



# Resilient by nature

## Sustainability Report 2021



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### Reporting on Corporate Social Responsibility

The report forms part of management's review covering the statutory reporting on corporate social responsibility, as required by section 99a of the Danish Financial Statements Act.

Installation of Rockflow in Roermond, the Netherlands

# Building a climate resilient future

Climate change is not a future phenomenon – its impacts are evident and in many cases devastating to the environment and societies around the world today. Despite the COVID-19 pandemic and the economic slowdown across the globe curbing emissions in 2020, emissions returned close to their pre-pandemic high and reached 36.4bn tonnes of CO<sub>2</sub> in 2021<sup>1</sup>. Rising global temperatures, extreme weather events, flooding, and catastrophic wildfires dominated 2021. According to the latest Intergovernmental Panel on Climate Change (IPCC) report, it is unequivocal that such changes are caused by human influence and that climate system disruptions will have an unprecedented impact over many centuries to come<sup>2</sup>.

Climate change implications are interlinked and pose environmental, economic, social, and technological risks. There is an urgent need to adapt and mitigate climate change impacts and foster climate resilience for businesses, the environment, and communities.

Society already has many of the solutions to support us on this path and the increasing number of countries and businesses setting targets aligned with the Paris Agreement and Science Based Targets initiative is encouraging.

At ROCKWOOL, we transform volcanic rock into stone wool to make products that contribute to addressing many of society's biggest climate change challenges, creating new opportunities to enrich modern living and build safer, healthier, and more climate resilient communities. Indeed, stone wool is a versatile natural material with multiple benefits such as being inherently circular and fire resilient that makes it ideal for applications in buildings, industry, transportation, horticulture, and water management.

We pursue a fact-based, auditable approach backed up by third-party references and methodologies to document progress in maximising our products' positive impact (handprint) and minimising the impact of our operations (footprint).

In this report, you will learn how ROCKWOOL's products can support communities to adapt and build resilience to climate change impacts and how we reduce the environmental impact in our production and value chain. In 2021, we reached two additional intermediate sustainability goals one year early. We improved our CO<sub>2</sub> intensity intensity (CO<sub>2</sub> /tonne stone wool) by 16 percent and offered the Rockcycle® reclaimed materials service to our customers in a total of 17 countries.



## ROCKWOOL Group at a glance

# 11 968

employees across Europe, North America, Russia, and Asia

# 71

nationalities worldwide

# 51

manufacturing facilities

# 3088 MEUR

net sales

# 10

SDGs to which we have committed

# 6

Group-wide 2030 sustainability goals

# 2

Group-wide 2034 science-based targets

<sup>1</sup> Reuters press release, 4 November 2021, Global carbon emissions rebound to near pre-pandemic levels.

<sup>2</sup> IPCC, Climate change 2021, The physical science basis report, 2021, Sixth Assessment Report (ipcc.ch).



Jens Birgersson, CEO, ROCKWOOL Group at COP26

## 🏠 ...renovating existing buildings is not rocket science.

As if further evidence were needed, the IPCC's Sixth Assessment report concludes that climate change is intensifying; that human influence has warmed the climate at unprecedented rates; and that we need to rapidly reduce greenhouse gas emissions<sup>1</sup>.

Despite the numerous positive pledges to achieve net zero emissions, however, humanity is not on track with climate objectives. Indeed, there is a worrying disconnect between the Paris Agreement's main objective to limit temperature increases to well below 2°C and the short-term actions needed to get us there.

The building sector is no exception. This matters greatly because buildings account for 28 percent of global emissions; 36 percent in the EU<sup>2</sup>; and 40 percent in the United States<sup>3</sup>. In the EU, around 75 percent of buildings are energy inefficient, and most of them will still be in use in 2050<sup>4</sup>.

The conclusion is clear: succeeding on climate action requires succeeding on making the world's buildings far more energy efficient than they are today. The good news is that constructing new and renovating existing buildings for greater energy efficiency is not rocket

science. It requires using well-known building materials and practices.

Encouragingly, there is strong popular support for making our homes and buildings more energy efficient. In public opinion polling we conducted with OnePoll, we found that overall, almost 80 percent of the 14 000 respondents in the EU, the UK, and the United States said they would renovate their homes and more than 70 percent said they backed mandatory energy performance standards, provided the right kind of financial and administrative support<sup>5</sup>.

The EU is prioritising and providing financing for building renovation as part of its overall "Fit-for-55" green transition strategy. And multiple jurisdictions in the United States have either established or are considering establishing energy efficiency standards for buildings. The key challenge, especially in the EU, is to connect the supply of money with the demand for it. That is the focus of a report ROCKWOOL did together with Cambridge Econometrics, which you can read more about on our [website](#).

Circling back to reaching global climate goals, my conclusion is that we need to move beyond the "pledge game" and focus on creating short-term results. Short-term targets create greater accountability, since the people involved in defining the goals also are responsible for delivering them. We know in business that reaching long-term goals requires short-term action.

For building renovation, it is essential that renovations are done in the right way. This means two things: that the renovations qualify as "deep", that is, achieving energy savings of at least 60 percent; and that the materials used are amongst other things fire resilient and circular.

At ROCKWOOL, this is also the approach we take to renovating our own buildings. During 2021, we made good progress on our energy efficiency in owned offices goal, completing the renovation of an additional five buildings. One of these was our main office in Gladbeck, Germany, where we succeeded in reducing the building's energy demand by 83 percent. You can read more about this renovation and another in Poland on page 13.

We also made good progress on other sustainability goals, meeting our 2022 intermediate goals on CO<sub>2</sub> intensity and reclaimed materials, for example. We also took significant measures to decarbonise several of our factories, the impact of which will kick-in in the coming years.

On our safety performance, most importantly, we did not have any fatalities in 2021, as was also the case in 2020. Our Lost Time Incident rate did increase, however. We have initiated several measures to improve the LTI trend, including additional safety audits at the factories with the highest LTI rates together with extra focus on sharing best practice across the Group.

You can read further about the progress we are making toward meeting our various sustainability goals on page 9 and in the Factbook and data section.

As ever at ROCKWOOL, we remain optimistic about the future. Especially in terms of creating a healthier, more sustainable built environment, we know what to do and how to do it. The imperative for the sector now is to pick up the pace and get things done. We look forward to working together with others to do our part.

**Jens Birgersson, CEO**

<sup>1</sup> IPCC, Climate change 2021, The physical science basis report, 2021, Sixth Assessment Report (ipcc.ch).

<sup>2</sup> EU Commission, 2020, In focus: Energy efficiency in buildings, [https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17\\_en](https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17_en)

<sup>3</sup> Environmental and Energy study institute, 2020, <https://www.eesi.org/topics/built-infrastructure/description>

<sup>4</sup> European Commission Renovate Wave strategy, [https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en)

<sup>5</sup> Cambridge Econometrics and ROCKWOOL, Unlocking the benefits of building renovation, 2021, <https://www.politico.eu/wp-content/uploads/2021/12/01/rw-cambecono-cop26-report.pdf>

# Beneath the Surface

From Aarhus to Bermuda, Cádiz to Saint-Tropez. During SailGP Season 2, ROCKWOOL took global audiences “beneath the surface” of some of the world’s most iconic cities – to explore how they are adapting to modern living and sustainability challenges.

The series, titled ‘Beneath the Surface’, has so far attracted more than 10 million views, and marks ROCKWOOL’s partnership with Denmark SailGP Team, whilst digging deeper into some of the exciting venues on the SailGP calendar.

In short episodes of around 15 minutes, the show explores unique locations – Aarhus, Bermuda, Cádiz, Plymouth, Saint-Tropez, San Francisco, Sydney, and Taranto – by connecting with political, community, and local business leaders to find out how cities around the world are leading by example and setting new standards in sustainability.

Some of the stories featured so far include:

- How Taranto – the ancient city on Italy’s south coast – is adapting to modern challenges, through regeneration whilst retaining its rich heritage;
- A look at how Plymouth’s military history, and particularly the extensive damage incurred during the Second World War, has shaped its innovative

approach to urban planning and created the city and green spaces we see today;

- How Aarhus, and Denmark, are leading the way in sustainable agriculture and food production using hydroponic solutions; and,
- Why Saint-Tropez is aiming to set new standards for responsible hospitality and sustainable tourism.

In addition to the ‘Beneath The Surface’ series, a video podcast – ‘Into The Depths’ – is also created in each location, and has so far featured a range of high-profile characters from the worlds of sports, science, business, and entertainment, including Jamie Chadwick (F1 driver and winner of W Series); Anne-Marie Rindom (Olympic gold medallist sailor); Alex Høgh Andersen (Hollywood actor and star of ‘Vikings’); Andrew Cotton (Red Bull big wave surfer) and Alex Bellini (Italian TV star, climate change campaigner, and round-the-world adventurer). SailGP is the world’s first climate positive sports property, and all of the competing teams – including Denmark SailGP Team presented by ROCKWOOL – have signed up to the UN Sports For Climate Action framework.



Mirella Vitale, SVP, Marketing, Communication and Public Affairs at ROCKWOOL Group, said: “One of the main attractions of joining a global racing league such as SailGP is the fact that it visits many of ROCKWOOL’s key markets, and gives us a platform to connect to people and tell our stories.

Ahead of Season 2, our in-house team set out to create high-quality and unique digital content to connect ROCKWOOL’s vision and values to our ground-breaking SailGP sponsorship”.

She added: “It’s important to us that we tell engaging and authentic stories that showcase the best of what each SailGP venue has to offer, but are also honest about some of the modern challenges faced by cities large and small around the world, what the local communities are doing to address them and highlight the solutions that are out there to help”.



Collection of plastic waste, Sydney, Australia



# Sustainability focus areas, governance, and progress

Sustainability is integral to our business strategy, which focuses on converting sustainable development challenges into business opportunities, through innovative products, solutions and partnerships.

ROCKWOOL's operations and products have positive value creation (handprint) on many social, economic and environmental aspects. At the same time, the production of our products is associated with negative impacts (footprint).

To quantify our impact, set goals for reducing our footprint, and to measure and communicate our progress, we have been using the United Nations Sustainable Development Goals (UN SDGs) framework since 2016. ROCKWOOL is also one of the first companies in our sector to commit and contribute actively to the UN SDGs framework. We have prioritised 10 out of the 17 goals, based on internal and external stakeholder consultation; identified the ones that are most material for our business; and have focused on using them to set our goals and measure progress and achievements.

For seven of our 10 handprint commitments, we use externally developed product metrics to track the positive impact of our products and SDG contribution. On top of this, we have set eight Group level sustainability goals, two of which are science-based targets. For more information on our handprint and footprint progress, see p. 8 and 9. On page 7 you can see how our handprint product metrics and sustainability goals are distributed along our value chain.

In addition, to strengthen data quality and credibility, for a second year in a row, we obtained external assurance and verification for six of our sustainability goals. We will be extending this assurance to cover our Scope 1 and 2 science-based absolute greenhouse gas emission

reduction target. For our Scope 3 science-based target, we use a third-party verified LCA model covering all relevant lifecycle stages from cradle to grave.

We assess the materiality of our sustainability priorities through our annual strategy process. Here we examine how best to address the opportunities and challenges we face amongst others in accordance with the framework of the Task Force on Climate-related Financial Disclosures (TCFD). Our materiality assessment is based on trends analysis and input from internal and external stakeholders. Hence, we are constantly identifying ways to increase our positive contribution to society and environment and to minimise the footprint of our operations and value chain.

## Sustainability governance

ROCKWOOL Group sustainability-related governance structures are aligned with the highest levels of our Company's management, ensuring that we have the resources and input to engage with our stakeholders and continuously improve our performance. Governance and strategic initiatives within sustainability are consistently a topic of Board and Group Management meetings.

For more information related to ROCKWOOL's sustainability approach, TCFD reporting and governance structure, visit [www.rockwool.com/group/about-us/sustainability/](http://www.rockwool.com/group/about-us/sustainability/).

Scope 1, 2 and 3 are defined according to the Greenhouse Gas Protocol.

Scope 1 includes all direct emissions from sources that are owned or controlled by the company.

Scope 2 includes indirect emissions from consumption of purchased electricity, heat or steam.

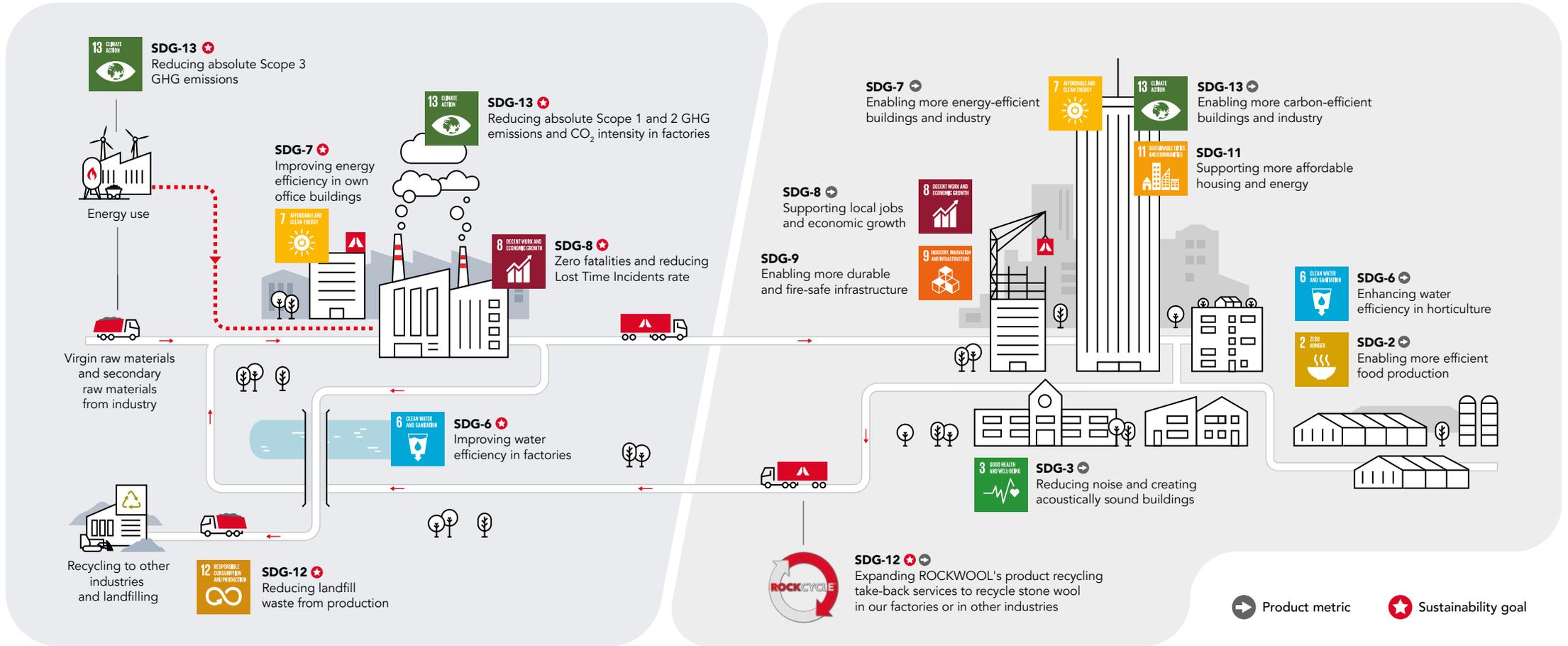
Scope 3 includes other indirect emissions from an organisation's activities that result from sources that they do not own or control.



