Trafigura

nyrstar

European zinc production

Trafigura and Nyrstar: a partnership for success

About us

Trafigura

Trafigura is one of the largest physical commodity trading and logistics groups in the world and a leading participant in the global zinc market – a metal of critical importance to the energy transition.

Over the past 30 years, we have built our global business on service and performance, focusing on creating long-term value for our customers and configuring our business in line with their evolving sustainability requirements.

Our global concentrates and refined zinc trading teams in the US, Europe, LATAM and Asia work together to respond to global trends and to make our supply chains efficient, secure and sustainable. Carefully selected investments in infrastructure and technology are integral to our teams' abilities to deliver this performance.

www.trafigura.com ↗

nyrstar

Our wholly owned subsidiary, Nyrstar is a world-class refined zinc producer with smelting and mining operations across Europe, Australia and North America that produces over 1.0 million tonnes of refined zinc metal annually.

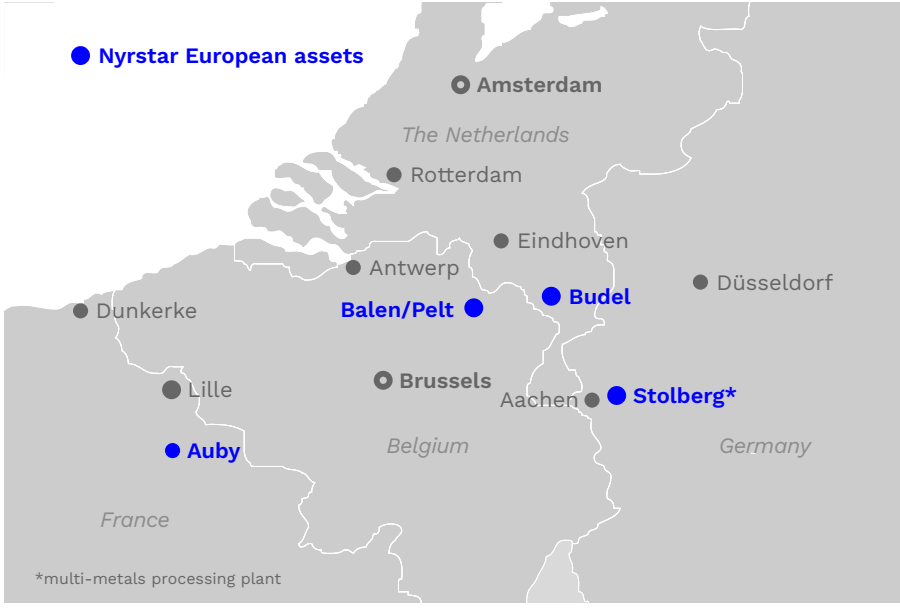
Nyrstar is one of the most important zinc producers in Europe with smelters located in Budel in the Netherlands, Balen and Pelt in Belgium and Auby in France.

Each of its European operations are located close to key customers and major transport and import/export hubs including the Port of Antwerp, to facilitate delivery of raw materials and distribution of its finished products to customers all around the world.

www.nyrstar.com ↗

1.1 million tonnes

of refined zinc metal production capacity per annum



Nyrstar: Helping support decarbonisation

Zinc plays a fundamental role in the energy transition. However, its extraction as an ore and its transformation into a refined end production can be energy intensive. As an environmentally responsible company Nyrstar works to continuously improve the efficiency of its production and logistics processes. Its initiatives include the development of a number of on-site renewable energy infrastructure projects including solar and wind power and energy storage.

Sustainable energy consumption

Nyrstar has reduced its operational carbon footprint by over 80 percent since 2020, through the use of energy from renewable sources in the manufacturing of its zinc products at its European facilities.

Nyrstar applies a market-based approach to calculate its Scope 2 GHG emissions across its sites. A market-based approach reflects actual emissions from electricity that a company has purposefully chosen, such as renewable power with Guarantees of Origin and supplier-specific emissions factors.

Solar power

Nyrstar's plant in Balen, Belgium, is partially powered by electricity generated by the on-site Kristal Solar Park, the largest solar park in the Benelux region with a capacity of almost 100MWp, and the Belgian Pelt plant has a 6MW capacity solar park, also on-site.

The Nyrstar Budel site in the Netherlands hosts a solar park with a capacity of 44MWp and a further 55MWp of planned capacity.

Wind power

Nyrstar has supported the development and renovation of wind turbines across its Balen and Pelt facilities with a combined capacity of 32MWp.

The wind turbines in Pelt are connected to the weather radar of the Royal Meteorological Institute of Belgium and the Flemish Environmental Society. This technological innovation makes it possible to better anticipate bird activity in the vicinity of the wind farm. The wind turbines are automatically shut down when flocks of birds approach.

THE ZINC MARK

In September 2024, Nyrstar Balen-Pelt, Budel, Clarksville, and Hobart zinc smelting operations achieved The Zinc Mark, signifying our adherence to best-in-class requirements for responsible production practices.

