable player in the eyes of consumers.

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¹ Real Estate Economics: http://sallan.org/pdf-docs/Fuerst_HP Value.pdf

Myth 2:

Airtight homes are claustrophobic and damp

Truth:

Airtightness is a prerequisite to obtaining a good class of energy efficiency and is a requirement in some building regulations. Yet being airtight does not feel like 'living in a plastic bag' as some infer. Rockzero makes creating an airtight home easier to achieve and still allows the building to 'breathe' due to our use of stone wool insulation.

In a sustainable home, this is supported by modern ventilation which brings fresh air in and pushes stale air out. Inadequate ventilation can be the major cause of poor indoor air quality in any type of building structure, whether it is airtight or not.

Rockzero's stone wool insulation also improves air quality further. It retains heat while discharging moisture, in a natural way. And since there is no organic material within our stone wool insulation, the risk of fungus formation, mould and especially rot is drastically reduced. This makes for a healthy and comfortable living environment.



Myth 3:

All insulation materials give predictable results

Myth 4:

Sustainable homes cost more overall

Myth 5:

Solar power and wind turbines have lower economic and environmental impact

Truth:

Energy performance in any building can be calculated, but in real life it is rarely as predicted. The choice of insulation material, complexity of the building, and thermal bridging all contribute to inaccuracies.

These issues do not occur with Rockzero. It has built-in airtightness with no cold bridges which results in best-in-class energy performance, precisely as calculated. Equally important, Rockzero's insulation design is based on natural stone wool which is robust and long-lasting, so there is no degradation of that energy performance for the building's lifetime.

Truth:

It may or may not cost more to build a sustainable home depending on its design (some research states the cost can be as little as 2.5%² or up to 12.9% more). However, over its lifetime, a sustainable home will cost significantly less. An energy efficient design can save as much as 80%³ of a building's operating costs over its lifetime.

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Having predictable low energy costs for decades is changing the way we look at the whole lifecycle costs of a home. Using long-lasting materials also significantly reduces long-term maintenance costs. And for consumers, a low total cost of ownership has great appeal: giving you the opportunity to improve margins and increase ROI.

Truth:

Sustainable design does not equate to the wholesale use of solar panels and wind turbines. These generate renewable energy but do not address the underlying issues of poor energy performance in a home's construction. Using Rockzero, a home is super-insulated with nearly zero-energy performance from the start. This will often eliminate the need for energy sources such as solar panels, since it's better to save a kilowatt hour of energy than have to generate it.

Rockzero will also perform unchanged for decades, and at the end of its life can be recycled indefinitely or can be constructed to be reused. This contributes perfectly to a circular economy in the building sector.

² Joseph Rowntree Foundation (www.jrf.org.uk/report/building-sustainable-homes)

³ Buildings Performance Institute Europe (BPIE)





Myth 6:

There's risk to building with new materials and techniques

Myth 7:

There's no design freedom

Truth:

There's nothing complex or technical about building with the Rockzero wall system. The insulation material at its heart – stone wool – has been used for many decades, and is one of the world's oldest, most abundant and common resources.

Rockzero's intelligent column design integrates stone wool insulation with a relatively small amount of steel. This gives load-bearing capability – up to one and a half floors high – whilst being thermally efficient. Using our fast-to-assemble components, you build using known traditional construction methods, so it doesn't require different skills or risk. In fact, you will often see a reduction in labour which reduces time on-site, and therefore cost.

In our experience, most builders are open to innovations that create more efficient homes. Using Rockzero and traditional build methods will lead to an increase in the uptake of sustainable housing, and that will create a growing business for everyone.

Rockzero is built using known and traditional construction methods, so it doesn't require specialist skills.

Truth

Sustainable homes can be built in many ways. The Rockzero wall system gives architects and designers all the usual design choices for interiors and exteriors. Their creative vision can include a bespoke finish with a variety of cladding products, such as sheet metal, stone strips, bricks etc.

Using Rockzero, the layout of the house is also flexible: interior space can be maximised, and the orientation of the building needn't be fixed in any direction. So you can give the end-customer exciting scope, which enables an efficient sales process and greater margins for your business.

Discover Rockzero

At ROCKWOOL we are pioneering new ways to build nearly zero-energy homes with solutions such as the Rockzero wall system. It's shaping the future of economical, long-lasting sustainable homes.

Discover more about the benefits of Rockzero today.

Visit rockwoolgroup.com/rockzero or contact the Rockzero **sales team**.

At the ROCKWOOL Group, we're committed to enriching the lives of everyone who experiences our solutions. Our expertise is perfectly suited to tackle many of today's biggest sustainability and development challenges, from energy consumption and noise pollution, to fire-resilience, water scarcity and flooding. Our range of products reflect the diverse needs of the world, while supporting our stakeholders in reducing their own carbon footprint.

Stone wool is a versatile material and forms the basis of all our businesses. With over 11,000 passionate colleagues in 39 countries, we're the world leader in stone wool solutions, from building insulation to acoustic ceilings; external cladding systems to horticultural solutions; engineered fibres for industrial use to insulation for the process industry – as well as marine and offshore.

