FENIX®

FENIX SUSTAINABILITY POSITION PAPER

EXECUTIVE SUMMARY

Our Group has been working on sustainability for more than ten years.
During this period a lot has been achieved and today we can proudly say that our FENIX® materials are carbon neutral.
FENIX's carbon footprint has been calculated and verified by a third party and carbon offsets have been bought to compensate for the emissions generated.

Why did we achieve carbon neutrality?
Reducing the carbon footprint and reaching carbon neutrality are key parts of our overall sustainability policy.

Next to the belief that improving the environmental footprint is the right thing to do, we are also convinced that it is essential to safeguard the continuity of the companies within our group. That is why sustainability is also well embedded in the plans and high on the agenda with the credo *'do no harm, do good, do better'*.

At the core of the sustainability strategy is the principle that we should start with ourselves when we seek to improve the world: *'do no harm'*. This means that we comply with safety, product and sustainability regulations and guidelines. Beyond that, we seek opportunities to minimize the environmental impact in all of the operations and products.

The second element of the strategy is to look for opportunities that support the environment beyond the direct scope of our own manufacturing footprint: *'do good'*. We want to encourage an active dialogue with our suppliers on how to improve environmental performance and support the customers in their sustainability challenges. This includes creating products that have a long lifespan that limit the need for replacement. Lastly, we also look into developing projects that help to absorb or reduce carbon emissions less directly linked to our factories and our product portfolio.

We believe that addressing sustainability challenges will allow our company to continue to grow and *'do better'* in the future. Investing in sustainability should – in the end – ensure that these efforts continue beyond the horizon of current regulatory changes and ethical/moral considerations.

Our way towards carbon neutrality
The approach is straightforward: we measure our impact, select targets to reduce this impact and monitor and report on progress. To measure our impact, we use the Life Cycle Assessment (LCA) methodology. LCA captures the details of the entire environmental footprint of our products.

FENIX's carbon neutrality is the result of a favourable product build-up and the implementation of a long-term sustainability strategy consisting of two main pillars: the **replacement of the most impactful inputs** and the improvement of our products and processes' **efficiency**. Moreover, the robustness and reparability of the acrylic surface ensures a long lifespan to all our FENIX products.

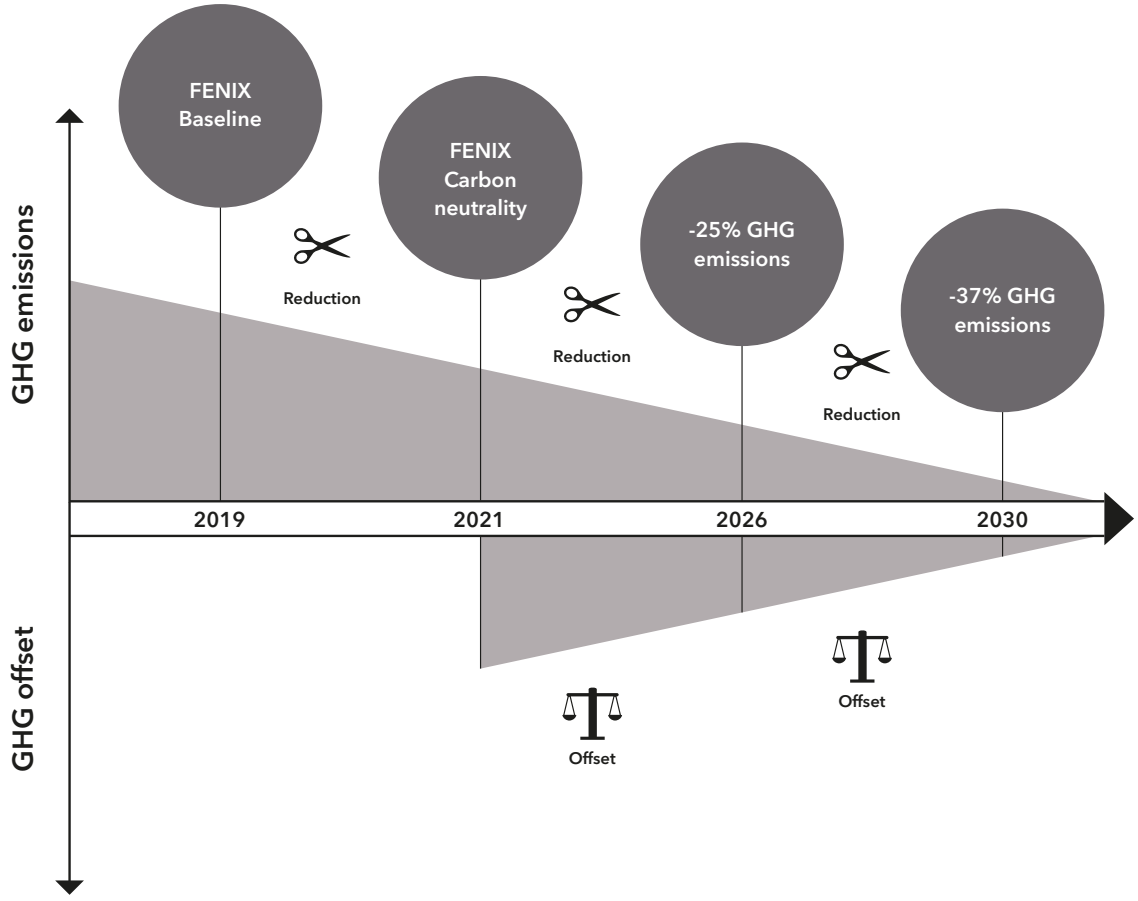
When looking at the product's composition, our FENIX panels are made of a combination of bio-based, renewable materials (wood fibre) and resin, with the bio-based share excee-

