Carbon Action 2030

Version 2021

www.lhoist.com

Our course for carbon neutrality

> Our European short-term goal is to reduce the CO_2 emissions coming from the energy we use by 50%.

As proud Industrialists, we acknowledge the opportunities and challenges that Sustainability represents for us across our three pillars of People, Planet and Profit. We play a critical role in the global challenge of working towards a low-carbon and sustainable-growth economy. The necessary transition to a more sustainable way of producing and using energy is a key part of our initiative and must happen in the near future. We anticipate fundamental changes in the way we operate which means a radical infrastructure overhaul. Lime, which is essential to clean air, water treatment and soil enrichment, will play a critical role in the process. While we cannot foresee the full magnitude of our initiatives yet, setting a course for carbon neutrality must be done now in order to build a sustainable, renewed, and greener future for our industry.

By chemical reaction when firing limestone, we emit CO_2. Therefore, Lhoist has always faced a carbon challenge and many initiatives have been implemented and developed across our global footprint. Aware of our responsibility and the vast range of opportunities, we want to do more. It is in our power to offer the 'green lime' of the future by reducing and eventually eliminating the amount of CO_2 we release into the atmosphere.

We work to realize this through two main goals. First, our short-term goal is to reduce the CO_2 emissions coming from the energy we use across Europe by 50%. We will continue to work hard to tackle the considerable technological, logistical, and economical challenges this represents. Our roadmap, programs and projects are already underway at every level of the organisation. We are building more efficient kilns, switching to cleaner fuels and increasing the performance of our products. Shaping a sustainable future is not something we can do alone; working in partnership with our customers over the full lifecycle of our products will enable us to reach our goal.

Second, our long-term goal is to produce lime without releasing any CO_2 into the atmosphere across our entire global footprint. Building and leveraging partnerships with large industrial and governmental partners has helped to pave the way towards this long-term goal. All the possible solutions to carbon-free lime are not yet known; project studies around methods of carbon capture, storage and utilization are still underway. While there are no economically feasible technologies available today, we will continue to invest in the exploration and development of solutions and roll out pilot scale implementations.

This brochure aims to provide an overview of the ongoing efforts to reduce our carbon footprint as well as that of our customers. More than just regulatory obligation, we believe this is our duty in line with our corporate values:

Respect for our environment and community
Courage to take the lead in a global transition
Integrity to set clear goals and report on our progress transparently

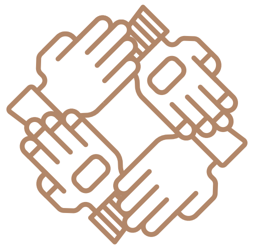
Ultimately, we want to achieve our goals, take action and keep you informed along the way.

With kind regards,

Cedric de Vicq
CEO Europe
Member of Lhoist Executive Committee

Our carbon footprint

Reducing our carbon footprint is part of our overall commitment to develop Lhoist as a sustainable company. As a market leader in the industrial sector, it is our responsibility to plan ahead and be a part of this global transition from the start. Our strategy takes into account our three major pillars of sustainable development: planet, people and profit.

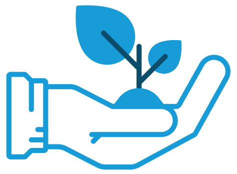


People

are the basis of our success, both through their loyalty to the company and through our commitment to their safety and development.

Planet

refers to our impact on the environment, including our carbon footprint. As a producer of lime, we have a specific stewardship of natural resources, the landscape and its biodiversity to fulfil.

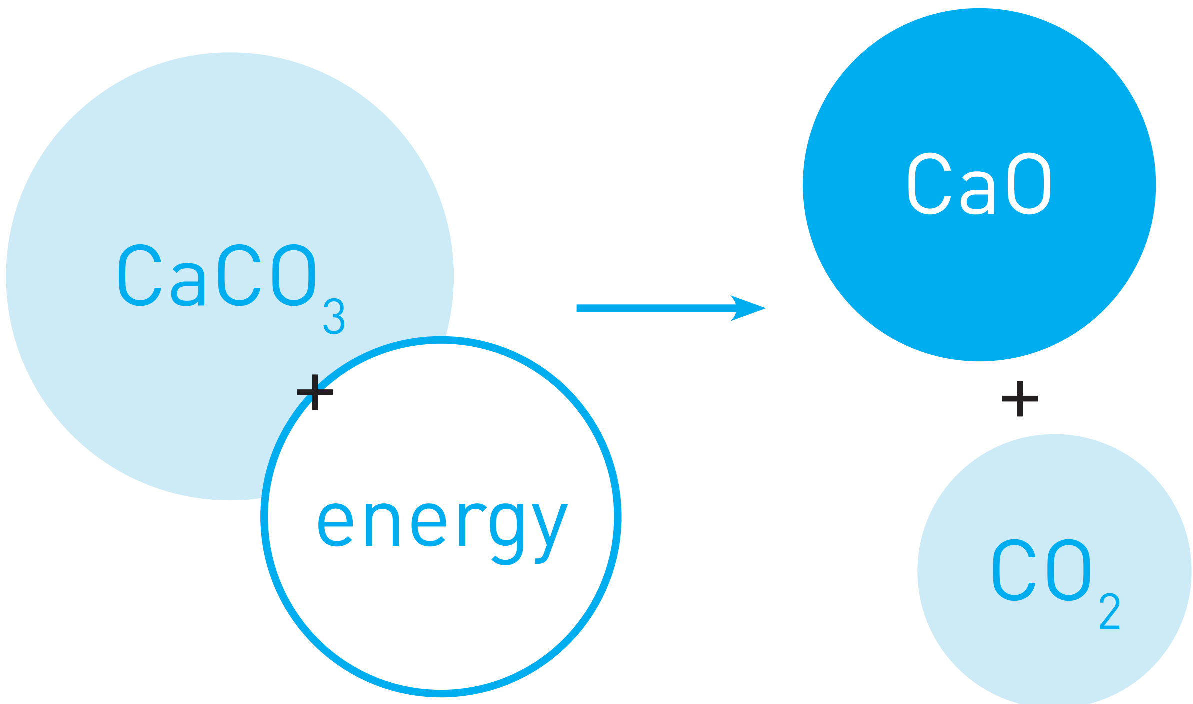


Profitability

means ensuring a sustainable supply chain and business model. By developing innovative products and taking our place in the circular economy, we simultaneously strengthen our position and that of our clients.

Process CO_2 and combustion emissions

In order to paint a clear picture of the efforts to reduce our carbon footprint, we need to first understand its different components. For any industrial entity that processes limestone into lime, an important distinction has to be made between CO_2 emissions resulting from fuel combustion and so-called 'process CO_2'. Combustion emissions are produced when burning fuel to generate heat for the calcination process. These can be dealt with by switching to more efficient installations and cleaner fuels or electricity. Process CO_2 is the result of the chemical composition of limestone ($CaCO_3$) which turns into lime (CaO) when heated by releasing a CO_2 molecule. As process CO_2 is an inherent part of the production of lime, these emissions cannot be avoided, however they can be captured, stored and even be put to good use.



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Process CO_2 originates from the heating of limestone ($CaCO_3$) to form lime (CaO).

Our CO_2 emissions can be divided into:

Avoidable emissions

- Electricity use (grinding, milling, compressed air, ...)
- Operations (offices, mobility,...)
- Combustion of fuel (calcination, drying)
- Logistics

We address avoidable CO_2 emissions through

- Energy efficiency
- Renewable electricity
- Fuel efficiency
- Transitioning to low carbon fuels, hydrogen for calcination
- Renewable electricity
- Carbon capture & transport
- Carbon storage
- Carbon usage