# Our value chain impact



**SDG-17**  
Engaging in effective collaboration



# Progress and achievements

ROCKWOOL Group is a net carbon negative company with our stone wool building insulation sold in 2021 saving in the lifetime of its use 100 times the energy consumed and CO<sub>2</sub> emitted in its production. Through our insulation products, we have a truly significant positive impact on climate change and create opportunities to support communities to build climate change resilience. We calculate and document the positive impact or handprint of our business and its contribution to the UN SDGs through third-party references and methodologies.

Trucost, part of Standard & Poor's Global has classified all our products as being SDG positive, meaning they have been assessed as having a positive impact on reaching the UN SDGs.

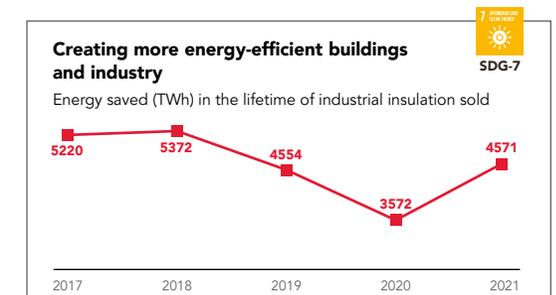
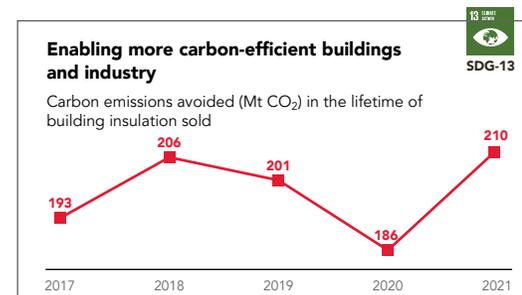
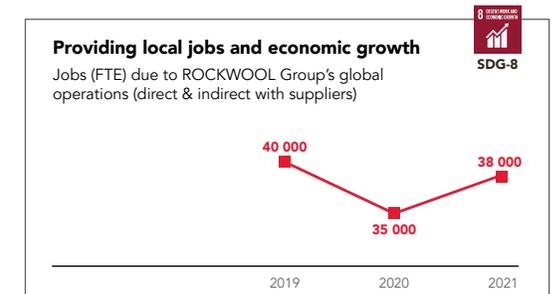
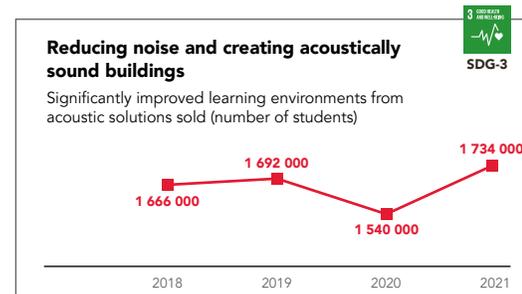
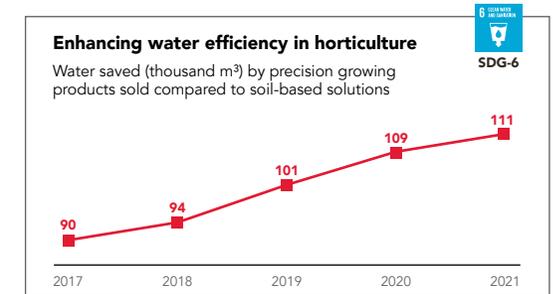
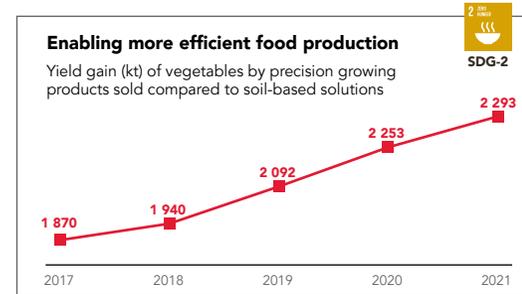


In 2021, ROCKWOOL was again recognised for its positive impact on society by receiving the EY special sustainability award for long term value creation. The award recognises ROCKWOOL's efforts in reducing the building sector's climate impact and for acting decisively to accelerate the green transition.

ROCKWOOL's share of net sales associated with taxonomy eligible activities<sup>1</sup> was 85% in 2021 and were related to climate mitigation activities. The predominant part was from net sales from the production of insulation products. Sales from the Systems segment were also included where the products contribute as key components in an external wall or roofing system.

In 2019, ROCKWOOL was the first Nordic company to host quarterly dedicated Environmental, Social and Governance (ESG) calls with the investor community, spearheading the importance of clear and transparent communication on companies' ESG performance. In 2021, our unique efforts within financial communication were recognised by the Danish Financial Society, which awarded ROCKWOOL with a special prize highlighting the company's "outstanding efforts in communicating ESG in a transparent and tangible way".

Through our special award Long Term Value Creation, we wish to draw attention to and celebrate those who have the solutions. We want to highlight companies with distinct sustainability ambitions that have a track record of significant, documented impact. EY and the Danish Chamber of Commerce consider ROCKWOOL to be such a company", says Jan C. Olsen, CEO at EY in Denmark.



The first year in each graph is the year in which the handprint metric was first used.

<sup>1</sup> European Commission, 2020, EU Taxonomy for sustainable activities, [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en)

# Sustainability goal progress

In addition to measuring and documenting our products' handprint, we have set specific goals on reducing our operational footprint.

In 2016, we set six sustainability goals, five of which have 2015 as the baseline year. The sixth goal on safety is updated annually.

During 2021, we met the intermediate 2022 goal for an additional two sustainability goals (CO<sub>2</sub> intensity and reclaimed material), adding to the two sustainability goals we met in 2020.

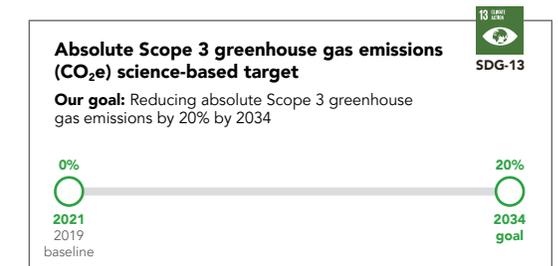
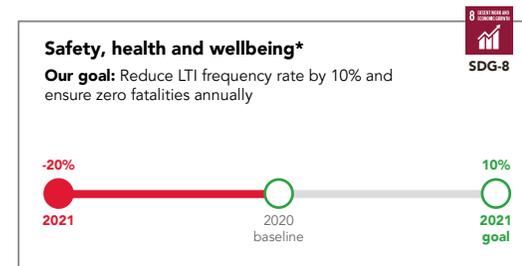
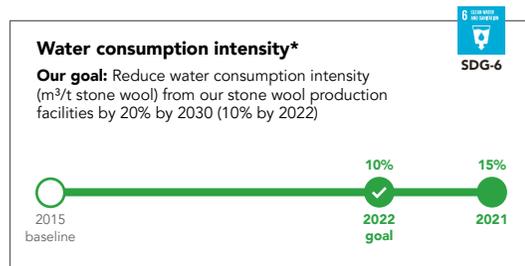
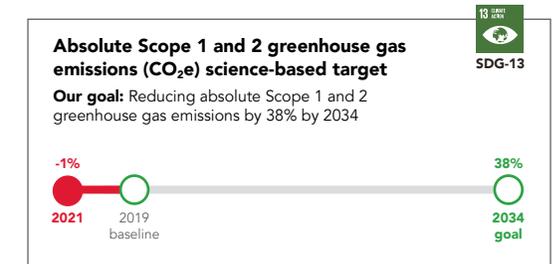
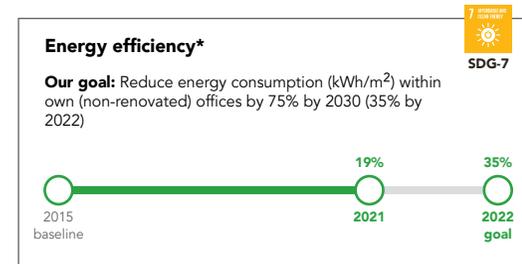
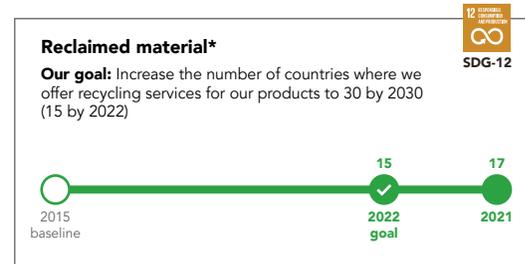
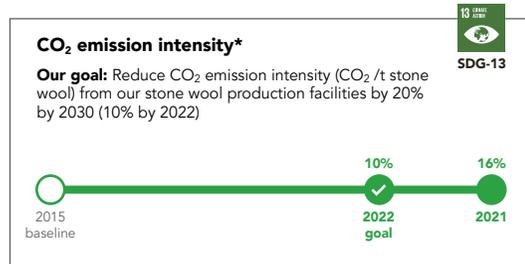
For CO<sub>2</sub> intensity, we achieved 16 percent reduction compared to the 10 percent intermediate goal. Regarding reclaimed material, we added three new countries to the list of countries where we offer our Rockcycle® reclaimed material service, reaching a total of 17 countries compared to the intermediate goal of 15.

We continue to progress on our energy efficiency in owned offices goal, completing the renovation of five buildings during 2021, with several additional buildings due for completion in 2022.

We experienced a negative trend on our Scope 1 and 2 science-based absolute emission reduction target compared to last year. This is a reflection of a significant increase in production volumes.

We took important measures to decarbonise several of our factories, the impact of which will kick-in in the coming years (see page 17), ensuring we are on track to meet our science-based absolute emission reduction targets while continuing to significantly increase production volumes.

While we did not have any fatalities in 2021, there was a deterioration in the Lost Time Incidents rate from 3.0 to 3.6. We take this very seriously and have initiated a number of measures to reverse this trend. These include additional safety audits at those factories where LTI rates are highest together with extra focus on sharing best practices across the Group. Progress is monitored very closely by executive management.



\*In scope of limited assurance provision.

Scope 1, 2 and 3 are defined according to the Greenhouse Gas Protocol.

Scope 1 includes all direct emissions from sources that are owned or controlled by the company.

Scope 2 includes indirect emissions from consumption of purchased electricity, heat or steam.

Scope 3 includes other indirect emissions from an organisation's activities that result from sources that they do not own or control.

# Creating impact

From taking action on climate change, to creating jobs, helping communities be safe and healthy, and ensuring a sustainable food chain, we are contributing to creating resilient and sustainable impact.

## In this section

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Energy efficiency renovation of the Txantrea neighborhood, Pamplona, Spain

# Renovating for energy efficiency

It may be a cliché but it's true - the cheapest, cleanest, safest energy is the energy we don't use. But in order to cut greenhouse gas emissions in line with the Paris Agreement, help households reduce their energy bills, and bring about a greener and more sustainable environment, building renovation rates have to markedly increase. That is the purpose of our day-to-day work, be it helping to design student accommodation in Denmark, calling for better building standards in the EU and U.S., or promoting practical policy solutions at the COP26 in Glasgow.

The vast majority of the world's building stock is incompatible with climate objectives. Buildings account for 36 percent of emissions in the EU<sup>1</sup> and 40 percent in the United States<sup>2</sup>. And yet deep building renovation

rates remain very low, typically around 0.2 percent a year. At this rate it will take hundreds of years to green our buildings – hardly an option, with the clock ticking on climate change. Increasing deep renovation rates also



Technician training and demonstration at Caparrosa factory, Spain

<sup>1</sup> EU Commission, 2020, In focus: Energy efficiency in buildings, [https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17\\_en](https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17_en)

<sup>2</sup> Environmental and Energy study institute, 2020, <https://www.eesi.org/topics/built-infrastructure/description>

reduces power consumption thereby enhancing the possibility of converting the power system to renewable energy.

Buildings are also the world's most valuable financial asset, worth tens of trillions of euros. This is why making them energy efficient is so important: to meet the Paris Agreement goals, preserve people's principal source of wealth, and ensure decent living standards.

This is especially true in today's context of surging energy prices around the world. In the United States, it is estimated that heating costs this winter could increase by an average of 30 percent compared to last year<sup>3</sup>. These costs will be extremely harsh for the estimated one-third of American households who are currently struggling to afford their energy bills.

Success this decade hinges on developing the stable renovation programmes that manufacturers need to plan production capacity and properly train more installers; teaming up with banks to combine public grants and low-interest loans; and setting up more 'one stop shops' to help households apply for subsidies and find qualified workers. This is the true front line of the renovation campaigns.

Industries like ours play an important role. We are training tens of thousands of installers, architects and engineers every year across multiple markets to ensure our products are installed in a way to reap maximum benefits in terms of thermal efficiency, fire resilience and circularity.

<sup>3</sup> EIA forecasts U.S. winter natural gas bills will be 30% higher than last winter - Today in Energy - U.S. Energy Information Administration (EIA).

<sup>4</sup> American Council for an Energy-Efficient Economy, 2020, Impacts of the Energy Savings and Industrial Competitiveness Act.

<sup>5</sup> Odyssee-Mure, 2021 <https://www.odyssee-mure.eu/publications/efficiency-by-sector/households/average-energy-consumption-dwelling.html>



## Building performance standards gain momentum in the United States

A separate analysis from the American Council for an Energy-Efficient Economy (ACEEE) found that comprehensive legislation requiring improvements in the energy efficiency of buildings could save consumers 51 BUSD on energy bills in the period until 2050<sup>4</sup>. Although only seven U.S. jurisdictions have established building performance standards, three of those policies were passed in the last year and at least a dozen jurisdictions are currently considering some related type of legislation. ROCKWOOL is collaborating with the Institute for Market Transformation and is a member of ACEEE, two U.S. organisations working hard to encourage broader implementation of energy efficiency policies.



7  
AFFORDABLE AND  
CLEAN ENERGY

**SDG-7**

Enabling more energy-efficient buildings and industry



**ROCKWOOL building insulation sold in 2021 will save annually**

# 20 TWh

**heating energy – equivalent to the annual energy use of over one million homes.<sup>5</sup>**

See <https://www.rockwool.com/group/carbon-impact/#methodology>

## Bridging the gap between pledges and action

Our CEO Jens Birgersson went to COP26 in Glasgow with a clear message: energy efficient buildings are essential to meeting global climate goals, and ROCKWOOL has valuable policy and technical solutions to contribute.

One of the key takeaways from the COP was that while 30-year goals are important, we need to think more in terms of three-year targets that can deliver here-and-now results. Short term targets create much greater accountability, since the people involved in defining the goals also are responsible for delivering them. That is how we operate in business.

Goals should be binding, and for building renovation, it is essential to ensure that the renovations qualify as “deep”. This means energy savings of at least 60 percent. This matters because home- and building-owners do not renovate often; for the most part only once. And we know that superficial renovation creates superficial climate, health, and economic benefits. So by having a clear definition of what deep renovations means, we guard against superficial actions that reduce future renovation potential in the building stock. It is critical to do the renovation properly once the finance is in place, the scaffolding is up and the workers on site.