ding the fossil-based one. Bio-based, renewable raw materials have a lower environmental impact than traditional petroleum-based inputs, as they store the CO_2 sequestered by the trees they originated from.

We leveraged on this build-up and pushed boundaries even further with Bloom technology where we increased the share of bio-based content by replacing 50% of phenol used in the thermosetting resin with lignin, a natural polymer coming from wood. By applying the same principle of selecting the most sustainable alternative, we switched entirely to renewable electricity: Arpa plant runs on green electricity either from the solar panels installed on the factory's roof or from the grid.

In parallel, efficiency measures have been implemented to reduce both the energy requirements and materials consumption and ambitious greenhouse gas emission reduction targets have been set for 2026 and 2030. Our guiding principle in this regard is 'do more with less' or, in other words, guaranteeing at least the same quality while using less resources.

Despite all the efforts, CO_2 emissions cannot be completely eliminated. Hard-to-abate emissions generated throughout the whole life cycle of our FENIX products have been balanced out via certified carbon offsets, making our products carbon neutral. However, being our priority the improvement of the environmental performance of Fenix, we keep looking for greenhouse gas emissions reduction opportunities, to minimize the share of emissions that we have to offset.



SUSTAINABILITY APPROACH

What is global warming and why it matters

Global warming is the name given to long-term heating of Earth's climate system observed since the pre-industrial period due to human activities[1]. The increase of carbon dioxide methane, nitrous oxide and other heat-trapping gases in the atmosphere, also called "greenhouse gases" (GHG), have led to the rise of Earth's global average temperature by about 1 degree Celsius. With a steady rise, changes in the average weather patterns have been more frequently observed.

This situation is serious and demands urgent action on a global scale. From the increased frequency of extreme weather events to rising food prices, people everywhere will be affected by global warming. Beginning with the Rio Earth Summit, then the Kyoto Protocol and now the Paris Agreement, action to tackle this global challenge is speeding up. With the Paris agreement, a legally binding international treaty on climate change, 196 Countries committed to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. This means aiming to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.

Consistent with the target set by the Paris Agreement and striving to be the first climate-neutral continent, the European Union Commission set out its vision in November 2018[2] and, in March 2020, submitted its long-term strategy to make the EU climate-neutral by 2050.

The sustainability motto: do no harm, do good, do better

In line with the movement on global warming, we have put sustainability at the core of the business. The sustainability policy is based on a deeply felt motivation to shift from 'being less bad' for the environment to being 'good' and creating new value.

Do No Harm

We will comply with safety, product and sustainability regulations and guidelines set by the countries in which we operate. In addition, we are focused on materializing opportunities that minimize the environmental impact of our operations and products.

Do Good

We will support our suppliers and customers in realizing their sustainability challenges. Moreover, we will continue to look for opportunities and initiatives to support and promote longer-term sustainability beyond the direct scope of the current operations.

Do Better

We believe that investing in sustainability should be beneficial to the long-term position of the companies. Many sustainability challenges constitute good business opportunities that will allow the companies to continue to grow.

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1 **NASA, Global Climate Change,** https://climate.nasa.gov/resources/global-warming-vs-climate-change/
2 **European Commissions, A Clean Planet for all, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0773**

Our strategy towards carbon neutrality

Fact-based approach

We firmly believe that you cannot manage what you do not measure. Addressing sustainability and carbon neutrality starts with the quantification of the impacts.