Unavoidable emissions

- Process CO_2

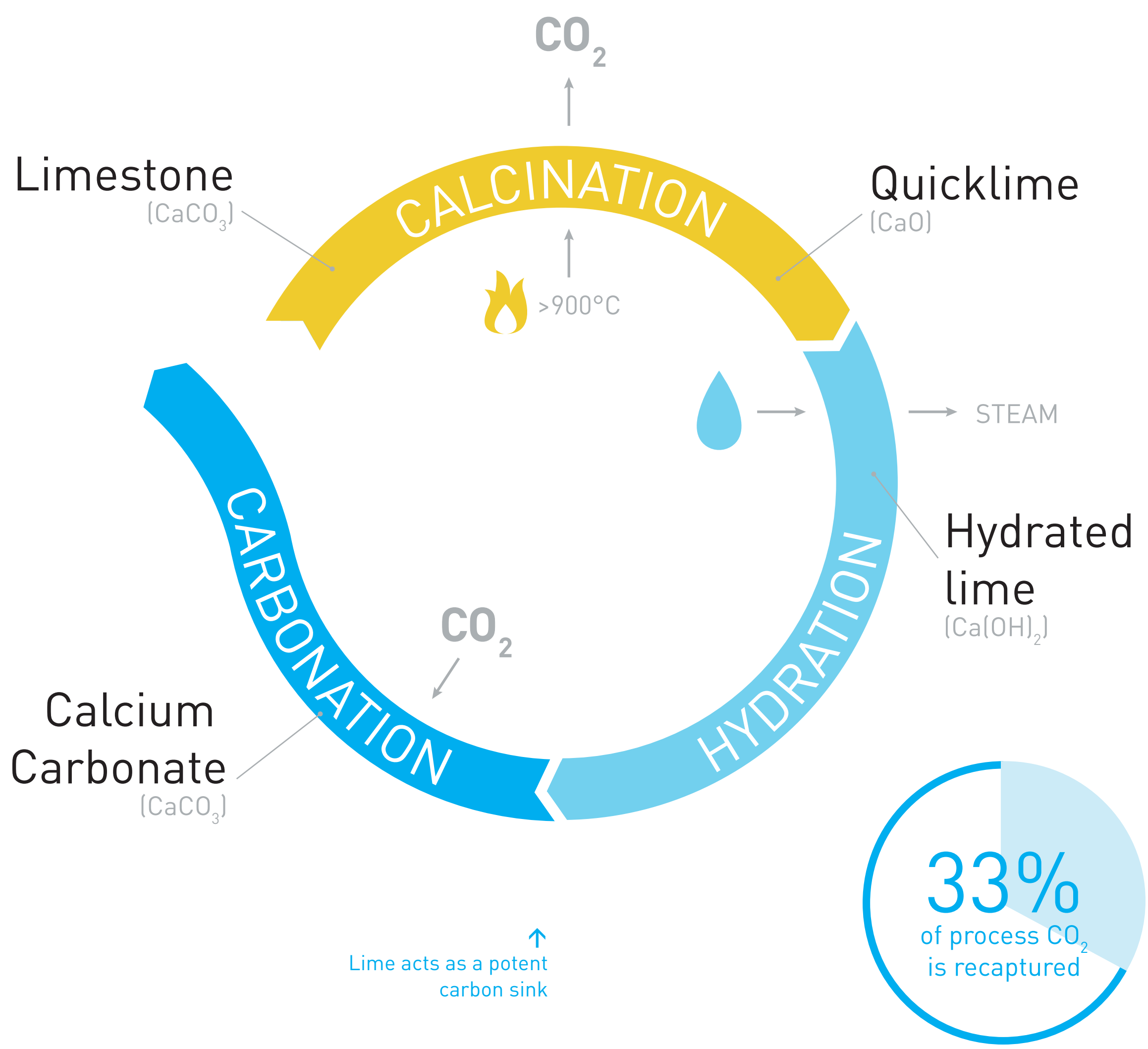
We address unavoidable CO_2 emissions through

- Carbon capture & transport
- Carbon storage
- Carbon usage

Lime as a carbon sink

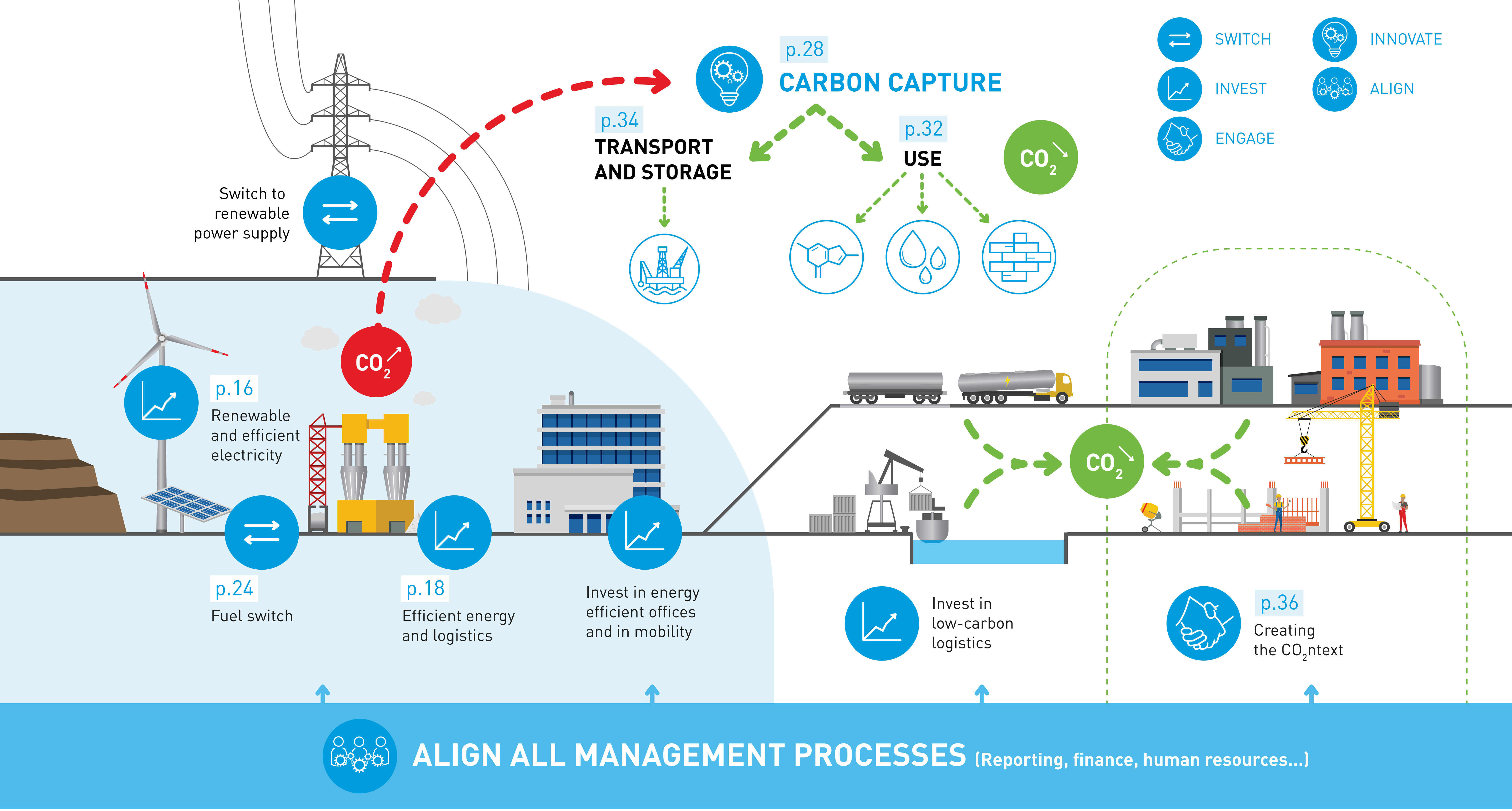
In order to have a full account of our impact in reducing carbon emissions, it is important to acknowledge the role of lime as a potent carbon sink. Many common applications of lime rely on its ability to spontaneously absorb CO_2, either from the atmosphere or from an industrial source. A 2020 study (1) put into evidence that lime absorbs on average a third of the amount of all process CO_2 emitted during production. Therefore as we work towards a full carbon-free production process, this presents the potential for using green lime as a carbon sink and as a powerful method of carbon capture.