Jens Birgersson, CEO, ROCKWOOL Group, speaking at New York Times climate hub event at COP26



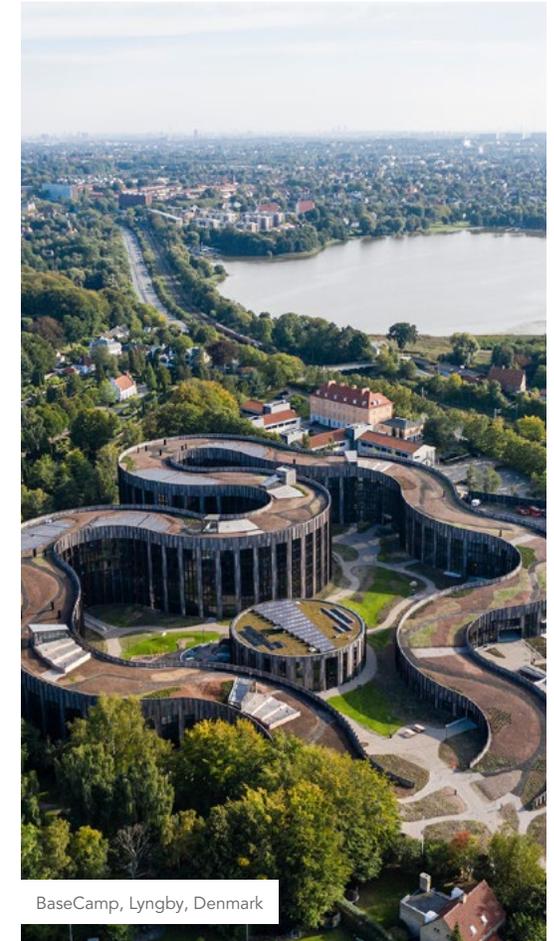
### A building inspired by nature

By combining aesthetics, fire safety, circularity and energy efficiency, ROCKWOOL's products played an important role in designing the BaseCamp student accommodation in Lyngby, Denmark, which perfectly fits with its green surroundings.

BaseCamp achieved the highly respected Gold certificate from the international green building certification scheme, DGNB, which confirms a very high level of sustainability throughout every phase of the building. The choice of insulation contributes to achieving this high sustainability recognition for the building”, explains Nina Dencker Nielsen, Business Director for Denmark, ROCKWOOL Nordics.

# 79%

would make their homes more energy efficient if they had the means to do so<sup>1</sup>



BaseCamp, Lyngby, Denmark

<sup>1</sup> Cambridge Econometrics and ROCKWOOL, Unlocking the benefits of building renovation, 2021, <https://www.politico.eu/wp-content/uploads/2021/12/01/rw-cambecono-cop26-report.pdf>

## Leading by example



### Our office renovation in Gladbeck, Germany obtained Gold DGNB certification by The Germany Sustainable Building Council

In 2021, we completed the renovation of DEUTSCHE ROCKWOOL's head office in Gladbeck. ROCKWOOL employees in Germany now occupy a fully renovated building, which has become brighter, quieter, more modern and significantly more energy-efficient. The building renovation has also been recognised by the German Sustainable Building Council (DGNB) by awarding the building with a Gold certificate, which is very difficult to obtain for a renovation project.

The renovation project achieved its overarching goal, having reduced the office's primary energy demand by 83 percent, while also avoiding 2.5 kt construction waste going to landfill. During construction, all leftover stone wool material was brought back to the Gladbeck plant to be recycled. What's more, adding a storey to the building created 435 m<sup>2</sup> of new office space and 40 more workspaces, without having to build on a single square metre of additional ground area.

More broadly, experts estimate that in the long run, refurbishment can save up to 77 percent of building materials compared to equivalent new buildings<sup>1</sup>.

ROCKWOOL's administrative office in Gladbeck, Germany before and after renovation



It is right and important that politics in Europe demands and promotes the energy refurbishment of the building stock. From our point of view, however, it is also about the fact that with our office building we have provided proof that a renovated building can reach the energy level of a new building today", explains Volker Christmann, Senior Vice President, Head of Insulation Central Europe and Managing Director of DEUTSCHE ROCKWOOL.

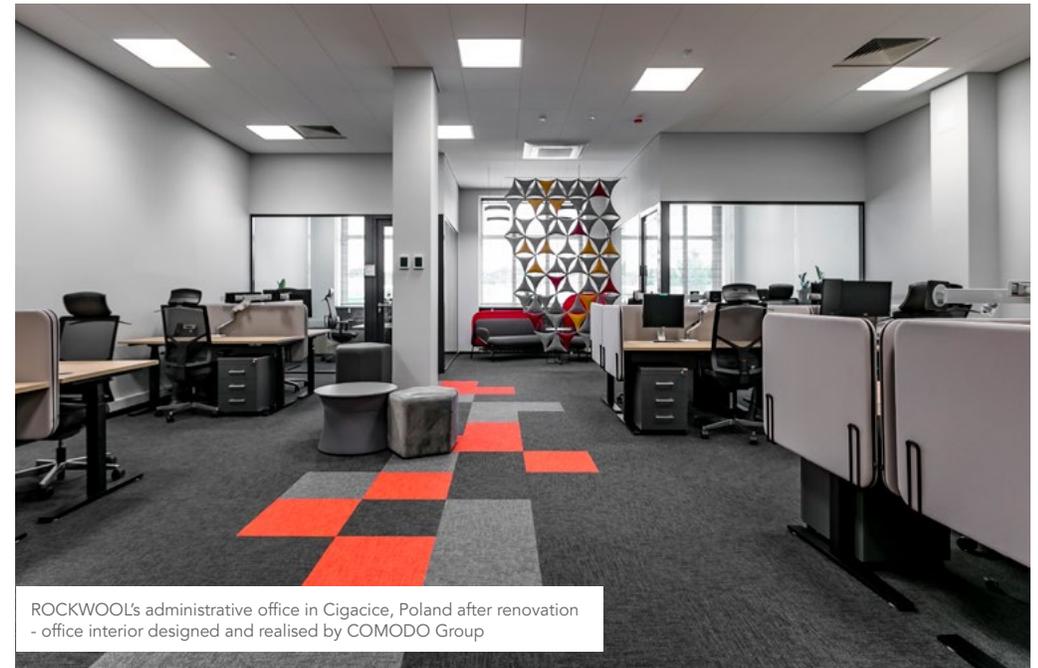


### Reducing energy consumption by over 70% by renovating our office in Cigacice, Poland

In 2021, we also completed the renovation of our office in Cigacice, Poland. By renovating the office, primary energy consumption was reduced by 71 percent. The project exploited the inherent

circularity of our stone wool, for example by recycling our Rockfon ceiling tiles.

In 2021, ROCKWOOL Poland was awarded by the Commercial Real Estate company CBRE Poland in the category Innovation and Technology for the effective reduction of the carbon footprint of the office.



ROCKWOOL's administrative office in Cigacice, Poland after renovation - office interior designed and realised by COMODO Group

<sup>1</sup> Architects for future, 2021, [https://www.ressourcenwende.net/wp-content/uploads/2021/07/210702\\_A4F-Vorschlaege-fuer-eine-Musterumbauordnung.pdf](https://www.ressourcenwende.net/wp-content/uploads/2021/07/210702_A4F-Vorschlaege-fuer-eine-Musterumbauordnung.pdf)



Ken Soble Tower, Hamilton, Ontario



### Achieving Passive House standard

Built in 1967, the Ken Soble Tower had been in a state of deterioration for some time as the oldest high-rise multi-residential building in CityHousing Hamilton's portfolio. The goal was to retrofit the building to achieve EnerPHit certification, a branch of the Passive House (PassivHaus) standard designed specifically for retrofits.

The project, which utilises multiple types of ROCKWOOL insulation, reduced greenhouse gas emissions by an impressive 94 percent.

The success of the Ken Soble Tower retrofit demonstrates a pathway to revitalising similar ageing building stock across North America through ultra-low energy retrofits.

Additionally, it serves as an example of the positive impact such projects can have on the built environment and local communities, while improving occupant quality of life, reducing operating expenses, and contributing to overall carbon reduction in urban areas.

## Engaging local communities

When it comes to building new manufacturing facilities, power generation plants, or other infrastructure projects, gaining community acceptance is a growing challenge in some markets. This can be the case even if a new project otherwise serves a highly desirable social goal – such as saving energy or reducing carbon emissions. At its most extreme, the trend extends to opposing construction of almost anything near population centres.

While ROCKWOOL's relations with the communities hosting our facilities are overwhelmingly positive, vocal local opposition is an increasingly common part of the industrial landscape for greenfield projects. This is a challenge that we are actively addressing, amongst other things by reviewing and updating our internal due diligence processes. The learnings from the National Contact Point (NCP) Denmark report in June 2021 in relation to the new U.S. factory in West Virginia provide further inspiration for these efforts.

With 51 manufacturing facilities in 23 countries, our focus is to produce and sell our products locally, generating employment, investment, and tax revenues in the host communities while at the same time being in full compliance with environmental requirements and standards. ROCKWOOL's factories are essential to the Group's success, as is maintaining constructive relations in the communities that host our facilities. It is vital to communicate effectively regarding the benefits and changes we bring.

**ROCKWOOL's insulation products sold in 2021 will over the lifetime of their use save our customers energy costs of around**

# 68 BEUR



**Around**

# 38 000 jobs

**created locally at our facilities worldwide and with suppliers.**

See <https://www.rockwool.com/group/socioeconomic-impact/>



**More than 40 years of local commitment**

Saint-Éloy-les-Mines is a small town located in Auvergne, in central France. It used to be a flourishing mining town from the 18th century until the mines closed in 1978. ROCKWOOL's factory in Saint-Éloy-les-Mines has contributed to the region's transformation and redevelopment. Today, the factory employs close to 600 people, with many of the suppliers being local.

For more than 40 years, ROCKWOOL has been involved in local economic and social life.

For example, through the QUALITEL endowment fund, which fights against poor housing conditions, ROCKWOOL has supported since 2018 "Habitat et Humanisme Auvergne" association. This local association manages 210 housing units to accommodate people experiencing socially challenged circumstances.



ROCKWOOL participated at the 10th anniversary of the QUALITEL Endowment Fund, France

# Advancing our decarbonisation commitment...



## Net carbon negative

A question we are sometimes asked is how can ROCKWOOL claim to be carbon negative when we are energy intensive?

The answer is quite simple: Through our insulation products, ROCKWOOL is contributing to an enormous saving of energy and thereby greenhouse gas emissions in both buildings and industry. The fact that the thermal efficiency of our products does not deteriorate over time is an important reason for this.

So while our production is energy-intensive we are saving far more – actually 100 times<sup>1</sup> more energy than is consumed and carbon that is emitted to make these products.

There are currently no standard methodologies for calculating the avoided emissions of products (also known as Scope 4 emissions<sup>2</sup>). We have therefore collaborated with a third-party to develop such a methodology, which we share here and encourage others to use as well. For more information visit [www.rockwool.com/group/carbon-impact/#methodology](https://www.rockwool.com/group/carbon-impact/#methodology).

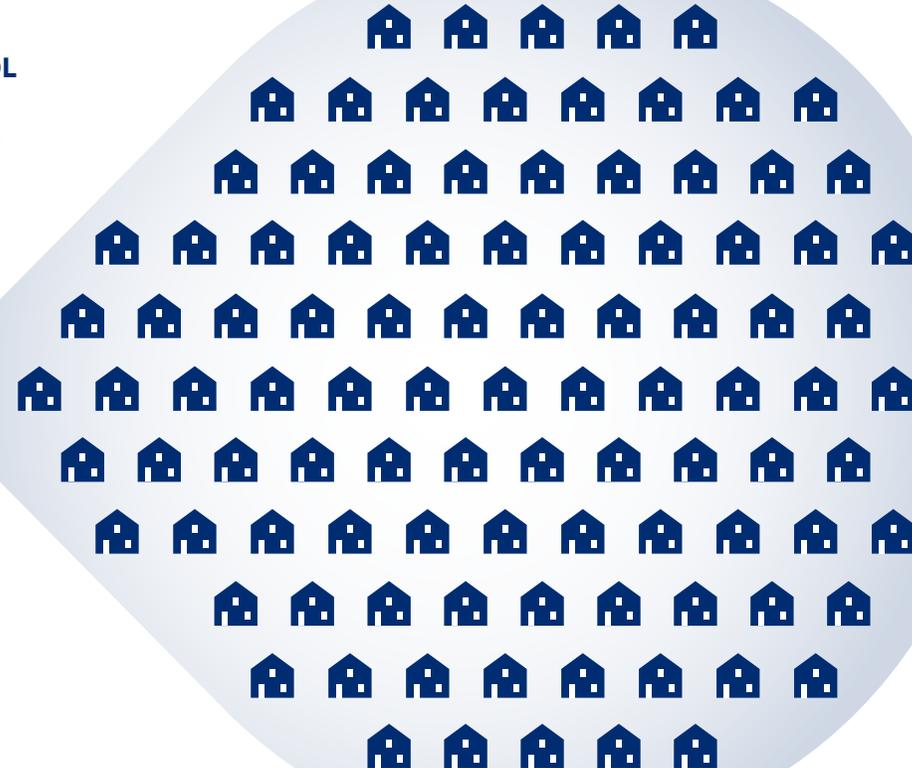
Over its lifetime ROCKWOOL building insulation sold in 2021 will save more than

# 100



# times

the carbon emitted and energy consumed in its production.

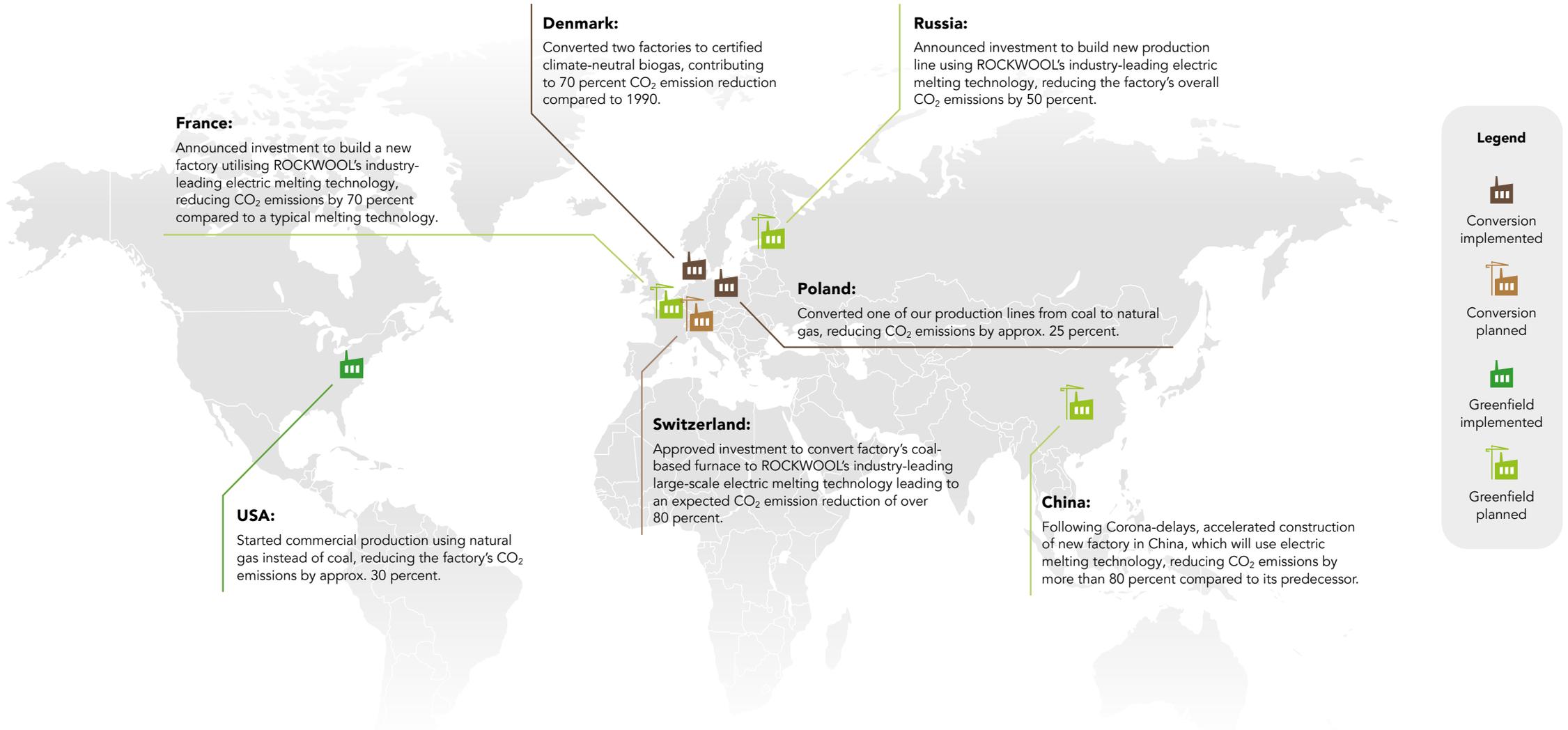


<sup>1</sup> The calculation "100 times" is based on the principle of ceteris paribus.

