

Better Environment







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Ausnutria is dedicated to protecting the environment and preserving resources for future generations. The Group strives to adopt sustainable business practices and minimise its environmental impact of upstream operations and associated production procedures. To fulfil the Group's commitment to environmental sustainability, subsidiaries also make efforts to improve energy and water efficiency, manage emissions and water discharge, reduce material consumption and waste generation, and manage climate change-related risks related to operations.

Key Highlights in Year 2022

- Monitored progressive targets for GHG emissions, energy consumption, water use, and waste recycling to improve our environmental performance.
- Around 95% of the electricity consumption for operations of Ausnutria
 Netherlands was compensated through renewable energy sources.
- Used chromium-free passivation cans which prevent the production of toxic wastewater and avoids the associated environmental risks.
- Purchased packaging materials from sustainable sources, such as suppliers from supplier certified with Forest Stewardship Council (FSC) chain of custody certification.
- Offset about 13% of direct GHG emissions voluntarily by purchasing carbon credit.
- The new production facilities in Heerenveen, which is under construction, will guarantee a completely gas-free production process.



AUSNUTRIA'S ENVIRONMENTAL TARGETS

To better manage its environmental performance, the Group has developed a set of progressive targets for greenhouse gas (GHG) emissions, energy consumption, water use, and waste recycling rate. The targets were thoughtfully established using a hybrid approach of both top-down and bottom-up. These environmental targets allow Ausnutria to closely monitor its progress towards environmental sustainability and encourage extensive adoption of sustainable practices.

Environmental targets by Year 2025	Progress achieved in 2022
GHG Emissions ¹	
Reduce total GHG emissions intensity by 20%	–21%
Reduce the Scope 1 emissions intensity by 15%	-25%
Reduce the Scope 2 emissions intensity by 20%	-9%
Energy Consumption ¹	
Reduce the energy consumption intensity by 20%	–17%
Reduce the natural gas consumption intensity by 20%	–21%
Reduce the electricity consumption intensity by 15%	-5%
Water Consumption ¹	
Reduce water consumption intensity by 35%	– 40%
Waste ²	
Maintain the recycling rate of paper and wood at 100%	100%
Maintain the recycling rate of rest milk and rest powder at 100%	100%
Achieve the recycling rate of plastic of at least 90%	99%

- Using 2019 as the base year
- Recycling rate target is for production-related waste only
- We will keep monitoring our achievements to seek continuous improvement and review the targets in the coming years where necessary

The Sustainability Committee and the Sustainability Workgroup regularly review the Group's environmental policies and initiatives. To ensure compliance with all applicable environmental laws and regulations in regions that it operates, the Group has set guidelines for the implementation of environmental management systems and operational standards at subsidiaries. All the aforementioned highlights the Group's overall dedication to minimising the environmental impacts of its procurement, manufacturing, and distribution processes. The Group's production facilities in Kampen, the Netherlands and Changsha, the PRC, received ISO 14001 Environmental Management System certification.

MANAGING ENERGY EFFICIENCY AND CARBON FOOTPRINT

To address the pressing issue of global warming, countries around the globe have rolled out policies and plans to combat climate change and enhance their climate resilience. In particular, in the regions where the Group operates, the European Union intends to achieve climateneutral by 2050; Australia aims to reach net zero by 2050; and the PRC aims to reach carbon emission peak by 2030 and achieve carbon neutrality by 2060. To support the global effort, the Group has established targets on GHG emissions to lower its carbon footprint and accelerate its low carbon transition. Using 2019 as the baseline year, Ausnutria aims to:

reduce the total GHG emissions intensity by 20% by Year 2025

reduce the Scope 1 emissions intensity by 15% by Year 2025

• reduce the Scope 2 emissions intensity by 20% by Year 2025



The Group has established a strong energy and emissions management system and periodically upgrades the equipment at its manufacturing plants to improve overall energy efficiency and meet the Group's emission reduction targets. To make sure the equipment is operating at optimal efficiency, heating, ventilation, and air conditioning, boiler systems, lighting, and other energy-intensive equipment are all subject to routine inspections, maintenance, and replacements. The Group also invests equally to implement solar panel systems at its factories.