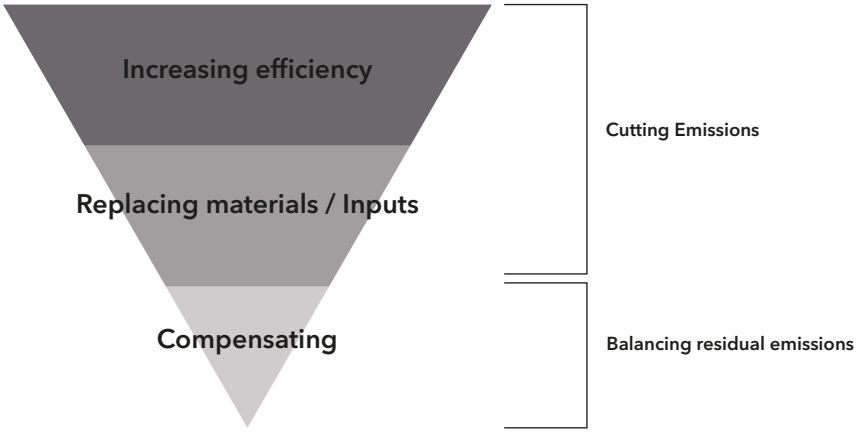
How? The Life Cycle Assessment (LCA) methodology represents the most reliable and fact-based tool available to help companies, institutions, and governments to systematically incorporate sustainability into their decision-making process.

LCA is defined as a process to evaluate the environmental burdens associated with the entire life cycle of a product, process, or activity. This is done through the identification and quantification of the energy, water and materials used and the wastes and emissions released into the environment.

By using the LCA methodology, we calculate the GHG emissions generated throughout the whole life cycle of FENIX (carbon footprint) and consequently define the most effective strategy to reduce those emissions to neutrality.

How to get to carbon neutrality

A credible carbon neutrality strategy is a long-term strategy. Companies should first invest in building a robust climate impact reduction strategy and compensate only what cannot be reasonably cut or reduced. In light of that, our strategy towards carbon neutrality is based on the following solutions' hierarchy.



Increase efficiency

Boosting efficiency represents the first way to decrease GHG emissions while reducing costs and improving performance at the same time.

There are many opportunities to improve the energy efficiency of industrial equipment. Replacing low-efficient engines with high-performing ones or optimizing the whole manufacturing system are two examples of approaches to reduce energy consumption.
A system is not only rendered more efficient through its energy consumption.
A large share of industrial emissions is associated with the creation of materials used in products. Smart design and optimized uses of materials can produce products delivering equal or better services while requiring less material.

Replace most impactful inputs
There are many opportunities to shift from high-carbon to low-carbon alternatives. Key examples include replacing thermal assets with renewable options (e.g. biogas), preferring renewable-sourced electricity (e.g. wind, hydro, solar) as well as switching from oil-based raw materials to bio-based alternatives. The UN has stated that "the use of long-lasting forest products are currently the most effective forms of carbon capture."

Compensate emissions
While the previous steps can result in substantial emissions reductions, there are still some that are difficult to eliminate entirely. Hard-to-abate emissions can be compensated by funding equivalent carbon dioxide savings elsewhere (offset or carbon credit). Our compensation strategy is twofold:
1. buying high-quality offsets; and
2. developing our own offsets to secure a long-term and timely supply of credits also conforming to the same quality criteria.

The carbon neutrality strategy and FENIX

FENIX: a good starting point
A good carbon neutrality strategy starts with a high quality, environmentally-efficient product. The FENIX was developed with this strategy in mind and is reflected in:
– How it is manufactured: FENIX panels are produced in a state-of-the-art plant, minimizing the energy requirements and waste generation;
– The source of electricity: only green electricity is used in the manufacturing process, either from the solar panels installed on the factory's roof or from the grid; and
– Its composition: approximately 60% of FENIX is made of bio-based material;

Combined, these three factors have contributed to making FENIX an environmentally-efficient product.

Taking a further look at the manufacturing process, efficiency represents a key element of carbon neutrality. Minimizing waste, hence raw materials consumption, and energy use offer a unique opportunity to conciliate cost savings and environmental sustainability. Both costs and sustainability are in fact strongly associated with the amount of resources used, the fewer the lower the impact. In that regard, FENIX holds a favourable position, being manufactured in a recently built, avant-garde plant, making of efficiency its distinctive feature. When it comes to energy, the logical next step after reduction is switching to renewable sources. Electricity from renewables like solar shows significantly lower GHC emissions compared to fossil-based options such as natural gas. At Arpa, for instance, not only were solar panels installed on the roof of our plant, covering approximately 20% of our electricity requirements, we also buy 100% green electricity.