<sup>2</sup> World Resource Institute, 2019, Estimating and reporting the comparative emissions impacts of products: Avoided emissions are emission reductions that occur outside of a product's lifecycle or value chain, but as a result of the use of that product <https://ghgprotocol.org/estimating-and-reporting-avoided-emissions>

See <https://www.rockwool.com/group/carbon-impact/#methodology>

# ...globally



## Walking the talk

ROCKWOOL is one year on from making the commitment, verified and approved by SBTi, to reduce absolute greenhouse gas emissions by one-third in 15 years.

This is an ambitious target for an energy-intensive manufacturing company, where total absolute greenhouse gas emissions are three million tonnes, the majority which are Scopes 1 and 2. This is all the more ambitious considering that these absolute emission reduction targets also cover emissions from future growth. And as a leading producer of fire-safe, carbon-abating solutions, our products are particularly in high demand.

In 2021, we experienced a negative trend in our Scope 1 and 2 science-based targets compared to last year and ended marginally worse than the 2019 baseline. This is a reflection of an increase in production volumes. We took significant measures to decarbonise several of our factories, the impact of which will kick-in during the coming years.

In addition to converting our Danish factories to certified climate-neutral biogas in January 2021, we opened our new factory in Jefferson County, West Virginia, using natural gas instead of coal.

We also converted one of our production lines at the Cigacice, Poland factory from coal to natural gas. This reduced the CO<sub>2</sub> emissions from that line by 25 percent.

Further in 2021, we announced plans to build a new factory, expand another, and convert a third - all of which we utilise carbon-reducing electric melting technology.

For more information on ROCKWOOL's position on decarbonisation visit: [www.rockwool.com/group/about-us/sustainability/](http://www.rockwool.com/group/about-us/sustainability/).



### Showcasing fuel-flexible technology at our newest factory

In July 2021, we began commercial production of stone wool insulation products at our newest factory, located in Jefferson County, West Virginia. The state-of-the-art factory produces ROCKWOOL's residential, commercial and industrial stone wool insulation and marks North America's first post-pandemic increase in stone wool insulation manufacturing capacity.

The 460 000 square foot factory utilises industry-leading melting and emissions abatement technologies, including ROCKWOOL Group's award-winning fuel-flexible melting technology that made it possible for the factory to start operations using natural gas instead of coal. Using natural gas as the fuel source reduces the facility's CO<sub>2</sub> emissions by approximately 30 percent. The factory currently employs around 130 workers, almost all from the region. When fully staffed the factory will provide approximately 150 jobs.



ROCKWOOL's factory in Ranson, West Virginia, USA



I am very proud to work for a company that genuinely values their people as much as they do their product. ROCKWOOL has been a great benefit to the area by providing competitive, stable jobs while continuously giving back to the community and local organisations".

Jacob Michael, Area 1 leader at Ranson factory



## Reducing our Scope 3 emissions

In the manufacturing and industrial sectors, achieving carbon neutrality requires substantially reducing Scope 3 emissions. For ROCKWOOL, one-third of our emissions fall into this category, but for industry as a whole, it is typically much higher.

Reducing Scope 3 emissions also requires greater transparency and higher quality data in carbon accounting. For its part, ROCKWOOL discloses all relevant Scope 3 emissions in accordance with the

Greenhouse Gas Protocol<sup>1</sup>, using a third-party verified LCA model covering all relevant lifecycle stages from cradle to grave<sup>2</sup>.

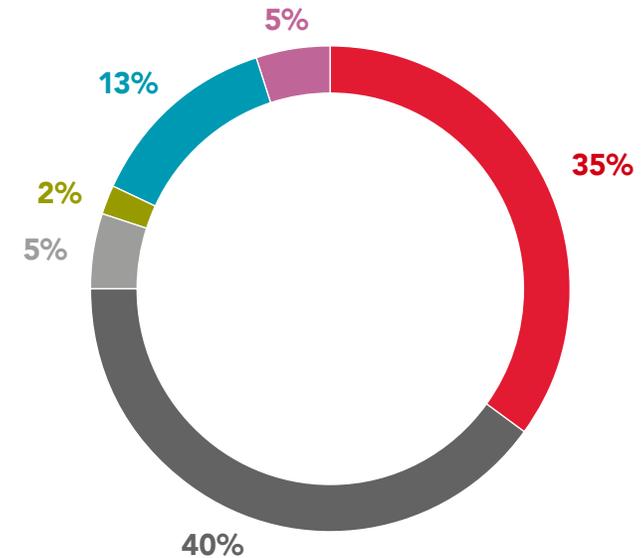
We are working on a number of initiatives to reduce our Scope 3 emissions. For example, in Denmark we have started using bio-gas fuelled trucks transporting our products to customers and construction sites in the Copenhagen area with plans to extend in both Denmark and Norway in 2022.



<sup>1</sup> Greenhouse Gas Protocol, 2011, Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

<sup>2</sup> ISO 14025:2010, EN15804:2012+A1:2013.

**ROCKWOOL's total Scope 3 emissions per category, 2021**



- Fuel- and energy related activities
- Purchased goods and services
- End-of-life treatment of sold products
- Upstream transportation and distribution
- Downstream transportation and distribution
- Waste generated in operations

# Pioneering circularity in the built environment

For ROCKWOOL and the broader global community, 2021 saw circularity gaining new momentum in its role in decarbonising society. We expanded our Rockcycle® reclaimed material schemes to additional markets and increased reclaimed material volumes while strengthening cross-sectoral circularity collaboration. And our factories are increasingly operating in fully-closed loop systems.

## Leading the way on stone wool recycling

A key attribute of our stone wool is that it can be fully recycled into new products – infinitely, and without any loss in performance. This contributes to closing the materials loop in one of the most wasteful sectors - construction.

As a company that aspires to take responsibility for its own resources, we do not, however, simply rely on our products being ‘recyclable’. We are constantly developing more user-friendly recycling services for the benefit of our customers and the environment.

By offering comprehensive recycling services in a growing number of countries, we contribute to greater circularity in the construction sector. In 2021, we

expanded our Rockcycle® reclaimed material service offering to three new countries - Croatia, Russia and Spain and increased the volume of reclaimed material that was recycled by 23 percent. To qualify for Rockcycle® we set specific criteria that our business units need to meet which are then verified by external auditors (see Factbook page 38).

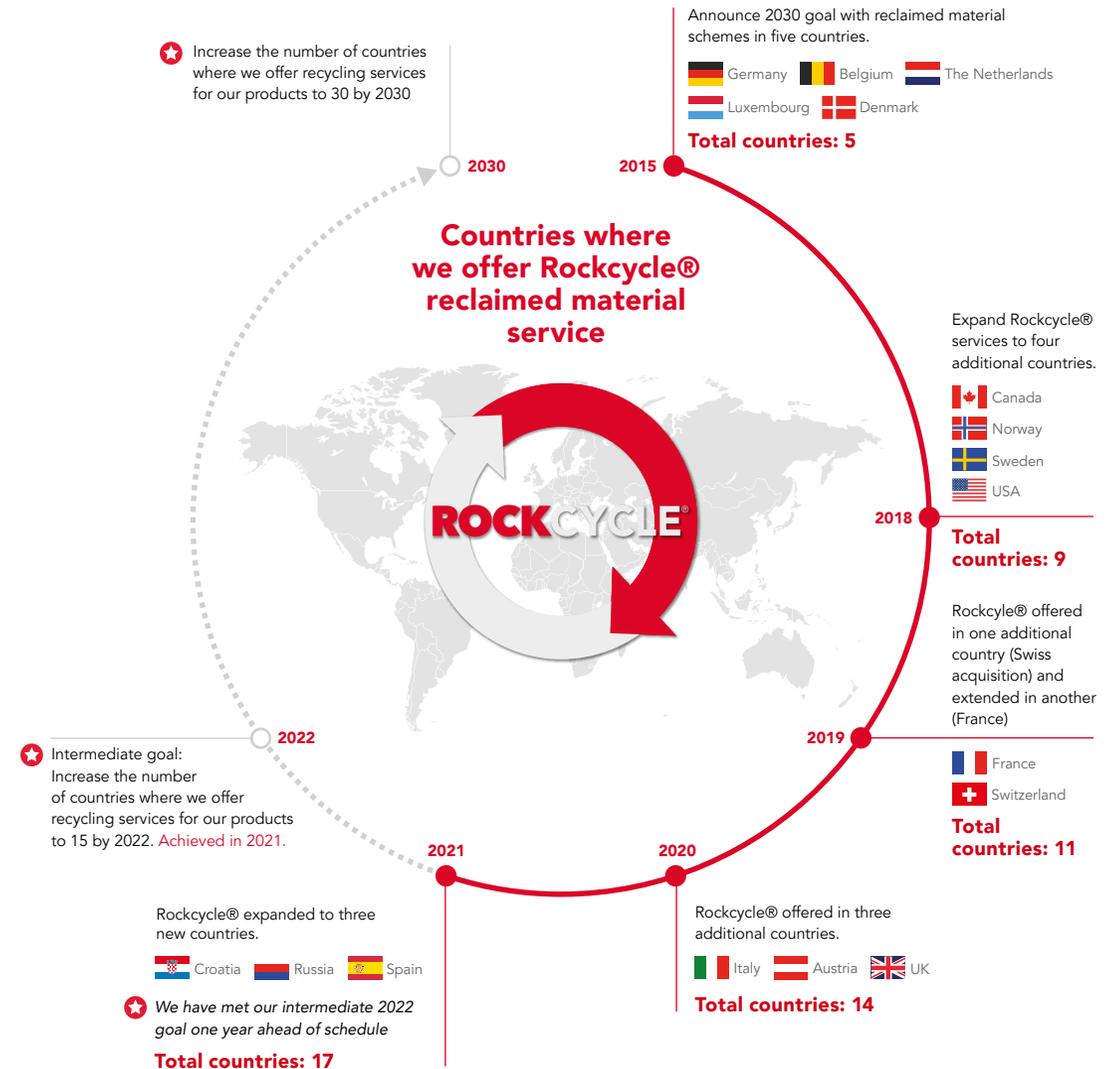
We are very proud to say that we exceeded one year early our intermediate goal of offering Rockcycle® in 15 countries by 2022.

For more information on ROCKWOOL's position on circularity visit: [www.rockwool.com/group/about-us/sustainability/](http://www.rockwool.com/group/about-us/sustainability/).

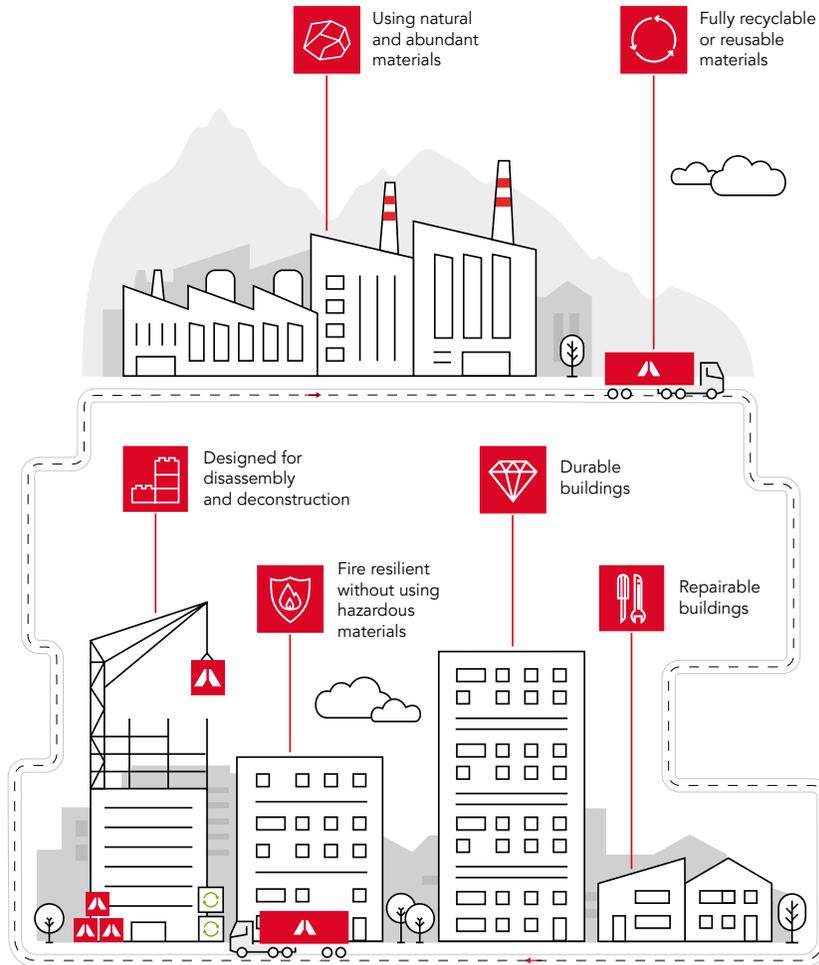


X-Lam Dolomiti specialises in designing ecological wooden buildings and works in full respect of environmental resources. Rockcycle® is important to us because it is in line with our philosophy, which aims at the rational use of resources by favouring the circularity that exists in nature and at the same time significantly reduces costs associated with waste disposal”.

*Mr. Albino Angeli, President of X-Lam Dolomiti, Italy*



## Circular by nature



### Professionalising the reclaimed material service

In 2021, we focused on streamlining the Rockcycle® reclaimed waste material across our markets in order to ensure better customer experience, efficient operations and improve our ability to meet the growing demand for the service. Construction waste recycling takes on increasing priority in the sector, driven by regulatory requirements, economic realities, and environmental concerns. The simpler and more efficient we can make the Rockcycle® service, the more waste and cost we help our customers reduce.

### Closing the loop in our own production

Capitalising on the inherent recyclability of stone wool, we have continued our efforts to have fully closed-loop systems at our factories. In 2021, three-quarters of our stone wool manufacturing facilities have eliminated all stone wool waste going to landfill. Globally, we have committed to reducing total production waste going to landfill by 85 percent by 2030. As of 2021, we had reduced total production waste to landfill by 51 percent compared to 2015.



“Services like Rockcycle® help us achieve BREEAM Excellent certifications on our assets and is in line with our goals and strong commitment to reduce our carbon footprint, improve waste management and promote the circular use of resources in the construction sector”.

*Kenneth Vera, Technical Development Manager, Goodman, Spain and a member of the Carbon Neutrality circle at Goodman Europe*

### Persistent challenges, new thinking

Among the most wasteful sectors, the built environment has a circularity challenge. We spent much of 2021 challenging our own thinking on the matter, articulating a vision for a more circular future, examining our own role in that future, and identifying gaps between what we are already doing and what still needs to get done. Hoping to inspire others, we published a [white paper](#) on the matter and hosted a cross-sector webinar together with the [Ellen MacArthur Foundation](#) and [Arup](#) to discuss overcoming circularity challenges in the built environment with industry stakeholders. The next step will be working with these two organisations and other industry partners on a joint position paper outlining circularity opportunities within the EU Renovation Wave.