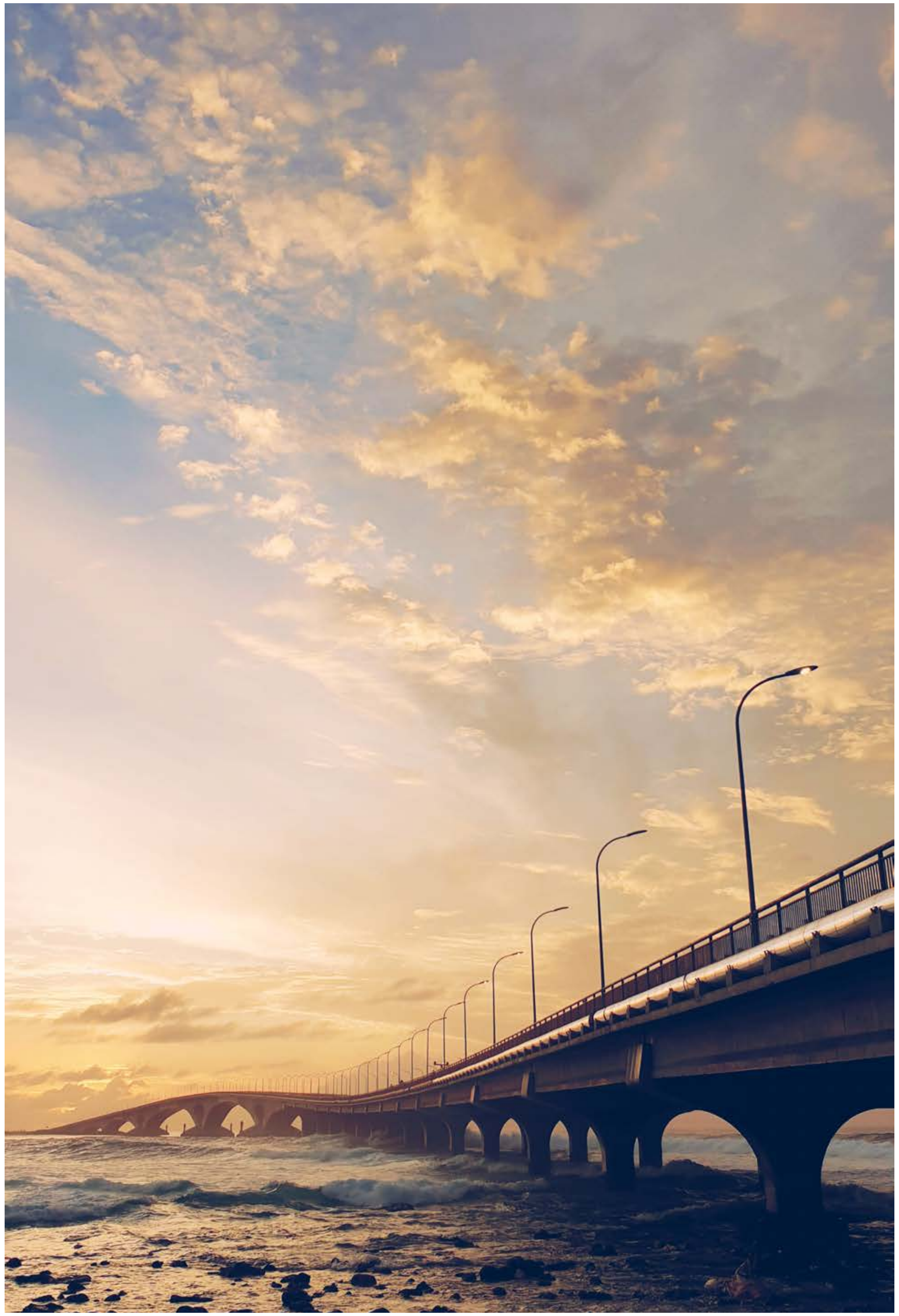
% of process CO_2 absorbed during use	APPLICATION OF LIME
80-92%	Lime mortar
32%	Flue gas purification
93%	Pulp and paper
5-28%	Steelmaking
100%	Drinking water



(1) Grosso M., Biganzoli L., Campo F. P., Pantini S., Tua C. 2020. Literature review on the assessment of the carbonation potential of lime in different markets and beyond. Report prepared by Assessment on Waste and Resources (AWARE) Research Group at Politecnico di Milano (PoliMI), for the European Lime Association (EuLA). Pp. 333.

Our carbon roadmap





“We benefit from efficiency gains and clean power today, while we develop our knowhow regarding renewable energy procurement and production for the future.

Renewable and efficient electricity

50%

Yearly green electricity consumption in Belgium

Electricity consumption represents a relatively small percentage of our total carbon footprint. However, in the long term, having access to ample amounts of renewable energy will be vital: most notably in green hydrogen production or innovative electrical technologies usage. As of now, we invest in renewables wherever suitable opportunities are available. This way, we benefit from efficiency gains and clean power today, while we develop our knowhow regarding renewable energy procurement and production for the future. Here are three examples of the ways in which we have invested in renewable and efficient energy production so far.

Construction of a wind turbine in the North Sea.

Power Purchase Agreement

In 2019 we signed a renewable energy contract with Engie to procure 8.4 MW of power produced by wind farms off the Belgian coast. Under optimal weather conditions, this can supply up to 100% of Lhoist's total electricity demand in Belgium, covering 50% of our yearly consumption on average. The agreement uses both the Guarantee of Origin system and blockchain technology to certify all power delivered to Lhoist as 100% renewable.

During the first year of the contract, the Engie wind turbines delivered 33 GWh of clean energy. This represents a reduction of >14,000 tons of CO_2 emissions. We have similar projects underway in Germany and Poland.

Co-development of renewable energy

In 2020, we partnered with Total, a leading renewable energy player in France, through its affiliate Total Quadran. This partnership was created with the goal to co-develop and install photovoltaic farms on 11 Lhoist locations in France. Total Quadran will build and operate more than 194,000 solar panels on about 111 hectares of Lhoist grounds. This represents over 83 MW of power, equivalent to 70% of Lhoist's electricity consumption in France.

To continue with our renewable energy strategy, we are planning to develop photovoltaic projects on other locations where Lhoist is present.

194.000

Number of solar panels to be installed in France

2MW

Combined heat and power generation

CHP generator at Hindlow.

Combined Heat and Power (CHP)

Our aim with CHP is to minimize efficiency losses in our power supply in two areas. Firstly, CHP eliminates energy losses during transportation of electricity over the grid, by installing the generator onsite. Secondly, it recuperates efficiency usually lost as waste heat by utilizing it in the production process. This type of project is currently underway at our Hindlow plant in the UK. There we installed a 2 MW power generator, which supplies electricity to both our own plant and up to 1 MW to the grid. We are now commissioning the integration of the bespoke heat recovery system into our production plant. This will allow us to use the waste heat from the power generator in the drying process for our Sorbacal product —something we would otherwise need to burn natural gas for without the added benefit of producing electricity.

A similar project was installed in our Rheine plant in Germany.

Efficient energy and logistics

An area in which we can create the biggest impact in the shortest amount of time is in our production infrastructure energy efficiency. This notion centers around our kilns, the beating heart of our production processes. Equally substantial gains can be made in the supporting equipment. An example of this initiative is found in our Central European plants.

A PFRK at our Limeira plant in Brazil.
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Parallel Flow Regenerative Kiln (PFRK)

The PFRK is the most energy efficient type of kiln currently in widespread use. It consists of two vertical shafts that alternate between a burning and a preheating phase, whereby the hot combustion gasses of the burning shaft are used to preheat the limestone in the parallel shaft. The result is an excellent energy efficient output of around 3.5 Gj/t of lime. They also support a higher production capacity than older types of kilns, allowing us to more efficiently allocate production according to proximity to the client, thus paring down our logistical needs.

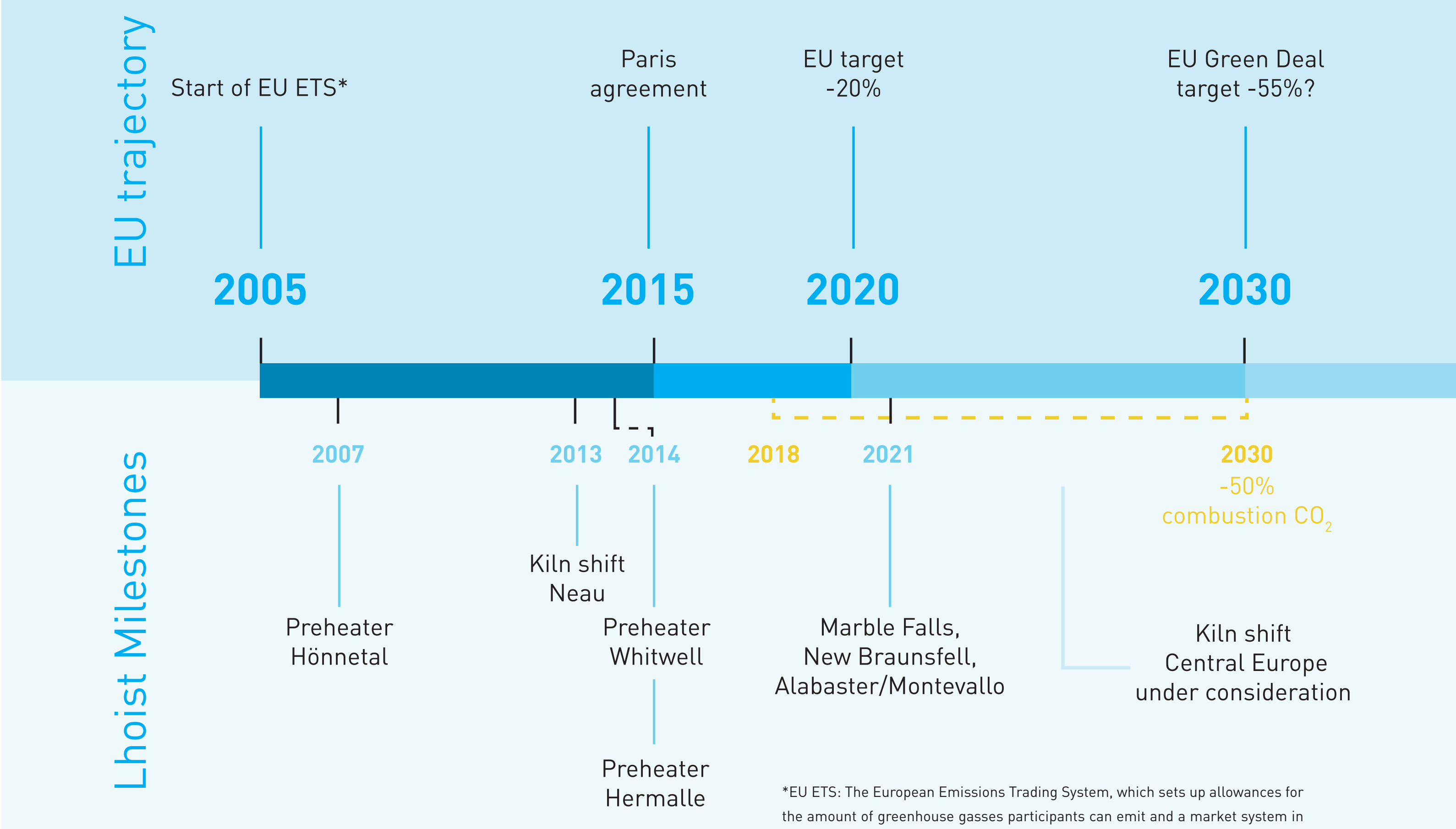
Lhoist already operates many PFRK's and we are continuously investing in replacing older kilns with this more efficient model. In 2013 we upgraded our old kiln for a PFRK at our Neau plant in France, for an efficiency gain of 54% or an emissions reduction of more than 10.000 tons of CO_2 per year. Similar projects are currently being considered or underway in several locations, most notably in North America and Central Europe.