Finally using renewable, bio-based raw materials helps to save fossil resources and can contribute to reducing greenhouse gas emissions. As mentioned earlier, forest and crops absorb CO_2 from the atmosphere during their growth and continue storing it once cut down. FENIX originates from the combination of paper, a renewable bio-based material by definition, and phenolic resin. The bio-based share in FENIX exceeds by far the fossil-based one.

Re-engineering FENIX to cut emissions while keeping the same performance

Over the last few years, we put a lot of efforts into re-engineering FENIX into an even more carbon-efficient product. Those efforts were guided by the principles of resource efficiency and sustainable materials selection, consistently with the approach described above in this document. We are now able to offer our customers a product with the same performance, all whilst being more resource-efficient and depleting less resources from the Planet. Furthermore, our FENIX NTM® Bloom product contains a material with a higher share of bio-based content. In fact, 50% of the phenol is replaced by lignin, a natural polymer that acts as a glue giving wood its rigidity and strength. FENIX NTM Bloom allows for a 25% savings in CO_2 emission.

Further reductions in the years to come

Targets to further reduce FENIX's carbon footprint have been set for 2026 and 2030.
By 2026 we aim to cut cradle-to-gate emissions by at least 25% and an additional 12% compared to our 2019 baseline.

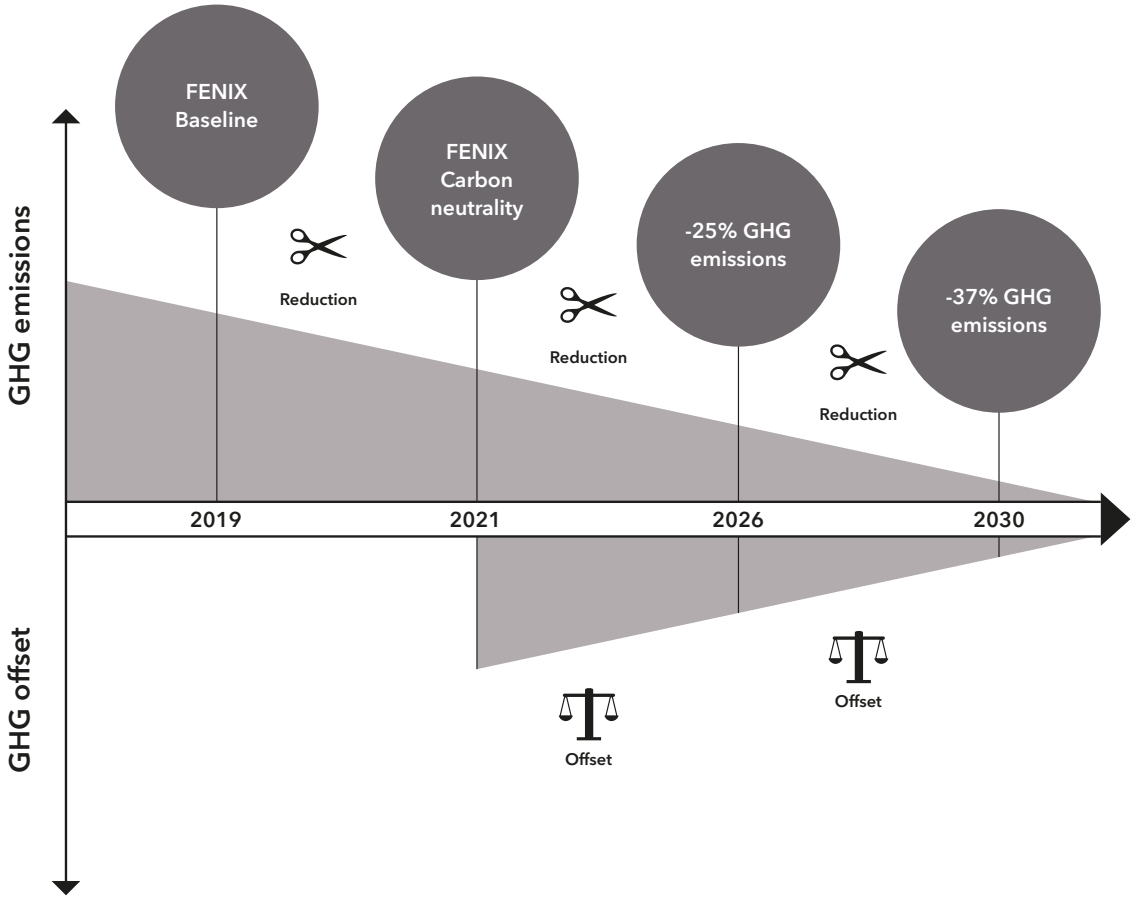
The key drivers of the improvement are outlined in the table below.