Zinc and the critical and strategic byproducts we generate at our facilities in Australia, Europe and the US are essential for the green transition, high tech and regional security.

The Zinc Mark award of our zinc smelting operations is a testament to the care our local teams take for environment, health, safety and the well-being of our local communities, demonstrating Nyrstar's robust ESG policies and practices.

With these most recent Zinc Mark awards Nyrstar Balen-Pelt, Budel and Hobart are the first sites to receive The Zinc Mark in Belgium, The Netherlands and Australia, respectively.

To receive The Zinc Mark, operations are assessed and independently verified against 32 responsible production criteria including greenhouse gas emissions, community health and safety, respect for Indigenous rights and business integrity and confirmed to meet the required performance threshold.

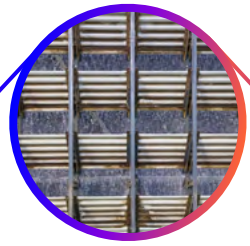
More information about The Zinc Mark assessment can be found at:

https://coppermark.org/assurance/the-zinc-mark ↗

https://www.nyrstar.com/resource-center/quality-certifications ↗

Sustainable logistics

Investing in more sustainable transport such as rail to bring raw materials from the Port of Antwerp to its sites and increasing use of barges to transport materials to customers along Northwest Europe's canal network.



Water recycling

Modern water treatment infrastructure ensures that wastewater generated at Nyrstar's plants is clean enough to discharge back into the environment.
All of Nyrstar's facilities operate a range of water reuse programmes, including raw wastewater, treated wastewater and groundwater.

Nyrstar's Budel smelter has a biological water treatment, where bacteria remove metal sulphate from the wastewater and turn it into solid metal sulphides, which can be separated and recycled back to the feed materials. As a result there is no waste product.

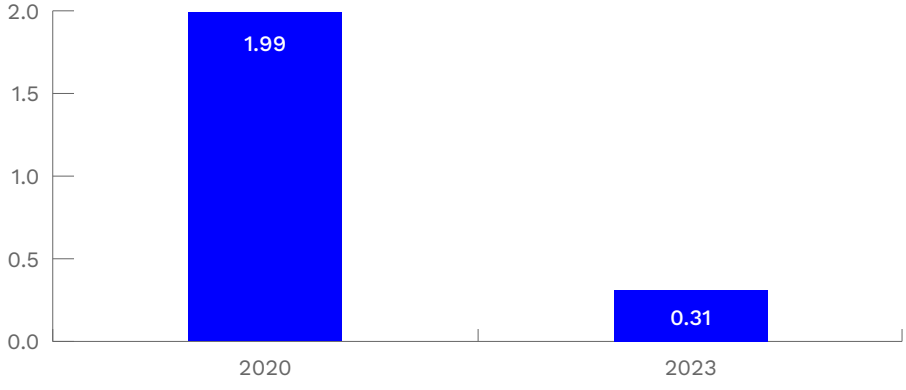
Virtual battery potential

Nyrstar's smelting operations provide a range of stability services to national electricity grids, as well as key flexibility. The significant electrical load that is managed at zinc smelters can allow them to act as a "virtual battery". This means that they can produce as much zinc as possible when national electricity grids have a surplus of green energy and reduce production during a shortage. This maximises the use of variable renewable energy and minimises consumption of fossil-fuelled, base-load generated power.

Carbon footprint at Nyrstar's European smelters tCO_2e/tZn (Scopes 1 and 2)

83%

reduction of Nyrstar's operational CO_2 footprint since 2020



Nyrstar's European zinc solutions

Nyrstar offers both low-carbon footprint and secondary zinc to help meet the environmental requirements of its customers. Consistent with industry peers*, Nyrstar can offer different solutions to customers based on their individual chosen paths of decarbonisation. In 2024, Nyrstar underwent an update of the Life Cycle Assessment of its Special High-Grade (SHG) Zinc**.

Changes to methodology

In 2024, the International Zinc Association (IZA) updated the *Technical Guidance on Carbon Footprint Calculation for Zinc Ore Concentrate, Special High-Grade (SHG) Zinc, and Primary Zinc Alloys* changing how to consider emissions associated with secondary materials, such as Waelz Oxides. Oxides typically have large life cycle emissions due to the recycling process. The updated methodology considers the secondary oxides to have the same average carbon footprint as the zinc concentrates feed.

Low-carbon zinc

Nyrstar's zinc production from primary sources has one of the lowest GWP (global warming potential, tCO_2e/tSHGZ) values on the market at almost four times lower than the industry average.

Nyrstar uses the market-based approach to calculate its emissions. This calculation reflects the actual emissions generated from the electricity source that a company has purposefully chosen, such as renewable energy with Guarantees of Origin certificates and supplier-specific emissions factors.

Second life zinc

Recycled content: When galvanised steel is recycled, the recycling furnace separates molten steel from zinc coating, which is captured as a zinc fume. This fume is collected, upgraded and used as raw material input at Nyrstar's plants.