Operating with Low-Carbon Infrastructure

To minimise carbon emissions, Ausnutria's latest production facilities in Heerenveen, the Netherlands, which include a milk processing facility that is still under construction, utilise lowcarbon technologies and energy-efficient designs to reduce carbon emissions. The facility guarantees a completely gas-free production process for the production of semi-finished infant nutrition and will be 100% carbon and nitrogen free. It will ultimately help save approximately 40% of energy compared to a traditional drying tower. With the use of geothermal heat system, factories in Leeuwarden and Heerenveen are able to store thermal energy for heating and cooling buildings and reduce its reliance on natural gas. Only under extreme weather conditions or during system defect, natural gas would be consumed as a backup to avoid operation disruption. The Group also strives to reduce its reliance on natural gas by switching to heating by electricity to achieve zero nitrogen emissions at the new facilities, complying with environmental and climate change standards, as well as the Netherlands' New Nitrogen Law. The construction of new facilities in Kampen, the Netherlands, continued to reduce natural gas consumption and cut nitrogen emissions to 70mg/m³ in Year 2022. The installation of pumps, engines, and ventilators in the new facilities also helps enhance overall energy efficiency in the Netherlands. Going forward, Ausnutria will continue to convert to electric heating at other production facilities to further reduce its dependency on natural gas.

Improving Management to Raise Energy Efficiency

Ausnutria is aware of the significance of energy management in transforming to a low carbon business. The Group has established several energy targets in Year 2021 as part of its commitment to lowering energy consumption and enhancing energy efficiency and has launched various ongoing measures to meet the target.

The Group regularly assesses the energy efficiency of its production facilities and, where necessary, introduces new initiatives and upgrades its equipment to optimise energy performance. Ausnutria promotes energy conservation and reduces emission by utilising digital technology such as 5G applications, artificial intelligence, big data and blockchain. A mobile application is adopted In Changsha City, the PRC, to track energy usage in real-time at various locations, including laboratories, manufacturing facilities, warehouses and public areas. Real-time control from the app covers air compression systems, purification workshops, air conditioning systems and ozone systems of the factories. In case of any unusual energy usage, the application immediately notifies the staff, enabling the factory to respond promptly by making adjustments and corrections. The Group can then better manage its energy performance and pinpoint areas for improvements thanks to real-time monitoring of energy consumption data.

The Group makes significant investments to upgrade the production facilities, with a view to further enhancing energy efficiency and pursuing a low-carbon operation. In the PRC, variable speed drives were installed in the air-conditioning systems in major factories, which optimise energy efficiency by operating the electric motors at their optimal speed and facilitating good indoor ventilation. Furthermore, exhaust pipes in the washing machine room were upgraded to improve ventilation and lower the demand for air conditioning. In PRC, the air purification pipe in one of the factories was upgraded in Year 2022. While ensuring a minimum number of air changes, the operating frequency of the fan is reduced from 45Hz to 35Hz to conserve energy. Around 77,000 kWh of electricity was saved and 67 tonnes of carbon emissions were avoided. In Leeuwarden, the Netherlands, energy-saving LED lamps and bulbs are used, covering 100% of its lighting devices. To practice energy saving, the power of the probiotic sachet cleanroom would be shut down when there is no production. It is estimated that the initiative saved 12,000 kWh of energy and reduced carbon emissions by 40 tonnes. All the above initiatives help lower Ausnutria's energy consumption for operations.