Preheater

Not all older types of kiln can be immediately replaced by PFRK technology. Fortunately, rotary kilns make better use of available resources in our geological deposits, while also offering greater fuel flexibility and enabling the production of a large range of specific products. We reduced the energy consumption and carbon emissions of such kilns by installing a preheater. The preheater is essentially a large heat exchanger at the top of a rotary kiln where the limestone is preheated by hot combustion gasses before being fed in to the kiln itself. This reduces both the energy consumption and combustion CO_2 by about 25%.

Process efficiency

Aside from the larger investments in infrastructure, we are continuously fine-tuning our production processes to improve their efficiency. Through automating the charging process, we can use the volumes of limestone and air that enter the kiln to maintain an optimum temperature, thus reducing the amount of waste heat. Improved leak detection, optimized parameters and compressor allocation can likewise reduce the energy we spend on compressed air usage. Every single action is directly rewarded with a CO_2 reduction.



*EU ETS: The European Emissions Trading System, which sets up allowances for the amount of greenhouse gasses participants can emit and a market system in which allowances can be traded

A global perspective

UK:
- CHP - Hindlow
- Preheater - Whitwell
- Energy efficiency: Automation - Hindlow
- Kilnshift
- Energy efficiency: Gas analyser - Whitwell
- Fuelshift to recycled fuels
- Hydrogen: study
- Carbon/hydrogen transport: Hynet-Peak district
- Fuelshift to biomass

Netherlands:
- Fuelshift to biomass
- Hydrogen: trial

Denmark:
- Energy efficiency: Gas analyser - Faxe

Belgium:
- Wind PPA
- Preheater - Hermalle & Dumont Wautier
- Fuelshift to recycled fuels
- Fuelshift to biomass
- CO_2 value Europe
- Energy efficiency: Automation - Jemelle
- Carbon capture: Leilac 1
- Carbon capture: Oxyfuel
- Carbon/hydrogen transport: Walloon backbone
- Photovoltaic
- Carbon use: Mineralisation of slag
- Carbon use: e-Kerosene

Poland:
- Energy efficiency: Automation - Bukowa
- Fuelshift to biomass
- Wind PPA
- Kilnshift

Czech Republic:
- Kilnshift - Beroun

Portugal:
- Fuelshift to biomass
- Photovoltaic

Spain:
- Fuelshift to biomass
- Photovoltaic

USA:
- Kilnshift - Marble Falls
- Kilnshift - New Braunfels
- Fuelshift to natural gas
- Kilnshift - Alabaster/Montevallo
- Energy efficiency: Automation - Nelson & Marble Falls
- Photovoltaic

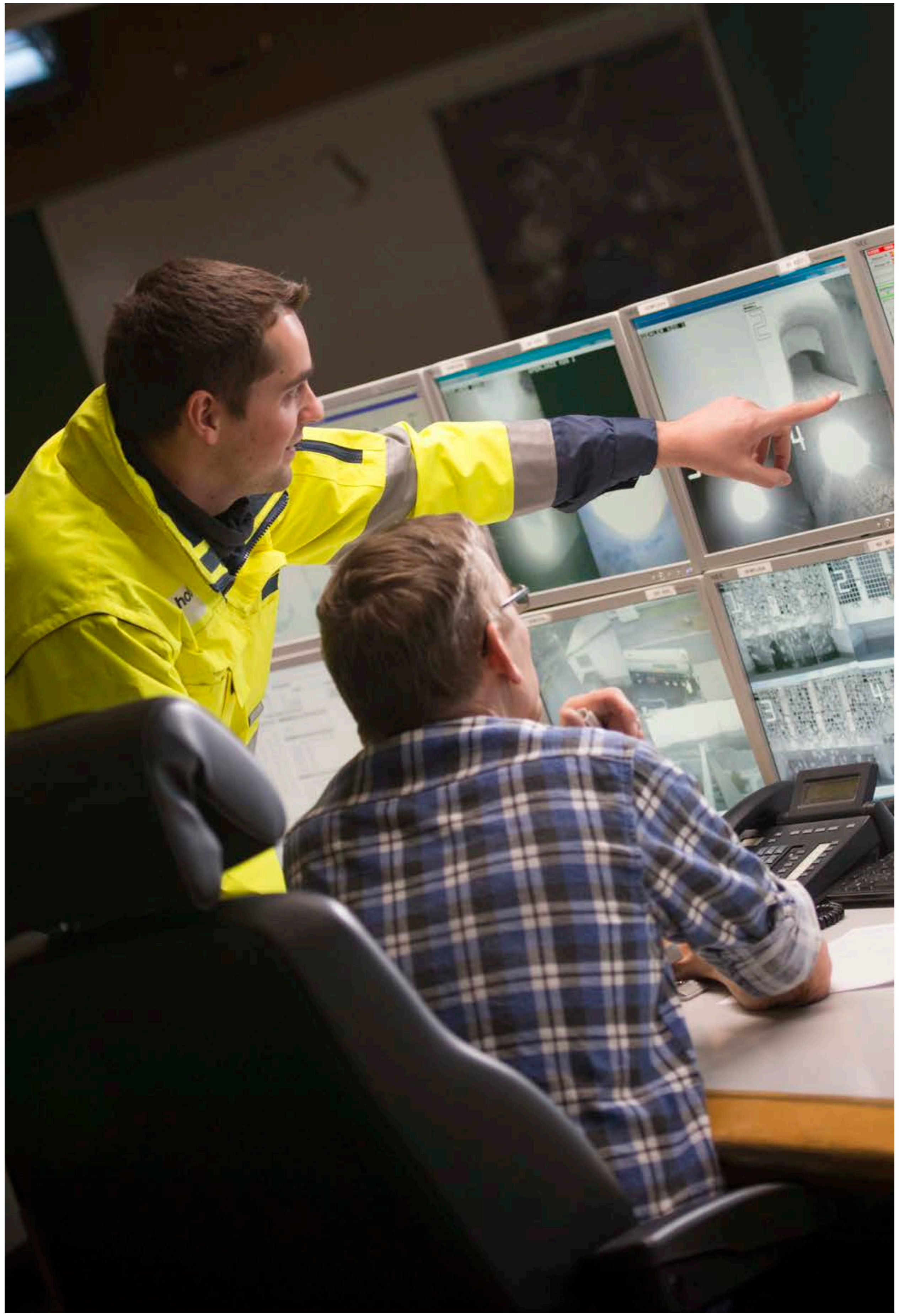
Brazil:
- Fuelshift to biomass
- Energy efficiency: Automation - Limeira
- Photovoltaic

Malaysia:
- State of the art new plant
- Photovoltaic
- Fuelshift to biomass

Germany:
- Preheater - Hönnetal
- Fuelshift to recycled fuels
- Level Blue
- CHP - Rheine
- Automation - Flandersbach
- Fuelshift to biomass
- Carbon capture: Leilac 2
- Carbon capture: LISA
- Carbon capture: Carina
- Carbon capture: Scarlet
- Carbon use: Carbon2Chem
- Wind PPA

France:
- Photovoltaic
- Kilnshift - Neau
- Fuelshift to biomass
- Fuelshift to recycled fuels
- Fuelshift to natural gas
- Energy efficiency: Automation - La Mède & Poliénas
- Carbon storage: DINAMX

- implemented or ongoing
- planned or study



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Every step along the way comes with engineering challenges, while every shift in fuel makes a sizeable contribution towards our short term target.