### The challenge of single-use plastics

300 million tonnes of plastic waste is produced every year and only nine percent of it is recycled<sup>1</sup>. Reducing the massive amounts of single-use plastic is one of society's biggest challenges as we progress toward a waste-free, circular society. The construction sector – and ROCKWOOL – are not exempt from the need to act. While the stone wool we produce is fully recyclable, we depend on plastic packaging for storage and transportation as well as certain in-use applications. We are working hard to increase the recycled content in the plastic packaging we use as well as to make the packaging itself more recyclable – for example, by using less coloured ink. That work continues in 2022.



### Grodan moves forward with recycled plastic in foils

We are continuously innovating new ideas to become the fully circular company we aspire to being. One such project involves improving the sustainability of the plastic sleeves wrapped around Grodan's growing media. It is challenging to achieve this without compromising the critical functions the sleeves play during the growing process.

These efforts have already reduced plastic usage by 10 percent. We are further developing solutions that incorporate up to 30 percent recycled content into the sleeves. Trial results using the greater recycled content are encouraging, as growers have not experienced any change in performance or output relative to our current products. We are now progressing toward larger-scale trials with our customers.

<sup>1</sup> UNEP, 2018, Our planet is drowning in plastic pollution - it's time for change!, <https://www.unep.org/interactive/beat-plastic-pollution/>

# Sustainable food production

Researchers at the Wageningen University in the Netherlands estimate that by 2050, the world will have to produce twice the amount of food using half the resources compared to today<sup>1</sup> - all while dealing with climate change-related threats to food security<sup>2</sup>.

Growing systems using Grodan play an important role in overcoming these challenges. Research carried out by Wageningen University shows that high-tech greenhouses have the biggest positive impact on the UN Sustainable Development Goals compared with all other growing systems and score highest within water and nutrient efficiency<sup>3</sup>.

Precision growing can ensure sustainable food production anywhere in the world - also in a desert climate, where water and fertile land are very scarce. In countries like Saudi Arabia, water used for agriculture is usually extracted from deep water resources. Extensive use can deplete these precious resources and diminishes their quality. Several growers have stopped production due to poor water quality. To address this

and other sustainability challenges, the national research centre Estidamah in Riyadh, Saudi Arabia, performs applied research to test and adapt innovative technologies.

Experiments in the research centre, developed with support from Wageningen University & Research experts, show that water savings of more than 95 percent can be achieved in tomato growing using Grodan substrates. During this process, the collected drain water and condensation from the cooling, can be reused. Also the water transpired by the crop is largely recovered.

In many cases, products grown in stone wool require only five litres of water to produce one kilogram of tomatoes. By comparison, growing the same in low- and mid-tech greenhouses would require 168 and 108 litres of water more respectively. Though not the main focus of the experiment, the high-tech greenhouse also produced 50 percent more yield than the other two systems<sup>4</sup>.



Strawberry greenhouse, using Grodan products

## Enabling growers to use

# 53%

## less water to grow

# 76%

## increased yields



**SDG-2**

Enabling more efficient food production



**SDG-6**

Enhancing water efficiency in horticulture



See <https://www.rockwool.com/group/sustainable-growing/#methodology>

<sup>1</sup> Passion for better future, Grodan, 2016. The facts presented in this booklet are a summary of a scientific review of dr. ir. Ep Heuveling and prof. dr. Leo Marcelis from Wageningen University & Research and based on UN <https://www.grodan.com/our-thinking/our-thinking-stories/sustainable>

<sup>2</sup> Special report on climate change and land: Food Security, IPCC, 2019, <https://www.ipcc.ch/srcccl>

<sup>3</sup> Evaluating Greenhouse Production Systems based on United Nations Sustainable Development Goals, Dianfan Zhou, Ep Heuvelink, Leo F.M. Marcelis, Wageningen, 2020. Nutrient efficiency is the reuse of the nutrient solution (recirculation) and herewith minimising its loss. It is made possible in high-tech soilless cultivation systems with stone wool.

<sup>4</sup> Evaluation of water saving technologies at Estidamah research center in Saudi Arabia, J.B. Campen, K. Al Assaf, A. Al Harbi, M.Y. Sharaf, F. de Zwart, W. Voogt, K. Scheffers, I. Tsafaras, O.M. Babiker, M. Qaryouti, 2018, <https://www.wur.nl/en/newsarticle/New-research-greenhouse-in-Riyadh-shows-30-90-water-saving-possibilities.htm>

# Creating fire resilient...

Buildings need to be energy efficient and circular, but also fire resilient and healthy. After all, we spend 90 percent of our time in buildings<sup>1</sup>. During 2021, we continued to advocate for stronger fire safety regulations, while our Rockfon brand received external recognition for, amongst other things, the material health of its products.



Aftermath of Milan tower fire, August 2021

By 2050, almost 70 percent<sup>2</sup> of the global population is expected to live in cities. To accommodate such growth, cities are increasingly investing in compact planning and high-rise construction. This has many benefits over urban sprawl, including less dependence on cars and lower emissions as well as increased overall accessibility to goods, services and employment opportunities<sup>3</sup>.

However, such dense living also entails risks when it comes to fire hazards. Over the past decade, there has been a rising number of building fires involving combustible exterior wall systems and facade materials<sup>4</sup>. A recent example is the 2021 fire in the Torre del Moro apartment building in Milan, Italy.

ROCKWOOL continues to advocate for fire safety regulations that prohibit the use of combustible insulation and cladding on high-rise and high-risk buildings.



Especially when talking about fire safety, construction companies have a responsibility to use the most suitable products for the project. In Italy, the requirements to prevent building façade fires are not strict enough. Italy should follow the straightforward regulatory approach England adopted after the Grenfell Tower fire". Marco Cruciani, Project Manager at CMB Società Cooperativa.



Wildfire, Colorado Springs, USA

In Wildland Urban Interface (WUI) zones in the United States and Canada, there is also a clear need to construct homes and other buildings to a higher standard of fire resilience to increase the likelihood of preserving the structures during a fire event.

<sup>1</sup> Neil E. Klepeis, 2001, The National Human Activity Pattern Survey (NHAPS): A Resource for Assessing Exposure to Environmental Pollutants.

<sup>2</sup> United Nations, 2018, <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>

<sup>3</sup> European Environmental Agency, 2018, Urban sprawl in Europe.

<sup>4</sup> Building and Environment journal, February 2020, A top-down, statistical approach to understand the fire performance of building facades using standard test data.



### Fire resilience in tall wooden structures

When one of Italy's leading green construction firms designed the country's tallest wooden residential complex in Rovereto, sustainability, circularity, and fire safety were foremost considerations. The two-building complex gives new life to an old neighbourhood, with its own special origins.

In addition to using wood from trees felled in a major storm several years ago, multiple ROCKWOOL insulation products contribute to creating thermally-efficient, acoustically comfortable, fire-resilient, and circular homes for residents of the 68 apartments.



Italy's tallest wooden residential complex, Rovereto, Italy



Known for being a leader in green and sustainable construction, Ri-Legno founder Lavinia Sartori says, "The Rovereto project helps transform an aging neighbourhood giving it a modern flair. From the wood to build the structure to the insulation to keep residents comfortable and safe, sustainability and circularity were key factors".



The University of Bedfordshire's Luton Campus, UK



### A campus fit for the future

Fire regulations and practice in England have become more stringent after the tragic incidents with Grenfell Tower.

For tall residential and institutional buildings, the regulations in England now require using non-combustible cladding and insulation, to protect public safety and improve building resilience.

In 2021, Rockpanel provided beautiful, non-combustible, and future proof accommodation for thousands of students at The University of Bedfordshire's

Luton Campus, UK. The choice of façade, along with high fire safety performance expectations and ambitious client aspirations to design a creative place for students was key in choosing a supplier for the project.

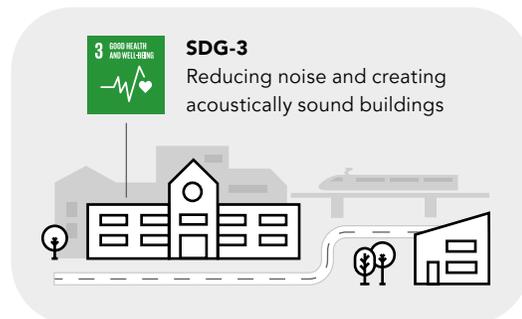
In addition, due to the stone wool properties of products used, Rockpanel was able to deliver a façade that is virtually maintenance-free and insensitive to moisture and temperature changes.

## ...and healthy homes

In 2021, ROCKWOOL Group was one of the first companies to assess its products using the Cradle to Cradle Certified Version 4.0 pilot standard. After almost a year in the making, we achieved three Cradle to Cradle certifications: one on Gold level for ROCKWOOL's FUTURO insulation products at our Swiss facility and two on Silver and Bronze levels for Rockfon products. The Rockfon certifications cover products produced in all Rockfon manufacturing facilities in Europe and more than 90 percent of its full portfolio.

For Rockfon products, sustainability does not start and end with Cradle to Cradle though. Our products' main purpose is to improve the wellbeing of building occupants. This is achieved amongst other things by offering improved acoustics, enhancing the lighting conditions and also integrating good design and aesthetics into indoor spaces.

As an active advocate on the importance of wellbeing in indoor spaces, we have held a keystone membership together with WELL Institute since November 2020. For more information to WELL Institute visit [www.wellcertified.com/membership/](http://www.wellcertified.com/membership/).



As part of this, we have together launched a series of webinars and articles with a focus on indoor acoustics and healthy building materials. The content we created in collaboration with International WELL Building Institute (IWBI) aims to increase the awareness on wellbeing and also offer the right toolbox and metrics to architects and engineers when designing the buildings of the future.

“As one of the first companies to assess their products in most categories using the Cradle to Cradle Certified Version 4.0 pilot standard, ROCKWOOL has taken a leading role in demonstrating the critical value of using a comprehensive science-based framework to drive the transformation and innovation of products made for tomorrow, today”.

*Dr. Christina Raab, President & CEO, Cradle to Cradle Products Innovation Institute*

# 1.7 million students

with improved learning conditions due to acoustics solutions delivered to schools in 2021.

See <https://www.rockwool.com/group/acoustic-impact/>

### Cradle to Cradle factbox

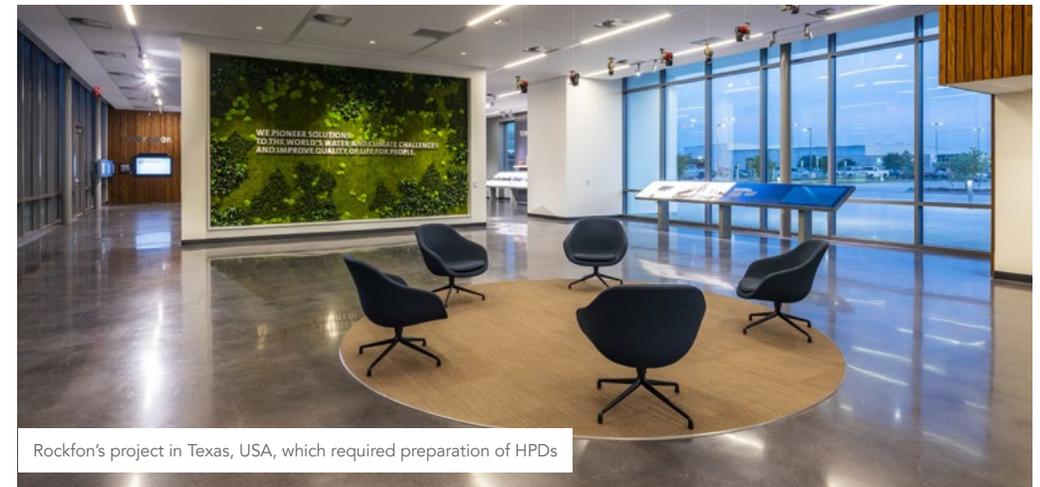
- Gold level certification for FUTURO insulation products at Swiss facility
- Silver and Bronze level certification for Rockfon ceiling tiles including Gold in circularity category
- More than 90 percent of the Rockfon ceiling tiles in Europe are Cradle to Cradle certified



### Health Product Declarations

In 2021, Rockfon launched in the United States a series of Health Product Declarations (HPDs) and Declare labels covering its high performing acoustical tiles that are used extensively in office spaces, healthcare and educational facilities. This action was in response to the increasing demands

from customers, architects, designers and building occupants for healthy spaces. This also confirms Rockfon's high standards within material health and forms part of one of the most comprehensive and transparent portfolios of Environmental Product Declarations (EPDs), HPDs and Declare labels available for ceiling specifiers in the market today.





Silk Road International Arts Centre in Langfang, China



### Achieving great acoustics and fire resilience at the Silk Road International Arts Centre

With potential to host audiences of up to 3000 spread throughout three separate theatres within the building, safety and acoustics were of vital importance when planning the Silk Road International Arts Centre, in Langfang, China. The theatre was renovated in 2021 to achieve excellent fire resilience and acoustic performance, combining sound insulation with sound absorption.



Our stone wool products help to enrich modern living by sustainably solving many building challenges”, says Liwen Shen, Marketing Director of ROCKWOOL China. “The team behind the Langfang Grand Theatre used our products to ensure the space was fire resistant, energy efficient and with the best possible acoustics. Now, thousands of people will experience wonderful performances in this building every year”.



### Creating healthy schools for young learners

In 2021, Rockfon North America supported the Pasadena Independent School District (PISD) in Texas with major renovations of two elementary schools to better serve their growing populations of pre-kindergarten to fourth grade students.

To create an ideal learning environment for the two schools, the PISD prioritised healthy indoor air quality, energy-efficient operations, optimised acoustics, moisture and mould resistance, low maintenance materials, and a modern, welcoming appearance. As part of meeting these goals, the school district selected Rockfon acoustic stone wool

ceiling systems for both schools.

With developing lungs and higher rates of respiration, children are particularly vulnerable to chemicals and bacteria in the air. Reducing airborne contaminants lessens the risk for health concerns, irritability and loss of concentration. Stone wool naturally resists mould growth, mildew and potentially harmful microorganisms, without the use of added antimicrobials, biocides or fungicides. In addition, the greater amounts of natural daylight and the good acoustic experience that Rockfon products enable help students to improve concentration and focus, which were also important factors for PISD.



Mae Smythe Elementary School in Pasadena, Texas, USA

# Factbook and data

This Factbook offers investors and other interested stakeholders a deeper look at ROCKWOOL Group's sustainability priorities, including our material issues, how we operate as a responsible business, maintain compliance, respect human rights as well as on the progress we have made on sustainability goals and the SDGs.

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**Operational performance:  
Climate and energy**

ROCKWOOL Group is an energy-intensive manufacturing company with an environmental footprint that we are firmly committed to reducing. In 2016, we set a goal to reduce the carbon intensity (CO<sub>2</sub> emitted per tonne produced) of our manufacturing facilities by 20 percent by 2030 (baseline 2015), with an intermediate goal of 10 percent reduction by 2022.

In 2020, we raised our ambition level, supplementing the carbon intensity goal with absolute greenhouse gas emission reduction targets verified and approved by the Science Based Targets initiative (SBTi). These targets include reducing absolute Scope 1 and 2 greenhouse gas emissions by 38 percent and absolute Scope 3 emissions by 20 percent by 2034, both relative to a 2019 baseline.

In 2021, we successfully met our intermediate carbon intensity target one year early, achieving 16 percent reduction. Among the key actions contributing to this result were the Moss, Norway factory operations using

the newly installed electric melting oven; the two Danish factories converting to climate-neutral biogas; and starting operations at our newest production facility in the United States using natural gas instead of coal. In addition, we tested an energy management system in our German factories, which showed good potential to support advanced energy analyses, monitoring, benchmarking and peaks control with the goal to reduce energy consumption.