Minimising Transportation to Reduce Transportation and Carbon Emissions

Ausnutria also makes an effort to reduce carbon emissions by avoiding transportation for its supplies. To guarantee a reliable and consistent supply of cans, Ausnutria Netherlands worked with Trivium Packaging, an innovative and sustainable metal packaging manufacturer. The can manufacturing facility in Heerenveen, the Netherlands, which commenced operation last year, produces and delivers cans to factories in Heerenveen and Leeuwarden. The factory helps to facilitate a more efficient travel route and reduces the travel distance necessary for can logistics, hence lowering the associated GHG emissions.



A new can manufacturing facility in Heerenveen, the Netherlands, commenced operation in Year 2021.

Deploying Renewable Energy

With the extensive use of renewable energy, the Group strives to reduce its carbon emissions with solar panels and carbon credits. In Year 2022, Ausnutria Australia continued to install new solar panels in its sites. The installation of solar panels in Australia saved electricity consumption by around 197 MWh. The Group is also investigating the viability of using solar energy in its production facility in Leeuwarden, the Netherlands. Due to the constraints of onsite generation, the Group prioritises the purchase of renewable energy certificates over conventional options. Ausnutria Netherlands continued to obtain renewable energy certificates in Year 2022 and offset around 95% of its electricity consumption use and made voluntary purchases carbon credits to offset the direct GHG emissions emanated by its use of natural gas. In Year 2023, we will pursuit 100% offset by sourcing renewable energy in operations in the Netherlands.



Solar panels implemented in Keysborough Site in 2022

Key Highlights on Renewable Energy in Year 2022

Around 95% of electricity consumption

for operations was offset in the Netherlands through renewable sources.

Around 13% of direct GHG emissions generated

was offset by voluntarily purchasing carbon credit.

Around 10% of total electricity consumption in Australia

was saved by solar panel system in the factories.

SAVING WATER FOR FUTURE GENERATIONS

Ausnutria recognises the importance of water management and employs a multi-pronged approach to reduce water use, recycle water, and effectively manage wastewater generated by its operations. The Group has established a Group-wide water target to better manage its water consumption performance. Using 2019 as the base year, Ausnutria aims to:

reduce water consumption intensity by 35% by 2025

The production of milk powder essentially involves wet processes. The production facilities in Ommen, the Netherlands, implement a closed-loop water system to reduce their water consumption. The condensed water is collected during the manufacturing process and reused in other parts of the process, such as boiling and ultrafiltration. The existing Clean-in-Place (CIP) sanitary cleaning system in Kampen, the Netherlands, was previously upgraded with solutions that facilitate the recovery and reuse of final rinse water for the next cleaning cycle. Such replacement helps conserve 17% of the water consumption annually. Automatic sensors for water taps are installed in the PRC to avoid unnecessary water usage while condensed water in air-conditioning systems is also recycled. In Year 2022, the PRC adopted a new initiative in which the condenser of the refrigerator in the workshop is cleaned with chemicals. The chemicals are regularly injected into the cooling tower to improve the heat exchange efficiency of the condenser and reduce the evaporation of cooling water. Furthermore, Ausnutria Australia enhanced efficiency in the cleaning regime for Gut relief products in Year 2022, which successfully reduced water consumption for requirements cleaning by 5%.

The Group also performs regular equipment inspections to detect and repair water leakages from taps, pipelines, and valves in a timely manner in order to prevent water wastage. To prepare for upcoming feasibility analysis on water recycling and reuse systems, water consumption data is tracked and carefully monitored. The Group works progressively to reduce water wastage and improve water efficiency through the above initiatives, in order to meet the water target previously set.