Recovered content: This includes various by-products from the metals and minerals industry that contain significant concentrations of zinc. These by-products are pre-processed to remove impurities and are then used as an additional feed material for Nyrstar's smelters.

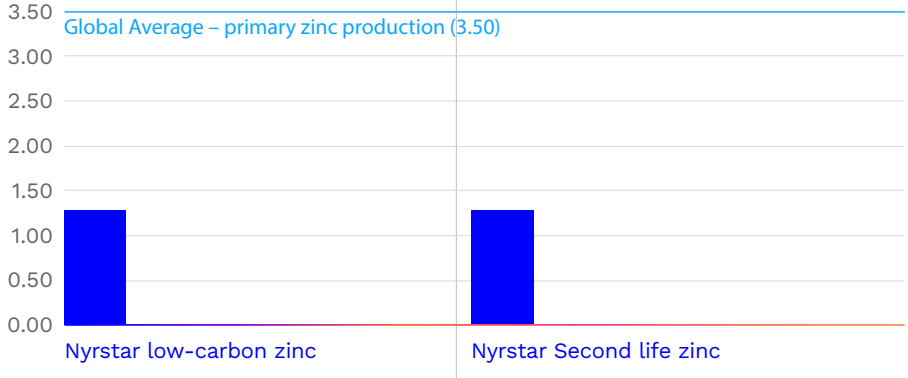
Through the use of secondary zinc, valuable natural resources are conserved and the environmental footprint associated with mining activities and levels of waste are reduced.

1.28

tCO_2e/tSHGZ
Nyrstar low-carbon zinc
(primary feedstocks)

1.28

tCO_2e/tSHGZ
Nyrstar Second life zinc
(secondary feedstocks)

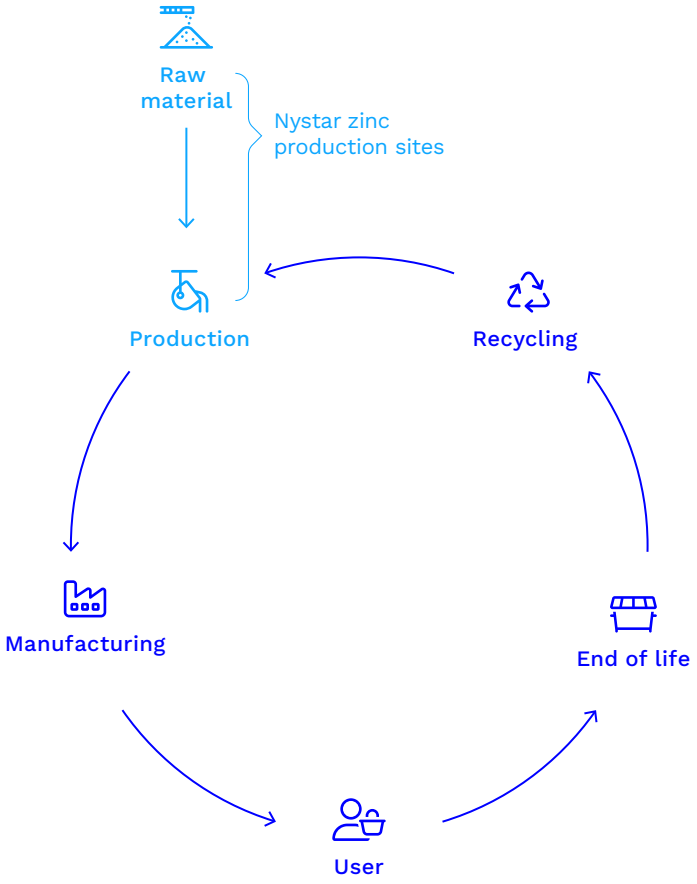


* Life Cycle Assessment of Nyrstar European Special High Grade Zinc (SHGZ) Methodology
** LCA for Auby remains based on 2021 data.

What is a life cycle assessment (LCA)?

Life cycle assessment is a methodology that considers a product's entire life cycle emissions, from the point where the raw material is mined, to the product being refined and used for manufacturing, to being used by the consumer, to the point where it is scrapped and recycled or disposed.

LCA has been standardised by the International Organisation for Standardisation (ISO14040 and ISO14044) and forms the conceptual basis for management approaches and standards as well as for regulations and product design.



Allocation

In the zinc industry, mass allocation can be used to apportion emissions associated with zinc products. The mass balance approach ensures that the volume of material entering the process is equivalent to the volume of material produced.

Life Cycle Assessment of Nyrstar European Special High Grade Zinc (SHGZ) Methodology ↗

Trafigura Pte. Ltd.
10 Collyer Quay #29-05/01
Ocean Financial Centre
Singapore 049315

Tel : +(65) 6319 2960
Fax : +(65) 6734 9448

www.trafigura.com
TM/0449.5e
Last updated: October 2024

Trafigura