Fuel switch

The type of fuel we use in our production processes depends on many factors, including environmental impact, cost, availability, impact on the final product and technical feasibility. We weigh these factors and build up our expertise of new fuel types, as we move from coal and petcoke to natural gas, biomass and recycled fuels, green hydrogen and electricity. Every step along the way comes with engineering challenges, while every shift makes a sizeable contribution towards our short-term and medium-term targets.

Solid fuel to natural gas

Historically, solid fuels, such as lignite, coal, petroleum coke and anthracites, have been used extensively as a fuel in lime production based on their abundance, properties, and cost. However, they are not a renewable fuel, nor can they be overlooked in terms of their environmental impact. The fastest method of transitioning away from solid fuels is to make the switch to natural gas. Current kiln technology such as the PFRK can be equipped to use natural gas depending on availability, but connections need to be constructed and equipped. In regions like North America, where solid fuels are still widely used, we are accelerating the transition to natural gas. In doing so, we are able to achieve an immediate reduction in our CO_2 emissions. One advantage to this process is that it's compatible with our shift to other types of fuel through coinjection with natural gas.

←
A look inside our kiln at Jemelle, Belgium.

Biomass

Biomass has the advantage of being a low carbon and renewable fuel. However, it presents substantial challenges most notably in ensuring compliance with sustainability criteria. We can look towards our Iberian plants to illustrate these challenges and how we can overcome them through smart engineering and procurement.

The first point of attention is availability. As Spain is the largest producer of olive oil in the world and a major wine producer, there are large volumes of biomass available as olive derivatives and grape seeds. We initially solely intended to use grape seeds. However, their seasonal availability is limited to nine months per year. Adding olive derivatives to the energy mix supports biomass supply all year round.

The second issue is feeding the fuel into the kiln. Since biomass has half the calorific power and half the density of traditional solid fuels, it requires us to quadruple the fuel quantity. By 2022, we will have adapted dosing systems in several plants to handle the extra volumes to allow our kilns to burn higher shares of biomass while being at full production capacity.

Thirdly, burning biomass raises challenges regarding emissions, including NO_x. Our teams need to find the appropriate balance between the biomass, fuel mix and adapted flue gas treatment measures.

Possible solutions for these challenges are the use of co-injection of natural gas to enable running kilns at high or even full capacity while respecting the air and product quality.

Our South Western French plants have pioneered the use of locally available biomass such as wood chips, olive cores, grape seed flour, walnut hulls and corncobs. They achieve CO_2 reductions of more than 10,000 tons per year, depending on biomass availability and the lime products produced.

We could argue that the trailblazers in implementing this process have been our Brazilian plants. They use large quantities of locally sourced wood residues and coffee shells to cover a substantial portion of their fuel consumption. They make it a priority to stretch the old habits and fuel supplies to further increase biomass use.

The calcination process
in a rotary kiln.
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Hydrogen

Renewably sourced hydrogen is one of the most promising energy sources for carbon neutral lime production. However, we expect it to be a landmark evolution of our existing processes and infrastructure. As hydrogen is stored at higher pressures and has a lower energy density than natural gas, burning hydrogen requires us to review our safety protocols and combustion parameters. Today, renewable hydrogen is not yet available in the kind of volumes we need for large scale industrial applications. However, we are already preparing for the transition. Lhoist is already involved in multiple research efforts to expand our knowledge and expertise regarding hydrogen.

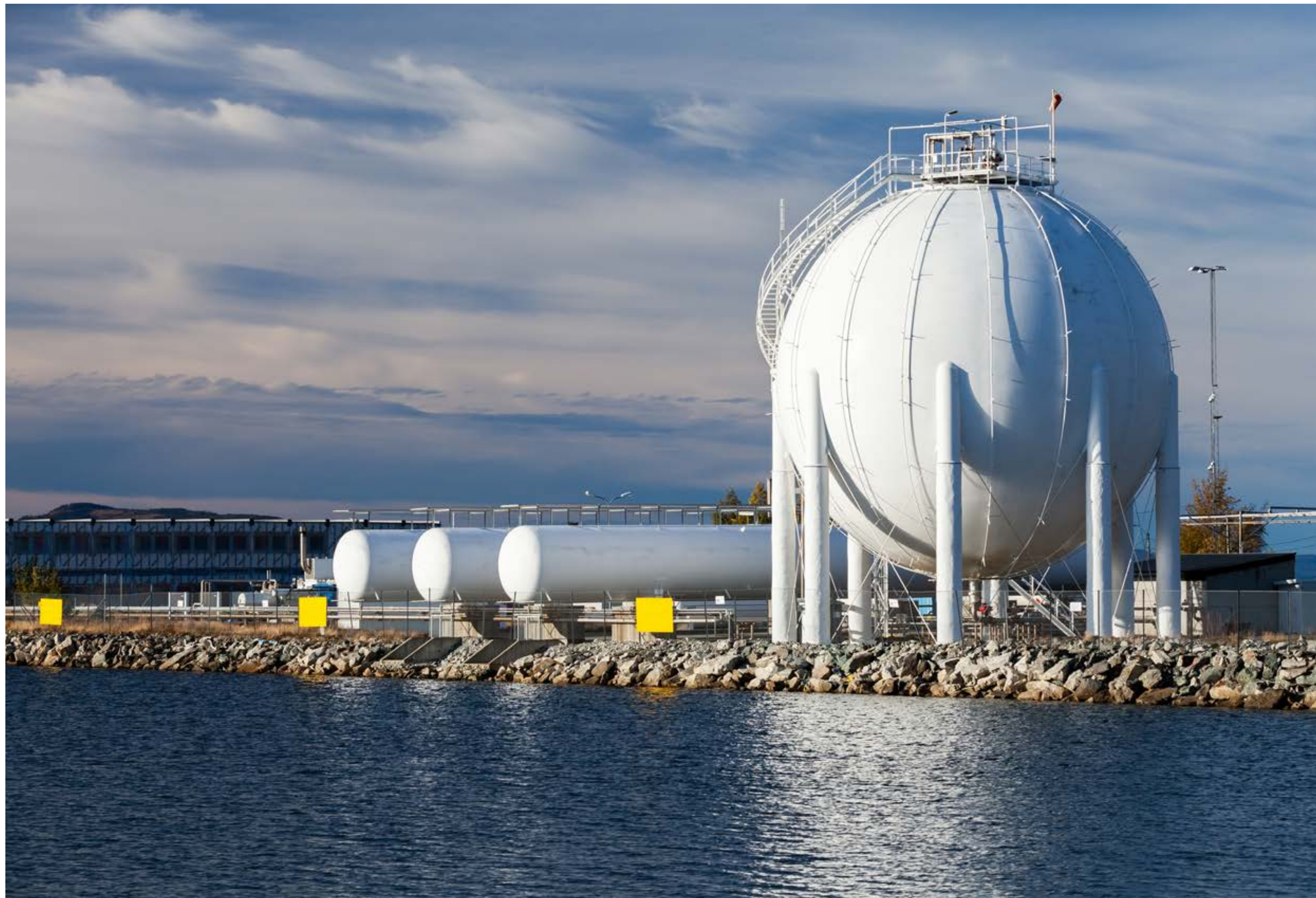
We are currently working together with the UK government, the Mineral Products Association and several other industrial partners to determine proper operating procedures for burning hydrogen in existing kilns. This includes software modelling of the production process followed by actual trials to determine the accuracy of our models. Lhoist has volunteered one of its parallel-flow regenerative kilns for software modelling of this type of kiln.

Nedmag, a Dutch producer of Magnesium salt and Magnesium Oxides, and a joint venture between Lhoist and the local investment group (NOM), has a production process requiring high temperatures. These temperatures are attained through burning natural gas and bio-methane sourced from a neighbouring agricultural business. Nedmag has now developed new burners and pipes to enable them to add hydrogen into their fuel mix, both in co-injection and at 100%.

Recycled Fuels

Recycled fuel consists of recycled waste streams from manufacturing industries, including certain plastics, paper, rubber and textiles. It is produced in large quantities in densely populated areas such as Western Germany, Northern France, Belgium and the Netherlands. Most notably in rotary kilns, we have used recycled fuels for years in several countries, including France and the UK

One noteworthy location is our Flandersbach site in Germany, which was historically employing lignite as fuel, due to its local abundance. Currently, the plant operates on 10% recycled fuels, which already reduces CO_2 emissions by 7.500 tons per year. In the future, we will increase this to 60% recycled fuels.