ADOPTING A COMPREHENSIVE WASTE MANAGEMENT PLAN

To limit the environmental impacts of waste processing and disposal, the Group has established a set of comprehensive procedures to manage waste from its inception to its final disposal. To guide its waste management efforts and promote Group-wide recycling, the Group has also developed 3 waste targets. By 2025, Ausnutria aims to:

- Maintain the recycling rate of paper and wood at 100%
- Maintain the recycling rate of rest milk and rest powder at 100%
- Achieve the recycling rate of plastic of at least 90%

Ausnutria seeks to divert waste from landfills to achieve the above targets. The Group closely collaborates with local licensed waste operators to collect and correctly dispose of waste in accordance with local regulations. Ausnutria has all the necessary facilities to handle waste in an environmentally sustainable manner. In Australia's dairy production facility, a baling machine is utilised to cut down the waste generated from cardboard for raw material packaging. In the PRC, Ausnutria has optimised and rearranged the packaging to minimise cardboard usage for its dairy products, which significantly reduced the need for transportation and associated environmental impact. Remaining packaging materials such as cardboard, plastic lid and plastic bag are 100% collected and recycled by licensed recycling operators. In Year 2022, Ausnutria maintained 100% recycling rate for paper and wood and 99% for plastic.

The majority of the non-hazardous waste produced by Ausnutria comes from milk and milk powder residues due to its primary business of dairy products manufacturing. To reduce waste generation, rest milk and milk powder are sold for animal feed in Australia whilst milk and rest milk powder are largely converted into biomass in the Netherlands by a contracted external service provider. In Year 2022, Ausnutria maintained 100% recycling rate for rest milk and rest powder. The Group also treats hazardous waste generated from dairy and nutrition product manufacturing with extra care. Chemical waste is stored properly in designated sealed containers and passed to authorised third parties for disposal regularly. The Group encourages all employees to sort and recycle waste at source in order to minimise waste generation.

DEVELOPING ENVIRONMENTALLY FRIENDLY PACKAGING MATERIALS

Ausnutria pursues green development and works progressively to limit the environmental impact relating to its product design. The Group develops eco-friendly packaging with the use of green tinplate products. Special guidelines are also developed for packaging, such as refraining from using dichromate to avoid hazardous waste generation and discharge and switching to a more energy-efficient method of tinplate production.

To respond to the national call for green development, Ausnutria produces milk powder cans with passivated tinplate without using chrome. The use of chromium-free passivation cans prevents toxic wastewater and avoids the associated environmental risks. In Year 2022, PRC began to purchase packaging materials from sustainable sources, which cardboard was procured from supplier certified with Forest Stewardship Council (FSC) chain of custody certification. To reduce resources consumption, cardboard packaging for several products in PRC was reduced from 230g to 200g, reducing paper consumption by 13%. The Group will continue to advance its eco-packaging to avoid unnecessary consumption of packaging materials to support green development.

To promote green product design, Ausnutria is formulating a 'Green Design Product Specification', which has been included in the database of Hunan Provincial Department of Industry and Information Technology as the basis for green product design evaluation, and this will be included as an important consideration in government's procurement, showing that Ausnutria's efforts for green development have been officially recognised.



MANAGING CLIMATE RISKS WITH RESILIENCE STRATEGIES

Ausnutria is conscious of the impact and risks that climate change may bring to its business. The Group has performed a detailed climate risk assessment on its operations and supply chain with assistance of a third-party consultant. Desktop research was conducted to identify material physical and transition risks for each operating location, their likelihood, and the potential impact on Ausnutria's operations.

The summary of the climate risks identified is as follows:

Physical risks

Risk type	Impact	Justification
Flooding (riverine and coastal)	Asset damage and operation suspension	Ausnutria's factories are mainly located along the river or coast. Flooding may damage factories' equipment and facilities and leads to financial loss. In particular, water can cause critical damage to electric equipment and its components. Dysfunction of dairy processing machines caused by severe flooding may lead to the suspension of factory operations.
	Accessibility to factories	Flooding in nearby areas of Ausnutria's factories may impede employees from accessing the sites. Employees may have difficulties reporting for duty or resuming work upon flooding. This can have negative impact on productivity and affect the feasibility of resuming operations.
	Disruption in logistics	The majority of Ausnutria's products that are produced overseas are transported to mainland China for sale. Flooding disrupts logistics through trucking route disruptions and freight delays.
Extreme wind	Asset damage and operation suspension	Extreme wind may increase the frequency of tropical cyclones, tornadoes, and hurricanes. It could cause extensive damages to the factory properties when wind speed exceeds the maximum level that the buildings can withstand.
	Disruption in logistics	Majority of Ausnutria's products that are produced overseas are transported to mainland China for sale. Natural disasters caused by extreme wind can disrupt logistics through trucking route disruptions, shipping, and freight delays.