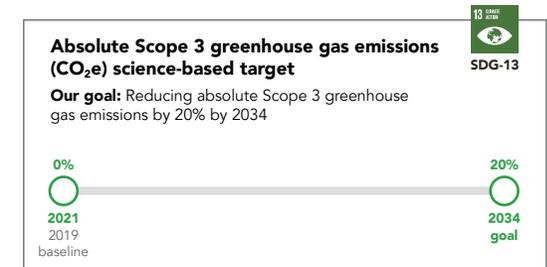
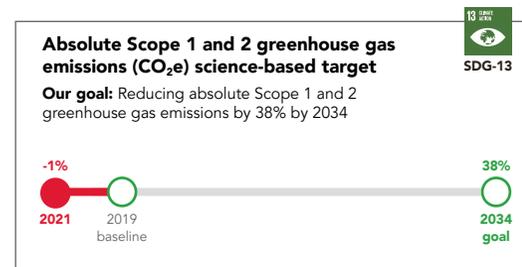
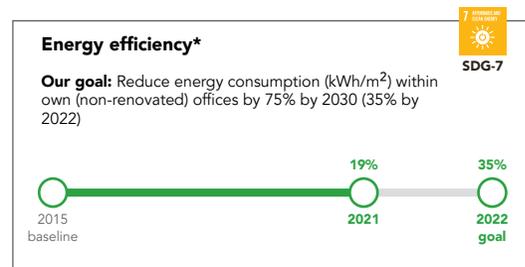
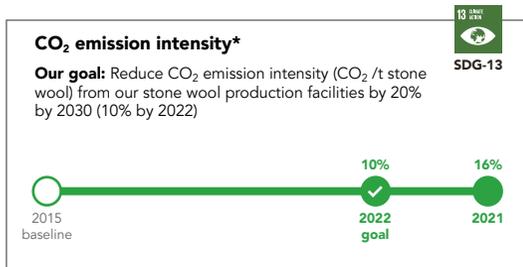
Due to the increased production volumes in 2021, absolute Scope 1 and 2 emissions and thereby progress toward our Scope 1 and 2 science based target marginally worsened relative to the 2019 baseline. However, we also took significant measures to decarbonise several of our factories, the impact of which will kick-in in the coming years (see page 17).

We are also dedicated to improving the energy efficiency of owned offices. In 2021, we reduced energy consumption (kWh/m<sup>2</sup>) with 19 percent compared to 2015 baseline, as we completed the renovation of five office buildings. We are currently in the process of renovating a number of buildings due for completion during 2022.



Announcing ROCKWOOL's new low-carbon electric production line in Vyborg, Russia. (from left to right) Jens Birgersson, CEO, ROCKWOOL Group, Alexander Drozdenko, Governor of the Leningrad Region and Carsten Søndergård, Ambassador of the Kingdom of Denmark in the Russian Federation

**Progress against our sustainability goals**



\*In scope of limited assurance provision.  
 Scope 1, 2 and 3 are defined according to the Greenhouse Gas Protocol.  
 Scope 1 includes all direct emissions from sources that are owned or controlled by the company.  
 Scope 2 includes indirect emissions from consumption of purchased electricity, heat or steam.  
 Scope 3 includes other indirect emissions from an organisation's activities that result from sources that they do not own or control.

## Operational performance: Environmental management

ROCKWOOL Group's environmental management work is guided by our Safety, Health and Environment (SHE) policy and manual, which builds on ISO 14001 and 45001 with the overall objective of minimising the environmental impacts of our production. In 2021, we updated our manual for environmental reporting and prepared a new manual for safety reporting to better guide our global business units on processes and procedures in collecting ESG data as well as on the importance of data quality and credibility.

Our production facilities are subject to strict air quality regulations that aim to protect sensitive population groups, wildlife, and the local environment. In addition to complying with local, national and international

legislation as a minimum, we have internal mandatory minimum requirements for a number of environmental areas. In cases where our own requirements exceed legal requirements, our requirements prevail. In 2021, air emissions compared to previous years were within the level of uncertainties of measurements as described in accounting policies, page 37.

Safety, health and environmental risk assessments are carried out at each of our factories. Their performance is audited and any cases of non-compliance and non-conformance are addressed. The audits are based on ISO 14001 and 45001 standards and also incorporate our own standards and policies together with local legal requirements. In 2021, 84 percent of our stone wool production facilities had at least one external certification within safety, health, environment or energy management and several facilities were certified across all areas.



Rain water collection in Øster Doense factory, Denmark

## Water management

The main focus of our water management strategy is to reduce freshwater use and ensure there is no discharge of wastewater into the environment. Therefore, we design our production processes for zero wastewater discharge to the environment. At most of our sites, we recycle production water in a closed-loop system, with much of the water evaporating as part of the process. As a result, water effluent is not a material issue for us.

In 2016, we set a sustainability goal to reduce the water consumption intensity of our stone wool production facilities by 20 percent by 2030 with intermediate goal of 10 percent by 2022. In 2020, we completed our intermediate goal and in 2021, we made solid progress to our 2030 goal by achieving 15 percent reduction of our water consumption intensity. Due to increased production volumes our absolute water consumption increased.

Throughout 2021, we made several improvements and investments in optimising the water usage across our factories. For example, at our factory in Cigacice, Poland, we invested in harvesting rainwater, which resulted in significantly reducing fresh water consumption. In 2021, rainwater accounted for seven percent of total water consumption across the Group.

Since 2000, the Danish factory in Vamdrup has collected rainwater in large basins. Continuous investments in storage capacity means today that the basins can store 2000 m<sup>3</sup>, supplying 40 percent of the factory's production process water consumption. In total the two Danish factories (Vamdrup and Øster Doense) recycled more than 50 000 m<sup>3</sup> rainwater in 2021.

At our French factory in Saint-Éloy-les-Mines, we implemented a system for closer control and quick reaction against water leakages, together with the installation of more water efficient equipment.

## Progress against our sustainability goals



\*In scope of limited assurance provision.

**Operational performance:  
Waste and recycling**

**Reclaimed material service**

ROCKWOOL Group has set a goal to offer comprehensive recycling services for our products in 30 countries by 2030. Since making the commitment in 2016, we have worked across multiple markets to develop the capacities and competences required to implement effective collection systems.

In 2021, we introduced new reclaimed material service Rockcycle® in Croatia, Russia, and Spain, bringing the total number of countries where we offer the service to 17. We have thus met our intermediate goal of 15 countries by 2022 a year early. We are very proud to see the uptake of the reclaim service also outside of the EU in markets such as Russia, which can have a potential to reclaim and recycle significant volumes of used stone wool.

Further, in an effort to increase the volumes of reclaimed stone wool and to provide our customers with the best user experience, during 2021, we conducted an internal project to streamline and professionalise the reverse logistics processes and improve the Rockcycle® reclaimed material service offering. In 2021, the volume of reclaimed material that was recycled increased by 23 percent compared to the previous year.

**Landfill waste from production**

During 2021, we held Group-wide best practice sharing sessions on how to reduce and handle waste from our production. Factories shared their experience on investigating solutions to reduce waste and implementing more sustainable ways of treating waste.

For example, at our UK factory near Bridgend, fly ash is now treated and used as a stabilisation aid within landfills to prevent leaching of heavy metals.

In 2021, we achieved a 51 percent reduction in waste sent to landfill, which is marginally better than the level in 2020.

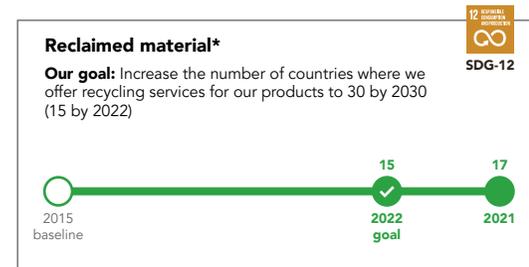


ROCKWOOL factory near Bridgend, South Wales, UK



Collection of cut offs and surplus stone wool, as part of Rockcycle® reclaimed service scheme, Croatia

**Progress against our sustainability goals**



\*In scope of limited assurance provision.

## Operational performance: Safety and social issues

We treat our employees fairly, ensuring a safe and healthy working environment, and aim to maintain strong relationships with our customers, suppliers and the communities where we operate.

How we act towards employees, partners, customers and the communities we are in shapes our reputation as a company among these constituencies and influences the opportunities we will have to grow with them in the future.

### What it means to be a ROCKWOOL employee - Greater Together

"Greater Together" is both a promise and an expectation. It combines what is valuable to employees with what ROCKWOOL Group offers and expects as an employer: a culture of skilled and passionate people and a collaborative working environment; a solid and reliable company with a strong history and legacy; and an opportunity to develop innovative products that have a positive impact on society and the world.

For ROCKWOOL, an aligned and consistent method of bringing new employees into the Group ensures all new hires get the same experience from recruitment up until they start in their new job. It also ensures a consistent and improved understanding of the business, culture and history, and how they will contribute to the goals of the organisation.

### Engaging employees

We are continuously striving to increase the engagement level of our employees. We run a yearly engagement survey covering a broad range of topics, including: satisfaction and motivation, loyalty, immediate manager, senior management, co-operation, working conditions, job content, remuneration, learning and development, and safety. Engagement in 2021 was at 81 percent,

a similar response rate to the all-time high response rate of 2020. Follow-up meetings are conducted throughout the organisation with employees to learn from the results and find ways to further improve.

### Developing our people

We recognise that engaging and motivating our people is key for future growth and success. Part of ensuring that outcome is developing leaders' competences to support employees' successful performance.

ROCKWOOL develops its leaders to: improve financial performance, drive strategy execution and operational excellence, and manage change. The ROCKWOOL Global Leadership Development Programmes drive the behaviours described as The ROCKWOOL Way.

In tier one of our three-tier ROCKWOOL Leadership Programme, "Managing ROCKWOOL People", we have trained 34 percent of our managers and project managers since the start of 2020.

### Diversity

It is our ambition to achieve greater diversity in the workforce, including gender, age and ethnic origin as well as regarding education, experience and personality.

In 2021, the overall ratio of females to males in the company remained stable with an 18/82 split. Among middle management, the ratio of women is higher and similarly stable over time. In 2018, Group Management set a target of 25-35 percent female leaders in executive and middle management positions. In 2021, 28 percent of all leaders in middle management positions were female, including 41 percent of new hires. In 2021, there was one female member of Group Management. In 2020, we set a new target to achieve 33 percent female representation among our shareholder-elected Board members by 2024. In 2021, the level remained at 17 percent as no additional females were elected to the Board at the Annual General Meeting.

For illustration, there are 71 different nationalities represented across the Group, including 31 at our headquarters in Hedehusene, Denmark. In addition, there are three nationalities represented in the Board of Directors; and five in Group Management. Our employees also have a wide variety of skills and educational backgrounds and range in age from 19 to 77, with the majority of them between 41 and 50. It is our goal to continue ensuring this diversity in the candidate field through clear recruitment and promotion processes.

### Safe and healthy workplaces

ROCKWOOL employs approximately 12 000 employees. As an industrial company we fully recognise that our employees face potential safety risks. We take these risks seriously and continuously work to create safe and healthy workplaces and conditions for all our employees and contractors.

Our approach to health and safety is guided by our Safety, Health and Environmental policy, applicable to all employees and contractors. On annual basis, we also carry out relevant risk assessments and give regular health and safety trainings to employees.

In 2016 we set up an annual goal of zero fatalities and a minimum 10 percent annual improvement in the Lost Time Incident (LTI) rate. We had no fatalities in 2021 but our LTI rate increased by 20 percent. The increase is due in part to our having reduced the extent of normal safety activities such as audits, trainings, and meetings that absent COVID restrictions would typically take place face-to-face.

We take this very seriously and have initiated a number of measures to reverse this trend. These include additional safety audits at those factories where LTI rates are highest together with extra focus on sharing best practice across the Group.

Progress is monitored very closely by executive management.

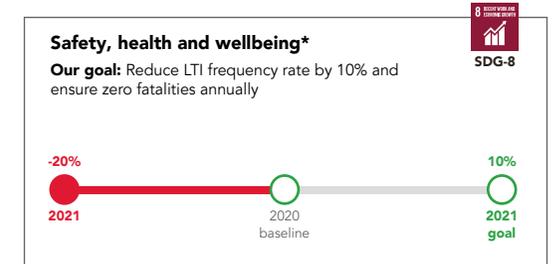
## Reporting on management gender composition cf. section 99b of the Danish Financial Statement Act

This section addresses the targets for and reports on gender representation in the Board of Directors, and further informs about the policy on gender representation on executive and middle management levels.

## Reporting on diversity policies cf. section 107d of the Danish Financial Statements Act

This section reports on the diversity policies targeting management composition.

## Progress against our sustainability goals



\*In scope of limited assurance provision.

## Operational performance: Corporate governance

### Business ethics

Our Code of Conduct serves as ROCKWOOL's most important instrument to communicate and provide guidance on the Group's way of doing business. The Code of Conduct includes Group policies related to anti-corruption, gifts and hospitality, conflict of interest, competition law, data privacy, human rights and labour rights, health and safety, and environment.

In 2021 around 4500 selected employees completed our Code of Conduct e-learning. During the year, there was a focus on providing face-to-face training in competition law and business ethics to a small group of employees who are not connected to the Group's learning platform. With this, staff from all Group companies have received the necessary training within competition law and Code of Conduct. We continue our work to integrate our e-learning platform into all entities of the Group.

### Tackling corruption

ROCKWOOL Group has zero tolerance towards any kind of fraud, corruption, bribery and facilitation payments. The anti-corruption policy also applies to suppliers, agents and other third-parties. We updated the fraud, corruption, and bribery risk assessment in 2020. In 2021, we continued promoting business ethics, including efforts to pre-empt integrity-related issues based on the 2020 risk assessment learnings.

These efforts included, for example, Code of Conduct and anti-corruption training at our new manufacturing site in Romania; updating recruitment screening processes; and updating our donations policy and manual regarding political donations to individuals,

unions, parties, or candidates (such are excluded). In 2022, we will implement stronger automated controls to monitor sales transactions to reduce the risk of corruption and bribery.

### Whistle-blower system

In 2021, 25 potential cases were reported through the whistle-blower platform, 16 of which qualified under the whistle-blower policy and were handled according to established procedure, including being assessed by the Integrity Committee. The 16 cases included four involving bribery and corruption, three of alleged fraud, three of discrimination, and two cases related to health and safety. The remaining four cases concerned miscellaneous areas.

Investigations into most of the cases have been completed, resulting in five people being dismissed. Other cases resulted in policy and internal procedure changes.

Of the nine cases that did not qualify as whistle-blower cases, four were related to HR issues. The other cases pertained to health and safety, a supplier complaint, trademarks, and working conditions. These cases were handled outside the whistle-blower system by the relevant departments.

### Respecting human rights

Our approach to human rights is guided by the Group Human Rights Commitment. We are committed to respect human rights and sustainability and social issues as outlined in the United Nations Universal Declaration of Human Rights and the four pillars of UN Global Compact: human rights, labour rights, environment and anti-corruption.

In 2021, we initiated a project to assess and map our due diligence governance processes with a view to strengthening these. This work will continue in 2022.

For example, based on our work evaluating supply chain sustainability risks related to UN Global Compact, we are developing a governance model and risk mitigation tool. These will augment our existing supplier due diligence tools for current and new ROCKWOOL Group suppliers.

### Responsible tax

ROCKWOOL Group believes that paying our fair share of taxes is an important part of responsible corporate citizenship. We are committed to ensuring compliance by paying the right amount of tax at the right time in the countries where ROCKWOOL is subject to taxation.