Carbon capture

The lime production process essentially comes down to separating CO_2 from limestone when activating calcium and magnesium oxides. This makes carbon capture a necessary part of our long term goal of carbon neutrality. We are researching and developing several new methods that will undoubtedly see extensive use outside the lime sector as well.

Oxyfuel

All current industrial lime production involves limestone, energy and air in a combustion process. This creates a flue gas containing on average about 20% CO_2, whereas most methods of carbon usage or storage require concentrations of more than 90%. By replacing the air in the combustion process with a mixture of pure oxygen and CO_2, we can create a more concentrated flue gas that is more suitable for further processing. Oxyfuel combustion is a well-known technology and we are currently researching ways of specifically applying it to lime kilns.

End-of-pipe solutions

We can scrub CO_2 from unconcentrated flue gasses by using a chemical compound to react with CO_2. Lime is in itself this kind of sorbent: it absorbs CO_2 and reverts to limestone. A group of chemical compounds called amines is another type of sorbent. Both types perform best under very different circumstances, with their common advantage being that they can be applied to an existing production process. An end-of-pipe solution doesn't require changes to the production process itself and has no impact on the characteristics of the end product.

→ A trial kiln using indirect heating as part of the LEILAC project

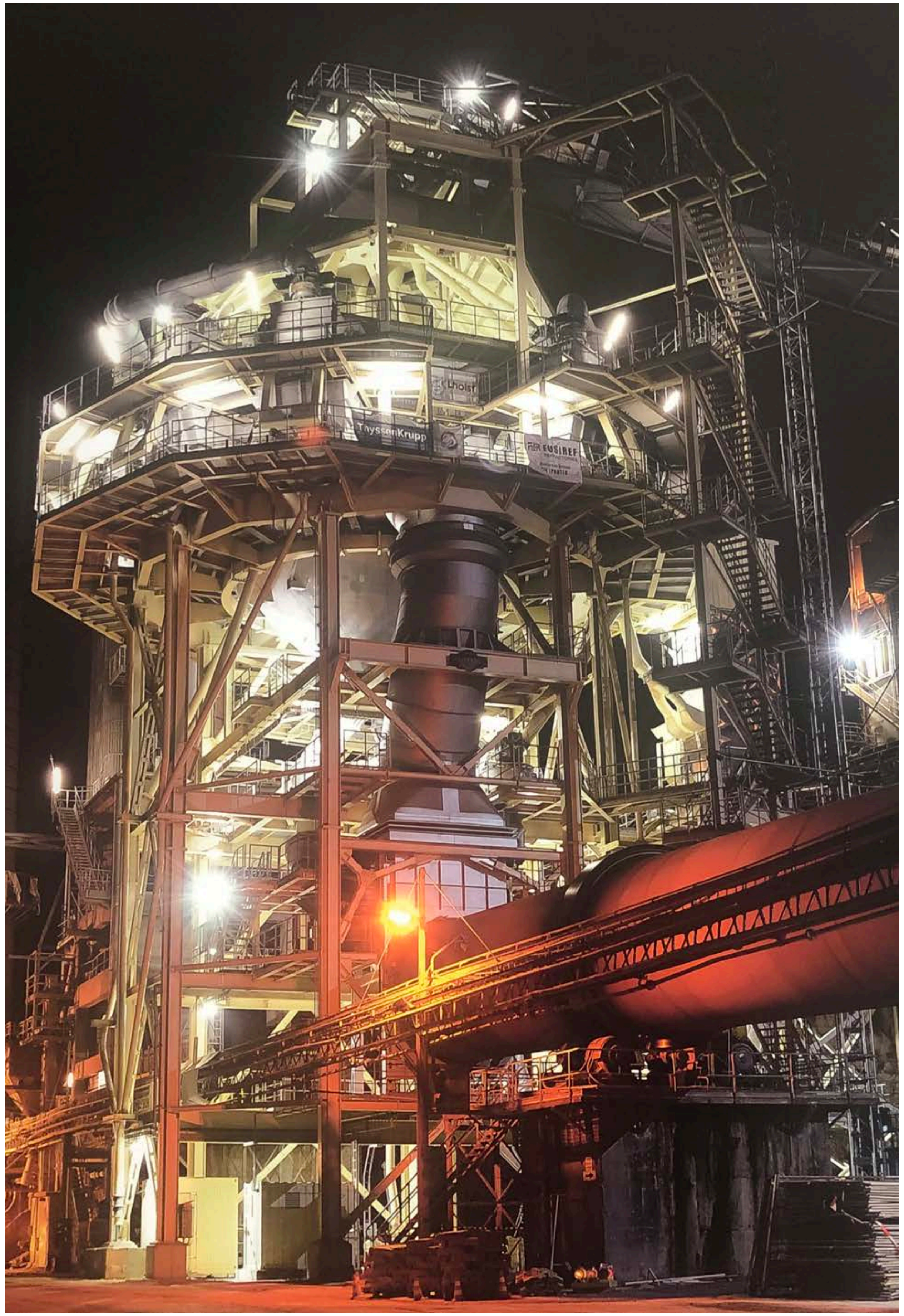
Indirect heating

A method of calcium looping involves indirect heating of the limestone that was used as a sorbent. This is done by moving the limestone to a closed calciner and feeding in heat from an external combustion chamber. Because the limestone is not exposed to the combustion gasses, this method produces lime and a gas made up of almost pure CO_2.

Ongoing projects

Currently, there are no mature technologies available for carbon capture for lime production. However, several promising avenues are being developed. Today, it is not yet clear which will turn out to be most effective and economically viable. Since it's our ambition to take a leading role in these developments, Lhoist is an active participant in multiple research and pilot projects with large industrial partners and governments. Here are some examples of completed and ongoing projects.

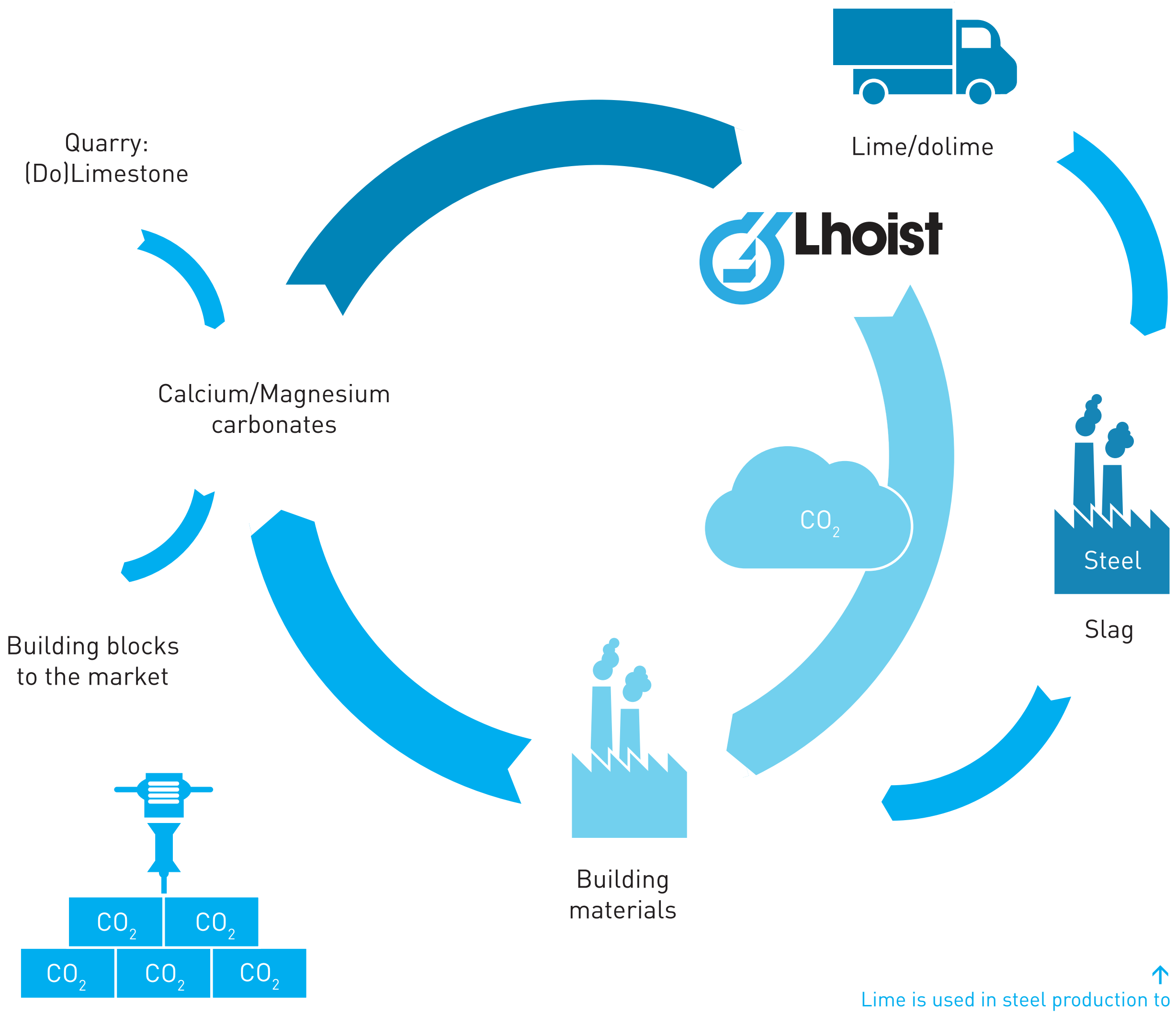
CARINA	Proof of concept for carbonate looping using indirect heating.	**2010-2016**	
SCARLET	Long-term pilot testing of carbonate looping for power generation using fossil fuels	**2014-2017**	project-scarlet.eu
ANICA	Pilot plant for advanced carbonate looping using indirect heating	**2020-2023**	act-anica.eu
LEILAC I	A pilot plant using indirect heating of limestone for cement and lime production to capture concentrated CO_2	**2016-2020**	project-leilac.eu
LEILAC II	Scale-up of indirect heating pilot plant	**2020-2024**	project-leilac.eu
DINAMX	Feasibility study of amine based carbon capture coupled with storage and transportation options	**2021-2025**	See Carbon transport and storage p. 27
CARBON2CHEM	Phase 2 of a large, multi-sector feasibility study on techniques for carbon capture and use as a chemical feedstock	**2021-2024**	See Carbon use p. 32.