CO_2 emission reduction activity	**Emission scope**	**CO_2 reduction potential (2026)**	**CO_2 reduction potential (2030)**
Energy and Material Efficiency – Optimize the use of thermal energy, optimize material use	Scope 1,3	14%	8%
Sourcing Renewable and More Sustainable Raw Materials – Increasing the share of bio-based content	Scope 3	11%	4%

Carbon offsets to compensate what cannot be cut

Despite all the efforts, GHC emissions cannot be completely eliminated, at least not in the short-term. Hard-to-abate emissions can be then compensated by an equivalent amount of removed GHC. By doing so, a product can be declared carbon neutral.

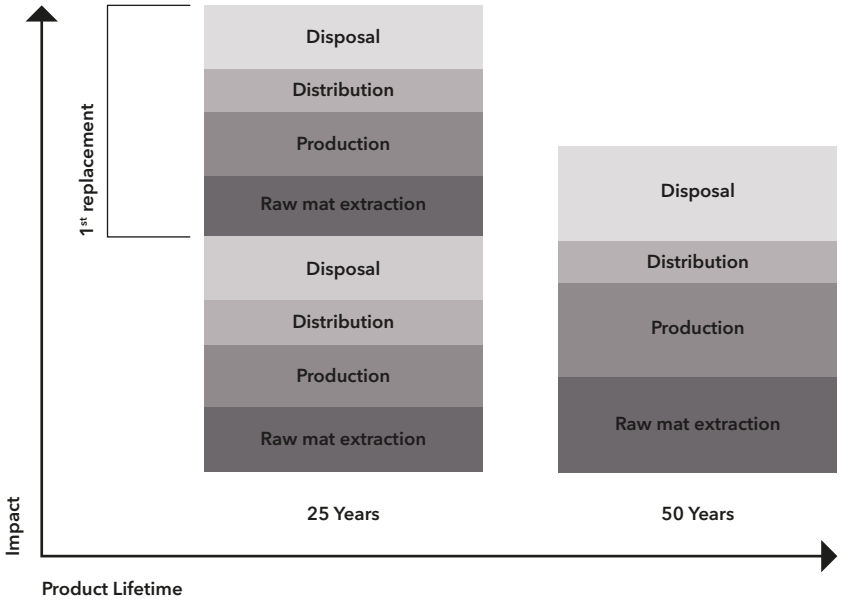
The emissions generated throughout the whole life cycle of our FENIX products have been calculated (and verified by a third party) and are costantly compensated via certified carbon offsets, making our products carbon neutral. Details on the carbon offsets project can be found in Appendix A.



Durability, a sustainability boost

As the sustainability performance of products is evaluated throughout their entire lifetime, durability, defined as reliability and long service life, is one of the major features of sustainable products. The longer the product lasts, the longer the period over which the GHG emissions associated with the production of those raw materials, the product's manufacturing, distribution and disposal are spread. In other words, durability represents the most effective strategy to reduce carbon emissions. It is not surprising that a study carried out in the U.S. showed that lengthening the useful lifetime of products can contribute to cut CO_2 emissions by 20% approximately[3].

3 2019, How To Reach U.S. Net Zero Emissions By 2050: Decarbonizing Industry. Energy Innovation: Policy and Technology & Jeffrey Rissman



What makes FENIX a long-lasting material? The decorative surface of FENIX is characterised by a multilayer coating and the use of next generation acrylic resins, hardened and fixed with Electron Beam curing process. As a result, the FENIX surface is extremely matt, pleasantly soft touch and surprisingly anti-fingerprint. Further, thermal healing of superficial micro-scratches is also possible. With these features, FENIX products have been designed to last.

APPENDIX A - Carbon offset project description

To offset the greenhouse gas emitted from operations, we chose to compensate our emissions through landfill gas capture projects.

Overview of the project

Location	Type	Carbon standard	Volume	Third party verified
Italy	Landfill gas	Green planet	28,850[4]	Yes

The project involves the development, and construction of two waste-to-energy facilities in two landfill sites in northern Italy. The project objective is to capture methane gas that is released from the landfill and generate electricity through gas engines coupled with generators. If this project would not be in place, the gas escaping from landfills would be released unhindered into the atmosphere, accelerating global warming. The price of these carbon credits is lower than 10 €/tCO_2eq.

4 Updated on 31/10/2022

FENIX® INNOVATIVE MATERIALS FOR INTERIOR DESIGN

Italian design since 2013

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