ROCKWOOL's Group Tax Policy sets out our overall guiding policies on tax governance and controls. Tax matters and risks as well as our tax policy are governed by the Board of Directors and discussed on a regular basis with the Audit Committee. Tax matters are operationally managed and monitored by the Chief Financial Officer and Group Tax department, working closely with the finance managers of ROCKWOOL's global business units.

In all tax matters, we apply the same values and integrity as in our Code of Conduct by making sure that our primary focus is the ordinary operation of the Group. We only adopt tax positions that are defensible under full disclosure. Our decision-making is driven by commercial considerations and not by the desire to engage in aggressive tax planning. We are committed to being a responsible tax payer with a clear and transparent corporate structure with no contrived entities.

ROCKWOOL does not have a legal presence in any of the countries listed on the EU's blacklist of non-cooperative jurisdictions and we actively monitor both the EU and OECD's list of uncooperative jurisdictions.

ROCKWOOL is committed to being as transparent as possible about tax matters and we seek to develop open, cooperative relationships with tax authorities.

We also engage in an open dialogue on tax matters through industry associations and other external bodies. We both monitor and support the developments within international tax at EU and OECD levels.

We recognise that taxes are the primary source of revenue for governments around the world, and are therefore a key lever to achieve the UN SDGs.

Key areas of our tax management focus in 2021 were:

- Having implemented indirect tax management compliance processes in most key countries in accordance with our Tax Control Framework. When fully implemented, the Tax Control Framework set-up will involve overview of material compliance risks, standardised controls, processes and instructions for staff to ensure compliance, timeliness and efficiency in our compliance work.
- Having moved management of corporate income tax compliance filings to an external consultancy co-outsourcing model in a majority of key countries. Short-term this leads to an increase in quality, speed and efficiency; and long-term, when fully implemented, will allow for a contemporaneous overview of compliance status as part of our Tax Control Framework.

## Product impact metrics

We track multiple metrics that quantify how ROCKWOOL products benefit society and, more specifically, drive progress on the UN SDGs.

Trucost  
ESG Analysis  
S&P Global

**100%**  
of ROCKWOOL's products  
are classified as SDG  
positive in 2020 by Trucost,  
part of S&P Global.

## SDG performance: Product and other indirect impact metrics

Indicator	Unit	2021	2020	2019	Note	SDG
Carbon emissions avoided in the lifetime of building insulation sold	Mt CO <sub>2</sub>	210	186	201	1	13
Carbon emissions avoided in the lifetime of industrial insulation sold	Mt CO <sub>2</sub>	1 026	796	1 000	1	13
Energy saved in the lifetime of building insulation sold	TWh	987	874	888	1	7
Energy saved in the lifetime of technical insulation sold	TWh	4 571	3 572	4 554	1	7
PM air emissions avoided in the lifetime of building insulation sold	kt	70	62	79	2	3
SO <sub>2</sub> air emissions avoided in the lifetime of building insulation sold	kt	253	224	246	2	3
NO <sub>x</sub> air emissions avoided in the lifetime of building insulation sold	kt	297	264	295	2	3
Water saved by precision growing products sold	thousand m <sup>3</sup>	111	109	101	3	6
Fertiliser saved by precision growing products sold	kt	19	18	17	3	2
Land use reduction by precision growing products sold	ha	32 485	31 910	29 639	3	2
Yield gain of vegetables by precision growing products sold	kt	2 293	2 253	2 092	3	2
Stone wool collected and recycled through ROCKWOOL recycling services	kt	64	52	41	4	12
Significantly improved learning environments from acoustic solutions sold	Number of students	1 733 427	1 540 389	1 692 367	5	3
Significantly improved learning environments from acoustic solutions sold	Number of teachers	84 403	74 789	81 985	5	3
Jobs due to ROCKWOOL Group's global operations (direct & indirect with suppliers)	FTE	38 000	35 000	40 000	6	8
Economic value created due to ROCKWOOL Group's global operations (direct & indirect)	MEUR	3 088	2 602	2 757	6	8
Economic value of energy saved by ROCKWOOL insulation products	MEUR	68 470	55 000	77 000	6	8

<sup>1</sup> Energy and carbon emission savings in the lifetime of our sold building insulation and technical insulation products is calculated following methodology developed by Guidehouse, who also validate the annual results.

See <https://www.rockwool.com/group/carbon-impact/#methodology>

<sup>2</sup> Annual avoided air emissions from heating energy production as a result of our sold building insulation calculated using methodology developed by Guidehouse, who also validate the annual results.

See <https://www.rockwool.com/group/carbon-impact/#methodology>

<sup>3</sup> Quantitative comparison between soil-based cultivation systems and stone wool systems using methodology developed by Wageningen University & Research.

See <https://www.rockwool.com/group/sustainable-growing/#methodology>

<sup>4</sup> Stone wool building insulation received at our factories for recycling and estimated dry weight of stone wool growth media recycled. A new methodology was developed by a third party in 2021 to more accurately calculate volumes of stone wool growth media reclaimed waste streams. This methodology was also applied for 2019 and 2020.

<sup>5</sup> The impact on learning conditions from acoustic products sold is calculated using a methodology developed by Rambøll, who also validates the annual result. In 2021, some of the underlying research in the methodology was updated by Rambøll and applied for 2019 and 2020. See <https://www.rockwool.com/group/acoustic-impact>

<sup>6</sup> Contribution to jobs and growth from ROCKWOOL Group's global activities is calculated following a methodology developed by Copenhagen Economics.

See <https://www.rockwool.com/group/socioeconomic-impact>

## Operational performance metrics

We track multiple metrics that quantify our operational footprint.

### Climate and energy

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019	Note
<b>Greenhouse gas emissions</b>	Total direct and indirect greenhouse gas emissions (GHG)	305-1, 305-2	Mt CO <sub>2</sub> e	<b>2.07</b>	1.85	2.05	1, 2
	Total reduction in direct and indirect GHG (Scope 1+2), (SBT)	305-1, 305-2	Index	<b>101</b>	90		1, 2, 4
	Total direct and indirect CO <sub>2</sub> emissions	305-2	Mt CO <sub>2</sub>	<b>1.72</b>	1.56	1.74	1, 2
	CO <sub>2</sub> direct (Scope 1)	305-1	Mt CO <sub>2</sub>	<b>1.50</b>	1.35	1.41	1, 2
	CO <sub>2</sub> indirect (Scope 2), market-based emissions	305-2	Mt CO <sub>2</sub>	<b>0.22</b>	0.21	0.33	1, 2
	CO <sub>2</sub> indirect (Scope 2), location-based emissions	305-2	Mt CO <sub>2</sub>	<b>0.41</b>	0.30	0.34	1, 2
	CO <sub>2</sub> intensity direct (Scope 1) per tonne stone wool	305-4	Index	<b>91</b>	97	96	1, 2
	CO <sub>2</sub> intensity indirect (Scope 2) per tonne stone wool	305-4	Index	<b>57</b>	64	93	1, 2
	CO <sub>2</sub> intensity direct and indirect (Scope 1+2) per tonne stone wool	305-4	Index	<b>84</b>	91	96	1, 2, 3
	Total indirect GHG emissions (Scope 3)	305-3	Mt CO <sub>2</sub> e	<b>1.04</b>	0.92	1.04	1, 2
<b>Energy</b>	Total reduction in indirect GHG (Scope 3), (SBT)	305-3	Index	<b>100</b>	89		1, 2, 4, 5
	Energy consumption	302-1	GWh	<b>5 687</b>	4 835	5 064	1, 2
	Energy per tonne stone wool	302-3	Index	<b>99</b>	100	99	1, 2
	Energy efficiency in own buildings	n.a	Index	<b>81</b>	95	94	3

<sup>1</sup> One factory in China acquired in 2018 is added in the 2021 values. Not included in the previous years.

<sup>2</sup> New factory in US started operations in June is included.

<sup>3</sup> Baseline 2015.

<sup>4</sup> Baseline 2019.

<sup>5</sup> Baseline 2019 updated to include upstream electricity emissions and applied for 2020 and 2021.

## Environmental management

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019	Note
<b>Environmental laws and regulations – non-compliance</b>	Factories certified to ISO 14001 and/or ISO 45001 and/or ISO 50001	n.a	Number	<b>27</b>	24	23	3, 5
	Share of factories certified to ISO 14001 and/or ISO 45001 and/or ISO 50001	n.a	%	<b>84</b>	77	79	3
	Audits for environment, health, safety	n.a	Number	<b>181</b>	183	201	3
	Fines – monetary value	307-1	KEUR	<b>1</b>	20	8	3
	Non-monetary sanctions	n.a	Number	<b>8</b>	4	5	3
<b>Air emissions</b>	NOx intensity	305-7	Index	<b>126</b>	115	103	3, 4
	SO <sub>2</sub> intensity	305-7	Index	<b>65</b>	86	66	3, 4
	CO intensity	305-7	Index	<b>2</b>	3	4	3, 4
	Ammonia intensity	305-7	Index	<b>88</b>	90	90	3, 4
	Phenol intensity	305-7	Index	<b>81</b>	80	81	3, 4
	Formaldehyde intensity	305-7	Index	<b>93</b>	106	90	3, 4
	Particulate matter (PM <sub>10</sub> ) intensity	305-7	Index	<b>116</b>	112	110	3, 4
<b>Water consumption</b>	Water consumption total	303-5	Mm <sup>3</sup>	<b>3.69</b>	3.23	3.49	1, 2
	Water consumption intensity (m <sup>3</sup> /t stone wool)	303-5	Index	<b>85</b>	90	93	1, 2, 6
	Water consumption excl. rainwater	303-5	Mm <sup>3</sup>	<b>3.44</b>	3.05	3.33	1, 2
	Total water consumption from all areas with water stress	303-5	Mm <sup>3</sup>	<b>0.25</b>	0.22	0.23	1, 2
<b>Water withdrawal</b>	Groundwater own abstraction	303-3	Mm <sup>3</sup>	<b>1.04</b>	0.99	1.04	1, 2
	Municipal water a.o. utilities	303-3	Mm <sup>3</sup>	<b>2.13</b>	1.77	1.97	1, 2
	Rainwater own abstraction	303-3	Mm <sup>3</sup>	<b>0.25</b>	0.18	0.16	1, 2
	Surface water own abstraction	303-3	Mm <sup>3</sup>	<b>0.26</b>	0.29	0.31	1, 2

<sup>1</sup> One factory in China acquired in 2018 is added in the 2021 values. Not included in the previous years.

<sup>2</sup> New factory in US started operations in June is included.

<sup>3</sup> The factory in China acquired in 2018 is added in 2020 data.

<sup>4</sup> New factory in US started operations in June is not included.

<sup>5</sup> 1 new factory added in China and 2 new certifications.

<sup>6</sup> Baseline 2015.

## Waste and recycling

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019	Note
Waste	Total waste generated	306-2	kt	172	172	209	2, 3
	Total hazardous waste generated	306-2	kt	21	13	21	2, 3
	Waste landfilled	306-2	kt	45	46	78	1, 2
	Landfill waste from factories	306-2	Index	49	50	84	1, 2, 4
	Waste for external recycling	306-2	kt	109	85	104	2, 3
	Waste for external recovery (energy)	306-2	kt	1	1	3	2, 3
	Other external waste disposal	n.a	kt	16	41	24	2, 3

<sup>1</sup> One factory in China acquired in 2018 is added in the 2021 values. Not included in the previous years.

<sup>2</sup> New factory in US started operations in June is included.

<sup>3</sup> The factory in China acquired in 2018 is added in 2020 data.

<sup>4</sup> Baseline 2015.

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019	Note
Recycling	Recycling of waste from other industries	n.a	kt	657	574	627	2, 3
	Average % recycled content	301-2	%	24	25	26	2, 3
	Post-consumer stone wool reclaimed and recycled	306-2	kt	64	52	41	2, 3
	Number of countries with comprehensive insulation reclaimed material schemes	n.a	Countries	17	14	11	4

<sup>2</sup> New factory in US started operations in June is included.

<sup>3</sup> The factory in China acquired in 2018 is added in 2020 data.

<sup>4</sup> Baseline 2015.

## Safety and social issues

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019
Workplace diversity	Percentage of female leaders in executive and middle management positions	n.a.	%	28	27	27
	Share of women in new hires for middle manager positions	n.a.	%	41	44	29

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019	Note
Workplace safety	Fatalities	403-9	Number	-	-	1	
	Frequency of LTI – employees & contractors (per million hours worked)	403-9	No./mill hours	3.6	3.0	2.9	
	Annual improvement in LTI frequency	403-9	%	-20	-3	17	

## Corporate governance

Category	Indicator	GRI disclosure number	Unit	2021	2020	2019
Anti-corruption	Confirmed incidents of corruption and actions taken	205-3	Number	4	1	2
Management approach disclosures	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	419-1	KEUR	-	-	-
	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	206-1	KEUR	-	-	-

## Accounting policies

### Reporting period

Our reporting covers the period 1 January 2021 to 31 December 2021.

The report focuses on the topics we consider most important and material to our business and society, by taking into consideration relevant stakeholder inputs. The report forms part of management's review covering the statutory reporting on corporate social responsibility, as required by section 99a of the Danish Financial Statements Act.

We are committed to communicating openly to provide stakeholders with sufficient information about Group's sustainability performance. Stakeholders can thus form their own judgement about ROCKWOOL's sustainability position, progress and role in the communities where we operate. The performance data is related to the ROCKWOOL Group's subsidiaries.

### Comments on environmental data scope and boundary

In 2021, 32 stone wool factories are included in the scope of the CO<sub>2</sub> emissions (Scope 1 and Scope 2), water consumption, waste to landfill, air emissions and reclaimed material. This includes the factory acquired in China in the fourth quarter 2018. The new U.S. factory in West Virginia, which started commercial operations in July 2021, is included for the first time in 2021. There were no divestments in 2021. Activities related to grid and render manufacturing are excluded as their contribution to these environmental indicators is assessed to be insignificant.

The energy efficiency goal scope covers wholly owned office buildings that have energy efficiency performance above 75 kWh/m<sup>2</sup>/year.

### Comments on safety data scope and boundary

All ROCKWOOL locations are in scope, including factories, offices, construction sites on own premises, laboratories, warehouses, etc. During 2021, we made one acquisition: the Japan-based Bansyo Holdings, a company that specialises in supplying protection and thermal insulation in both the industrial and building sectors. The safety data from this acquired company is included from August 2021. The U.S. factory in West Virginia is included for the safety data as well. There were no divestments in 2021.

All employees and working hours from contractors performing duties for ROCKWOOL Group are included. We distinguish between two types of contractors to manage risks and safety:

- Permanent contractors with long-term duties for or on behalf of ROCKWOOL; and,
- Occasional contractors (work on site, maintenance etc.).

For both types of risk a method statement must be in place and prescribed safety precautions and supervision implemented. Incidents involving permanent and occasional contractors are recorded and included in the LTI rate. External visitors are not included in Group LTI rate, though all incidents are recorded and investigated.

### Comments on compliance and management diversity data scope and boundary

In 2021, compliance data indicators covered the entire Group, with the exception of the "environmental, safety and health laws and regulations" indicator, which applies to 32 stone wool factories.

### Baseline

All environmental-related sustainability goals have 2015 as baseline year, except for the absolute greenhouse gas emission targets for 2034, which have 2019 as baseline year.

For the safety goal the baseline is the previous reporting year.

### Sustainability data collection, calculations and consolidation

The calculation and reporting of CO<sub>2</sub> emissions (Scope 1 and 2), water consumption and waste to landfill is supported by the same system used for the financial consolidation and reporting.