> Creating an extensive and diversified market for CO_2 as a feedstock is key to making carbon capture economically viable.

Carbon use

Creating an extensive and diversified market for CO_2 as a feedstock is key to making carbon capture economically viable. In order to establish a truly circular economy, existing industrial applications will need to be scaled up and new uses for CO_2 will need to be developed. We intend to play an important role leading this development by leveraging our experience with lime and related sectors such as Precipitated Calcium Carbonate (PCC for paper), building materials, agriculture and steel production.



Lime is used in steel production to capture impurities, creating slag. The recycled slag can be combined with captured CO_2 to create building blocks.

E-fuel

Captured CO_2 can be combined with green hydrogen to produce different forms of carbon neutral fuels. These e-fuels could be used by industries that are very difficult to decarbonise, such as aviation and shipping, which require a high density energy source. Producing e-fuels requires extensive cooperation between partners that can supply, transport and process sufficient volumes of renewable energy, hydrogen and CO_2. We are already exploring such partnerships, through which our captured carbon might be used as feedstock for renewable kerosene.

Source: Thyssen Krupp

Carbon2Chem

This research project originated in the steel industry and has since branched out to related fields like lime and cement production. Aside from researching various methods of carbon capture, Carbon2Chem focuses on the creation of primary raw materials from industrial off-gases. This includes the production of synthetic fuels, plastics and fertilizers.

Mineralisation of Slag

The iron and steel industry uses large quantities of lime in its production processes. Lime is added during smelting to capture impurities, thereby forming slag. Slag typically contains lime that has not reacted with other compounds and is still able to absorb CO_2, creating carbonates. Lhoist is currently participating in a project that will recycle slag and captured CO_2 to produce blocks. The process initially involves recovering useful metals from slag, while the remainder is ground into a fine filler material, which is pressed into blocks. Due to the presence of the available lime, the blocks harden through exposure to the CO_2 captured from our installations. The capture of CO_2 creates calcium carbonate and acts as the binder of the building block. This circular approach effectively closes the life cycle of lime as it safely sequesters captured carbon.

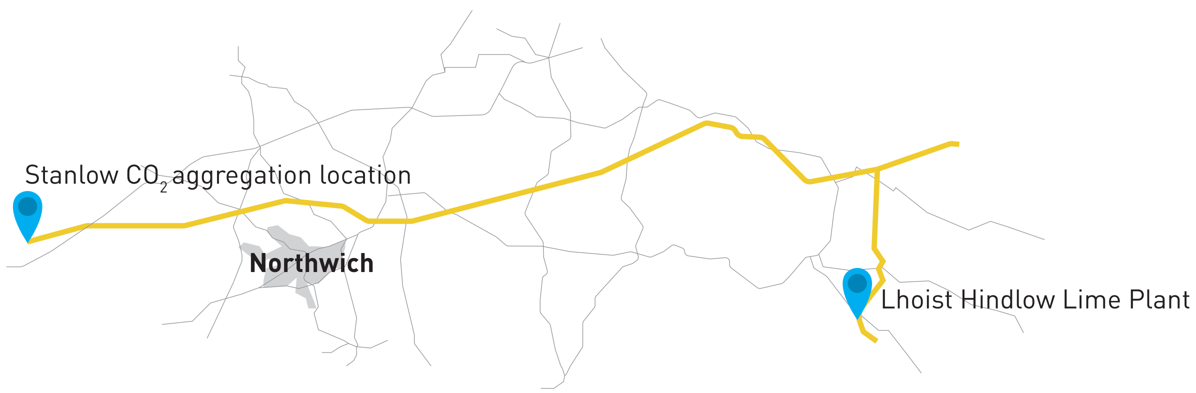
Carbon transport and storage

To implement carbon capture and transition to renewable fuels, we will need access to new infrastructure to transport and store CO_2, oxygen and hydrogen. Consequently, pipelines, terminals and geological storage will be vital components of our industry's future. Several initiatives are underway to explore the engineering challenges, cost structures and location issues. We are taking an active role in these projects to ensure that our production sites will be ready for integration into this global infrastructure and to gain early insight into the new cost structures and business models.

Peak District pipeline

Our Hindlow plant in the UK is located in the Peak District, along with several other CO_2-intensive industrial sites. This inland cluster is surrounded by a National Park , far from any potential storage sites. The aim of this project is to explore options to transport CO_2 over a hundred kilometres towards Liverpool. From there, the CO_2 could be moved to a geological storage location in the North Sea off the coast of Scotland.

We have been working together with Progressive Energy, who are also looking to develop Hynet: an extensive hydrogen network throughout the North West of England.



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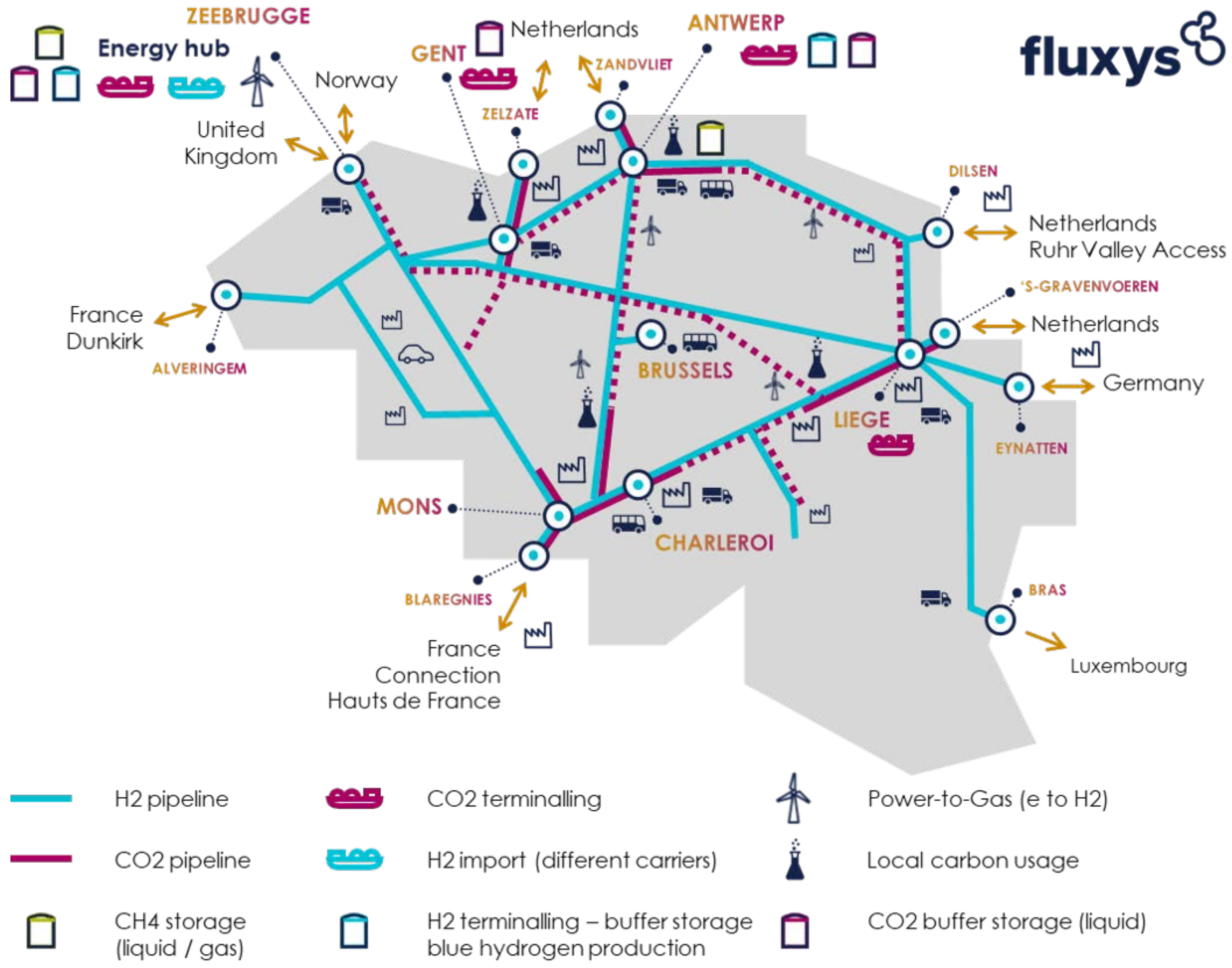
A pipeline could gather the CO_2 emitted at industrial sites of the Peak District at a central location before it is moved to a geological storage location.