Risk type	Impact	Justification
Temperature change	Increase operating cost	Rising mean temperature, as well as heatwave and extreme cold, can drive up Ausnutria's operating costs. The rise in indoor and outdoor temperature would lead to greater energy consumption for maintaining the cooling system and air condition system in production areas.
Water stress	Increase operating cost	While water is not used in production processes for the majority of Ausnutria's factories, factories like Kampen and Ommen rely on water for processes such as pumping, cooling circuits, cleaning and sanitising. Water stress may prompt government to raise water tariff, increasing the financial cost of water supply.

Transition risks

Risk type	Justification
Policy and legal risk	The introduction of new policies may lead to increased operating costs and early retirement of current machinery. Meanwhile, with increasing awareness on climate risk, voluntary-based initiatives may scale up or become mandatory in the near future. Acknowledging the trend of existing policy helps prepare Ausnutria for future transition and avoid non-compliance penalties.
Technology risk	In Australia, government bodies encourage and promote the uptake of energy-efficient technologies for the dairy processing industry. In Europe, in response to the 2030 climate and energy framework, the EU has funded various projects to search for alternative solutions to reduce the emission from the dairy industry. The capability to adopt green technologies may help Ausnutria optimise its operation, operate with cost-effectiveness while minimising the environmental impacts.
Reputational risk	There is growing attention on the carbon footprint of dairy products. NGOs and international organisations have launched various dairy sustainability initiatives. Ausnutria may seise the opportunity to establish a positive company image by joining international or industry associations and responding to the sustainability initiatives. Aligning with the industry approach allows Ausnutria to maintain its dairy product competitiveness under the low-carbon trend.
Market risk	With the substantial increase in the vegan population in major economies, the demand for plant-based or non-dairy milk alternatives is growing at a rapid pace. The demand for such products grows particularly faster among adults, compared with infants and toddlers.

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Supply chain disruption

Risk type	Justification
Likelihood	Milk farms in the Netherlands are most likely to be exposed to coastal flood risk, tropical cyclones, tornadoes, and hurricanes and water stress risk. Additionally, milk farms in Australia are most likely to be exposed to coastal flood risk and wildfires.
Impact	While Ausnutria does not own farms, its dairy business is highly dependent on the stable supply of quality raw milk from cow and goat farmers. Extreme weather such as flooding and strong wind may damage dairy farm components, including livestock, machinery, buildings, equipment, and food stock. This may affect the safety and provision of milk supply and pose an impact to the stable supply of raw milk sources. Ausnutria might face increasing procurement costs.
	In addition, road closures due to extreme weather events may result in logistics delays, affecting the milk quality. The financial loss caused by asset damage and suspension of operation may increase the production cost of milk farm and Ausnutria.

Ausnutria considers climate risks in its factory development. In the PRC, sponge city elements were incorporated into the design of the Smart Factory to enhance preparedness for expected changes in rainfall patterns. By implementing stormwater management, the Group hopes to better manage the facility's flood risks and enhance its climate resilience. The principles of infiltration, retention, storage, purification, reuse, and discharge are also applied in the Smart Factory. Its design, which includes a sunken green space, permeable pavement and a rain garden, enables the factory to collect surface runoff and withstand rainstorms with a return period of one in 50 years, enhancing the factory's preparedness for extreme weather.