The data collection, calculations and consolidation of results for the safety goal are supported by a reporting tool. The working hours registered for employees and contractors are based on local systems.

The LTI, CO<sub>2</sub> emissions (Scope 1 and 2), water consumption and waste to landfill data is provided by the factories, after which it is reviewed and approved by local management. The data is therefore assessed to be complete and accurate to local management's best knowledge.

The Group's Scope 3 GHG emissions are collected within all applicable categories and are calculated annually. This lifecycle assessment analysis is based on EN15804, using GaBi Professional software Version 9.2.1.68 and GaBi database. The data is used in calculating the Group's progress toward reaching its Scope 3 GHG emissions science-based target.

### Data controls

Data trails have been mapped and risks identified with respect to completeness, accuracy, and cut-off. Where relevant, mitigating controls have been set up and completed. Changes to historical data are only made if the impact is more than one percent of the Group's aggregated data.

## Environmental, safety and compliance indicator definitions

### Environment data indicators

#### *Tonnes of stone wool produced*

Tonnes of stone wool produced is the total quantity of usable products produced by ROCKWOOL factories. The total value for the reporting period is the denominator for calculation of the CO<sub>2</sub> and water consumption intensity goals. ROCKWOOL uses tonnes of stone wool as a standard measure for comparison as this is considered a suitable measure for the environmental impact associated with producing our products. Tonnes of stone wool is calculated based on the number of usable products produced on the line and accepted by the warehouse. The tonnes are calculated based on number of products, the nominal density and the nominal dimensions/volume of the products produced, corrected for any odd-size waste not recycled.

#### *CO<sub>2</sub> emissions (Scope 1 and 2)*

Scope 1 and 2 are defined according to the Greenhouse Gas Protocol. Scope 1 includes all direct emissions from fuels such as coke, coal and natural gas as well as emissions from raw materials; Scope 2 includes indirect emissions from consumption of purchased electricity, heat or steam<sup>1</sup>.

Scope 1 CO<sub>2</sub> emissions are calculated based on consumption, net calorific values, carbon content or emission factors determined by readings, invoices, laboratory analysis results or national databases depending on country specific regulatory requirements

All Scope 1 emissions from our stone wool factories in the EU and Norway are covered by the EU Emissions Trading Scheme. The factory in the United Kingdom is in an interim situation that follows all the same principles and assurance as the EU trading scheme. The CO<sub>2</sub> emissions from the Toronto, Canada factory are externally verified and submitted to the Ontario Ministry of the Environment, Conservation and Parks.

<sup>1</sup> GHG Protocol, Scope 2 Guidance, 2015, [https://ghgprotocol.org/scope\\_2\\_guidance](https://ghgprotocol.org/scope_2_guidance)

CO<sub>2</sub> emissions from electricity (Scope 2) are reported as market based emissions and location based emissions. Market based emissions are based on emissions factors specified in energy attribute certificates, contracts, power purchase agreements and supplier utility emissions and residual mix. Where market based emission factors are not available, location based factors are used. Market based emissions are used for ROCKWOOL's CO<sub>2</sub> and GHG goals.

The location based emissions are calculated using the emission factors published by the International Energy Agency specific to the country of operations.

#### *Energy consumption*

Energy consumption is calculated as the total energy consumed by the 32 stone wool factories in the form of fuels and electricity. Reported energy is based on the consumptions determined by weight or volumes measured or by invoices. Reported energy can also be based on net calorific values from laboratory analysis, information from the suppliers or national data bases.

The source for net calorific values and emission factors depends on country specific regulatory requirements.

#### *Scope 1 and 2 GHG emissions*

Scope 1 and 2 GHG emissions are the sum of CO<sub>2</sub> emissions and other GHG emissions (N<sub>2</sub>O) in absolute terms for the reporting year. N<sub>2</sub>O emissions are calculated based on analyses made in some of the production facilities under representative operational conditions. The global warming potential value used for N<sub>2</sub>O is the one published in the IPCC Fourth Assessment Report (AR4). The data is used in calculating the Group's progress toward achieving its absolute GHG emissions science-based target.

#### *Scope 3 GHG emissions*

Scope 3 is defined according to the Greenhouse Gas Protocol. Scope 3 includes other indirect emissions from an organisation's activities that result from sources that they do not own or control<sup>1</sup>.

Scope 3 emissions are collected and calculated taking into account the Group's upstream and downstream absolute GHG emissions within the reporting year.

#### *Air emissions – NO<sub>x</sub>, SO<sub>2</sub>, CO, Ammonia, Phenol, Formaldehyde and PM<sub>10</sub>*

All air emissions other than GHGs are calculated as the total emissions for each component. They are based on analytical measurements performed in accordance with the factories permit requirements and operational conditions. The scope of air emissions is 32 stone wool factories. The air emissions data has some uncertainty and are dependent on nationally prescribed methods. Emission measurements can vary a great deal based on the representativeness of the samples taken, flow measurements, as well as the method of analysis.

#### *Water consumption and withdrawal*

Water withdrawal consists of water withdrawn from the ground, surface water, municipal supply and any other external source at the 32 stone wool factories. Rainwater collection is excluded from the goal for water consumption per tonne of stone wool. Reported data is based on metre readings and invoices.

Total water consumption from all areas with water stress refers to the water consumption at four factories in Malaysia, India and Russia that have been identified as being located in either highly or extremely highly water stressed areas. This was the result of a water scarcity assessment carried out by a third party in 2017. The water scarcity assessment will be carried out every fifth year.

#### *Landfill waste from factories*

Waste to landfill is calculated as the total quantity of production waste sent to landfill by the 32 stone wool factories. Reported data are based on weighbridge tickets and/or documentation provided by external suppliers either in the form of reports or invoices.

Waste sent to landfill by these sites that did not originate from the production process is excluded from the reported figure. Waste sent to other types of disposal are calculated as the total quantity of waste sent to each individual type of disposal. Reported data are based on weighbridge tickets and documentation provided by external customers/suppliers.

#### *Reclaimed material*

A reclaimed material scheme is where ROCKWOOL or a third-party contractor offers a stone wool recycling scheme.

A country-specific reclaimed material scheme is considered eligible when it meets all the following criteria:

- The scheme facilitates the take back of ROCKWOOL stone wool products from construction or demolition sites to a ROCKWOOL factory and/or a waste/industry partner that ensures the material is reused/recycled;
- The scheme is either offered to a substantial market segment or the scheme is offered to selected, large customers in a country;
- The scheme covers insulation products but must also cover Systems segment products when appropriate; and,
- Information about the offering is accessible for example on the ROCKWOOL country website, in marketing brochures, through direct promotion, or related, and is communicated to relevant customers.

The criteria are also included in the goal's internal guidelines, available to all ROCKWOOL employees and global business units, as part of the goal scope. A country must present appropriate documentation in the form of contracts, financial documentation, customer correspondence and marketing materials for assessment by ROCKWOOL management.

#### *Recycled content*

Recycled content is calculated in accordance with EN 15844:2012 and ISO 14021:1999, but excludes internal factory waste. The Group recycled content is calculated as an average of the recycled content across the 32 stone wool factories. Recycled waste from other industries is waste or co-products used to substitute virgin stone in the melting process.

#### *Energy efficiency in our own buildings*

Energy efficiency in own, unrenovated offices is calculated in terms of kWh/m<sup>2</sup>/year. The criteria for the buildings included and excluded in the goal's scope are outlined in the internal Group guidelines to the goal. The guidelines are available internally to all ROCKWOOL employees and global business units that are part of the goal's scope. To determine the scope and the initial baseline energy consumption of the buildings determined to be in scope, management engaged a third party to carry out an energy efficiency mapping of the Group's global office building stock.

This resulted in an initial office building scope with an estimated energy efficiency performance to be used as the goal baseline. Two buildings were not part of the initial third party assessment, as they were demolished. New buildings were built instead and these are now added to the assessment.

<sup>1</sup> GHG Protocol, Scope 3 Guidance, 2011, <https://ghgprotocol.org/scope-3-technical-calculation-guidance>

When ROCKWOOL establishes the energy efficiency improvement potential of an office in scope, a third party completes a new energy design performance assessment. If the calculated energy efficiency from this assessment deviates from the initial baseline value, the baseline is updated to reflect the new value. The final energy efficiency value of the renovation/new build is used to calculate the energy efficiency improvement. This value is calculated by a third party.

#### Safety data indicators

##### Lost Time Incident (LTI) rate

The LTI rate is calculated as the total lost time incidents per one million working hours, in accordance with GRI indicator 403. A lost time incident is defined as an incident that renders the injured person unable to perform any regular job or as restricted work on any number of calendar days after the day on which the injury occurred. Contractor working hours are calculated based on actual hours registered on site or hours written in tenders.

Working hours for ROCKWOOL employees are in most cases calculated based on payroll systems. In some cases, the calculation is based on other systems. Working hours are the total actual working hours performed.

#### Compliance data indicators

##### Workplace diversity

Women in management includes all managers (levels 1-5) in our organisational hierarchy. Women in new hires includes managers from Managing Directors to middle management (levels 3-5) in our organisational hierarchy.

##### Anti-corruption

Incident disclosure is aligned with the GRI standard on anti-corruption point 205-3, where confirmed incidents of corruption are reported.

#### Compliance with environmental, safety and health laws and regulations

A fine is a monetary penalty for non-compliance with environmental, health or safety laws and regulations (including international, national, and voluntary agreements with authorities).

A sanction is a non-monetary administrative penalty for non-compliance with environmental, health, or safety laws and regulations (including international, national, and voluntary agreements with authorities). Fines and sanctions are reported as the total of fines and sanctions in the 32 stone wool factories.

The number of safety, health and environment audits/inspections includes external audits related to safety, health and environment carried out by authorities, certified bodies, or similar, together with Group internal audits at the 32 stone wool factories.

#### GRI Standard Reference Index

Our reporting is informed by the Global Reporting Initiative (GRI) Standards. The Standards highlight multiple topics across three categories: economic, environmental and social, which are material to our business.

We publish a separate GRI Standard Reference Index along with our annual Sustainability Report that can be downloaded at [www.rockwool.com/group/about-us/sustainability/](http://www.rockwool.com/group/about-us/sustainability/)

#### Management's statement

The Registered Directors have today considered and approved the 2021 Sustainability Report of ROCKWOOL for the reporting period 1 January to 31 December 2021.

The 2021 Sustainability Report has been prepared in accordance with the stated sustainability accounting policies and the Greenhouse Gas Protocol guidelines regarding our carbon footprint.

In our opinion, the 2021 Sustainability Report gives a fair presentation of the Group's sustainability activities and the results of our sustainability efforts in the reporting period as well as a balanced presentation of our environmental, social and governance performance in accordance with the stated sustainability accounting policies.

Hedehusene, 9 February 2022

Jens Birgersson  
CEO

Kim Junge Andersen  
CFO

## Independent limited assurance report on selected ESG data

### To the stakeholders of ROCKWOOL International A/S

ROCKWOOL International A/S (“ROCKWOOL”) engaged us to provide limited assurance on the selected Environment, Social and Governance (“the selected ESG data”) data described below for the period 1 January – 31 December 2021.

### Our conclusion

Based on the procedures we performed and the evidence we obtained, nothing has come to our attention that causes us not to believe that the selected ESG data in scope for our limited assurance engagement are free of material misstatements and are prepared, in all material respects, in accordance with the accounting policies as stated on pages 37-39.

This conclusion is to be read in the context of what we say in the remainder of our report.

### Selected data in scope

The scope of our work was limited to assurance on the selected ESG data for the period 1 January – 31 December 2021 in the section “Factbook and data” (pages 29-32) in ROCKWOOL’s Sustainability Report 2021, namely:

- CO<sub>2</sub> emissions intensity (page 29);
- Energy efficiency (page 29);
- Water consumption intensity (page 30);
- Reclaimed material (page 31);
- Landfill waste (page 31) and;
- Safety, health and wellbeing (page 32).

### Professional standards applied and level of assurance

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) ‘Assurance Engagements other than Audits and Reviews of Historical Financial

Information’ and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410 ‘Assurance engagements on greenhouse gas statements’, issued by the International Auditing and Assurance Standards Board. Greenhouse Gas emissions quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks; consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### Our independence and quality control

We have complied with the independence requirements and other ethical requirements in the International Ethics Standards Board for Accountants’ International Code of Ethics for Professional Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour and ethical requirements applicable in Denmark.

PricewaterhouseCoopers applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our work was carried out by an independent multidisciplinary team with experience in sustainability reporting and assurance.

### Understanding reporting and measurement methodologies

The selected ESG data need to be read and understood together with the accounting policies, as stated on pages 37-39 of this report, which Management is solely responsible for selecting and applying. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

### Work performed

We are required to plan and perform our work to consider the risk of material misstatements of the selected ESG data. In doing so and based on our professional judgement, we:

- Evaluated the suitability of the accounting policies;
- Made inquiries and conducted interviews with ROCKWOOL’s management with responsibility for management and reporting of the selected ESG data to assess reporting and consolidation processes, use of company-wide systems and controls performed;
- Checked the selected ESG data on a sample basis to underlying documentation, and evaluated the appropriateness of quantification methods and compliance with the accounting policies;
- Conducted analytical review of the selected ESG data and trend explanations submitted by all reporting entities for consolidation at Group level; and
- Evaluated the obtained evidence.

### Management’s responsibilities

Management of ROCKWOOL is responsible for:

- Designing, implementing and maintaining internal controls over information relevant to the preparation of the selected ESG data that is free from material misstatement, whether due to fraud or error;

- Establishing objective accounting policies for preparing the selected ESG data;
- Measuring and reporting the selected ESG data based on the accounting policies; and,
- The content of the ROCKWOOL Sustainability Report for the period 1 January – 31 December 2021.

### Our responsibility

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the selected ESG data are free from material misstatement, and are prepared, in all material respects, in accordance with the accounting policies;
- Forming an independent conclusion, based on the procedures performed and the evidence obtained; and,
- Reporting our conclusion to the stakeholders of ROCKWOOL.

Copenhagen, 9 February 2022

### PricewaterhouseCoopers

Statsautoriseret Revisionspartnerselskab  
CVR no. 3377 1231

Kim Tromholt  
*State Authorised Public Accountant*  
*mne33251*

Rune Kjeldsen  
*State Authorised Public Accountant*  
*mne34160*

## ESG performance

In response to growing interest, ROCKWOOL Group, in 2019, became the first company in the Nordic region to host dedicated calls with investment analysts focusing solely on our ESG approach and performance. This is a fast-moving area of engagement, and we welcome regular dialogue with analysts on these issues. Recordings of the ESG analyst calls can be found at [www.rockwool.com/group/about-us/sustainability/esg/](http://www.rockwool.com/group/about-us/sustainability/esg/).

### Ratings

- MSCI ESG A
- MSCI BISR Environmental Impact 89.42%
- SustainAnalytics Risk Rating 18.5 (Low)
- ISS-Oekom B (Prime)
- CDP Climate A-

### Indexes

- Trucost, part of S&P Global, classifies 100 percent of the Group's products as SDG positive.

### Selected partnerships within climate and sustainability



Ellen MacArthur Foundation



Corporate Leaders Group

Renovate Europe



## COP Statement to UNGC

ROCKWOOL Group is a participant in the UN Global Compact and we express our continued support for the Global Compact by hereby renewing our ongoing commitment to the initiative and its principles.



This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

**The ROCKWOOL® trademark**

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the Group's largest assets, and thus, is well protected and defended by us throughout the world.

**ROCKWOOL Group's primary trademarks:**

ROCKWOOL®

Rockfon®

Rockpanel®

Grodan®

Lapinus®

Additionally, ROCKWOOL Group owns a large number of other trademarks.

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