Dinamx

This project started as an amine-based carbon capture solution for the steel industry. Our French plant in Réty is involved in the project's second phase, in which the technology is being explored for other carbon intensive industries. The aim of this technique is to create liquified CO_2 for transport and storage.



Source: Fluxys (fluxys.com/en/energy-transition/hydrogen-carbon-infrastructure)

Wallonia CO_2 pipeline

A similar project to the Peak District pipeline is under consideration for large industrial sites in the Walloon region of Belgium. We have joined a coalition of large industrial carbon emitters and users to determine possibilities and opportunities for transporting CO_2. This could, for instance, involve aggregating CO_2 in sufficient quantities to make further shipment or industrial use an economical solution.

Creating the CO_2ntext

Lhoist provides commodity products in a highly competitive market. This means that addressing our carbon footprint goes beyond the engineering and procurement challenges discussed in this brochure. We must also pay close attention to the commercial and regulatory context in which we operate. Keeping an eye on the future, Lhoist will play an active role in helping shape a commercial and regulatory environment that enables and encourages a fast transition towards a sustainable market.

Sustainability through efficiency and lifecycle approach

We help our clients to reduce their carbon footprint by providing quality lime products, as lime acts as a carbon sink (see p. 4) in many applications. However, Lhoist takes it a level higher through innovation. By developing top quality products for specific applications, we increase the effectiveness of our clients' processes and reduce the amount of lime they need for any given result. For example, we have developed Sorbacal® SPS, a hydrate with a high specific surface area for improved efficiency in flue gas treatment and Neutralac® SLS45, a highly concentrated milk of lime used in water treatment. By reducing the volumes needed and consequently also saving on transport costs, these products have achieved a reduction in CO_2 of at least 30% compared to traditional lime-based products.

CO_2 Value Europe

Lhoist is a founding member of the CO_2 Value Europe association, which aims to promote and develop sustainable industrial solutions to valorise carbon in new products and applications. We work together with the EU and national policymakers to help create a regulatory framework that stimulates the development and deployment of carbon capture and use.

Level BLUE – Our carbon neutral product offering for our customers

Level BLUE is our new product offering for carbon neutral products. We are very proud that –as a world market leader for lime & minerals, we can offer our strategic customers a portfolio of carbon neutral products today. Level BLUE operates on the principle of 3 pillars: Avoiding, reducing, and compensating with a pipeline of effective carbon reduction initiatives behind each pillar.

- Avoiding – Using (for example) carbon free energies or hybrid mobile equipment to avoid CO_2 wherever possible.
- Reducing – Through optimization of our assets and the use of alternative fuels, we reduce CO_2 wherever possible.
- Compensating – The remaining emissions which cannot be avoided or reduced today are compensated by investing into certified climate protection projects. The certification is in line with the internationally recognized Greenhouse Gas Protocol, and can therefore be accounted in the carbon footprint calculation of our customers.

Evaluating our carbon footprint requires a detailed and accurate accounting of all production-related emissions at each site We are working with an external agency to ensure reliable and accurate results. Each year, our carbon footprint savings are calculated and certified according to international standards and protocols.

From Level BLUE to Level GREEN

The first Level BLUE deliveries started in 2020 and our first contingents were immediately sold out. Dozens of further customers of various industries have already signed up for 2021. With their support we can accelerate our efforts to decarbonise to reach the next level, Level GREEN As soon as we have the necessary carbon capture, storage and utilization technologies in place to produce completely carbon free, we will be able to launch our product line Level GREEN.

What's in it for our customers?

Our products Level BLUE and Level GREEN help our customers to reduce their own carbon footprints and reach their climate goals. Our customers increase their company value and thus their attractiveness to their customers and other stakeholders. We truly believe in industrial ecosystems to collectively achieve a sustainable global economy.

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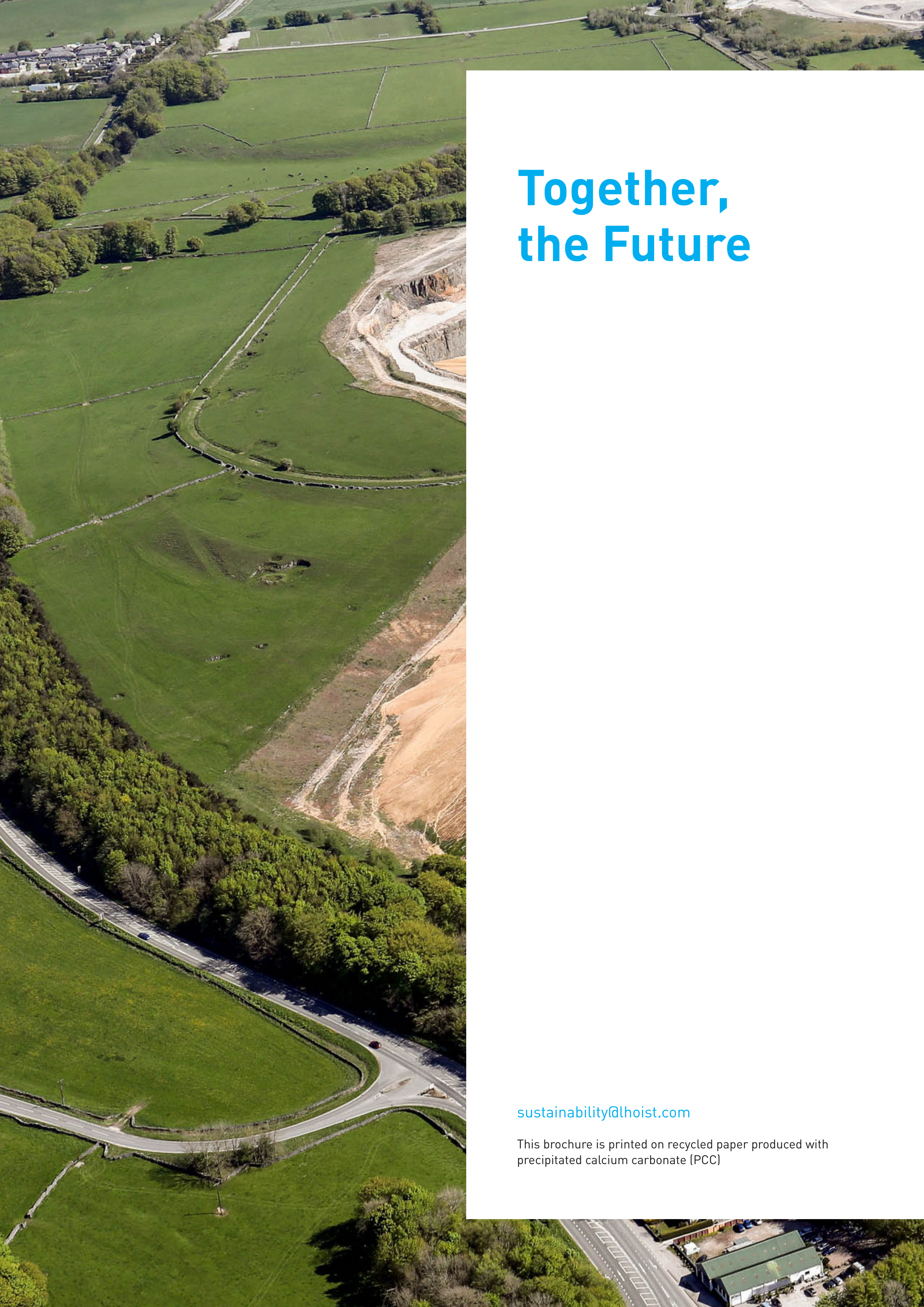

Together, the Future

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