



Better Environment









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Better Environment

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 2023

- Track and evaluate progressive targets for GHG emissions, energy consumption, water use, and waste recycling to enhance our environmental performance.
- 100% of the electricity consumed by Ausnutria Netherlands for operations was compensated through renewable energy sources.
- Employed chromium-free passivation cans which avoid the production of toxic wastewater and its associated environmental risks.

- Purchased packaging materials from sustainable suppliers, such as those that hold a chain of custody certification from the Forest Stewardship Council ("FSC").
- The new production facilities in Heerenveen, which is under construction, will guarantee a completely gas-free production process.



TRACKING OUR PROGRESS ON ENVIRONMENTAL TARGETS

The Group has established a series of progressive targets for greenhouse gas (GHG) emissions, energy consumption, water consumption, and waste in order to better manage its environmental performance. The targets were carefully set utilising a combination of top-down and bottom-up approach. With the help of these environmental targets, Ausnutria is able to track its progress towards environmental sustainability and promote extensive adoption of sustainable practices.

Environmental targets by Year 2025 ⁴	Progress achieved in 2023
GHG Emissions ⁵	
Reduce total GHG emissions intensity by 20%	-17%
Reduce the Scope 1 emissions intensity by 15%	-16%
Reduce the Scope 2 emissions intensity by 20%	-19%
Energy Consumption ⁵	
Reduce the energy consumption intensity by 20%	-19%
Reduce the natural gas consumption intensity by 20%	-24%
Reduce the electricity consumption intensity by 15% ⁶	-4%
Water Consumption⁵	
Reduce water consumption intensity by 35%	-42%
Waste ⁷	
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%

The Group's environmental policies and initiatives are periodically reviewed by the Sustainability Committee and the Sustainability Workgroup. The Group has established guidelines for the implementation of environmental management systems and operational standards at subsidiaries to ensure compliance with all applicable environmental laws and regulations in the regions in which it operates. The aforementioned emphasises the Group's general commitment to reducing the environmental impact of its sourcing, production, and distribution processes. The Group's production facilities in Kampen, the Netherlands and Changsha, the PRC, are certified with ISO 14001 Environmental Management System.

ENHANCING ENERGY EFFICIENCY TO MINIMISE CARBON FOOTPRINT

Various nations have implemented strategies and policies that aimed at mitigating the adverse effects of climate change and strengthening their climate resilience. With regard to the regions in which the Group operates, the European Union seeks to become climate neutral by 2050; Australia intends to reach net zero by the same year; and the PRC intends to reach carbon emission peak by 2030 and achieve carbon neutrality by 2060. The Group has set GHG emission targets to reduce its carbon footprint and accelerate its low-carbon transition in support of the global effort. 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

- ⁴ We will keep monitoring our progress to pursue continuous improvement and will review the targets in the coming years where necessary
- ⁵ Using 2019 as the base year
- The absolute electricity consumption of 2023 comparing to that of 2019 has increased due to business expansions, which also contribute to an increased revenue and thus impacting the intensity figure. We will assess any feasibility to increase the energy efficiency regarding the productions in the future
- ⁷ Recycling rate target is for production-related waste only



To increase overall energy efficiency and achieve the Group's emission reduction targets, the Group has set up a robust system for managing energy and emissions, and regularly upgrades the equipment at its manufacturing facilities. Heating, ventilation, air conditioning and boiler systems, lighting, and other energy-intensive equipment are all subject to periodic inspections, maintenance, and replacements to ensure the equipment is running at maximum efficiency. Additionally, the Group makes equal investments in installing solar panel systems at its facilities.

Operating with Low-Carbon Facilities

Low-carbon technology and energy-efficient designs are used in Ausnutria's new production facilities in Heerenveen, the Netherlands to reduce carbon emissions. These facilities include a milk processing plant that is still under construction. The facility promises a fully gasfree production process that is 100% nitrogen- and carbon-free for the production of semifinished infant nutrition. When compared to a conventional drying tower, it will ultimately help save about 40% of energy. Factories in Heerenveen can reduce their dependency on natural gas by storing thermal energy for building heating and cooling with the use of geothermal heat systems. The Group also aims to reduce its dependency on natural gas by moving to electricity-based heating at the new facilities to achieve zero nitrogen emissions, in accordance with environmental and climate change regulations, as well as the new Nitrogen Law of the Netherlands. In Kampen, the Netherlands, improvements to the existing facilities, such as increasing concentration on towers and adjusting temperatures for drying process, and raising evaporators efficiency, have resulted in a reduction of natural gas usage by 6% in Year 2023. The installation of pumps, engines, and ventilators to the new facilities contributes to improved energy efficiency. Ausnutria will keep converting its other manufacturing facilities to electricheating in the future to lessen its reliance on natural gas.

Strengthening Energy Management to Enhance Energy Efficiency

Ausnutria is conscious of how important energy management is to its transition to a low-carbon company. In Year 2021, the Group set a number of energy targets as part of its commitment to reduce energy use and improve energy efficiency. To achieve these targets, the Group has started a number of ongoing initiatives.

The Group evaluates the energy efficiency of its manufacturing facilities on a regular basis, and where necessary, launches new projects and upgrades existing equipment to maximise energy performance. Through the use of digital technologies like blockchain, big data, 5G applications, and artificial intelligence, Ausnutria saves energy and reduces emissions. In Changsha City, the PRC, a mobile application is used to monitor energy consumption in real-time across various sites, including manufacturing facilities, laboratories, warehouses and public spaces. The ozone systems, air conditioning systems, purification workshops and air compression systems of the factories are managed real-time through the app. The programme instantly alerts the workers in the event of any abnormal energy use, allowing the factory to rapidly respond with adjustments and corrections. The Group may use then use real-time monitoring of energy consumption data to better manage its energy performance and identify opportunities for improvement.

To purse a low-carbon operation and further optimise energy efficiency, the Group invests heavily in modernising its manufacturing facilities. Major factories in the PRC have installed variable speed drives in their air conditioning systems, which maximise energy efficiency by running electric motors at their highest speed and achieving better indoor ventilation. Additionally, the laundry room's exhaust pipes were upgraded to improve ventilation and reduce the need for air conditioning. In Leeuwarden and Ommen, the Netherlands, all lighting fixtures are made entirely of energy-efficient LED bulbs. Insulating installation has been made to Leeuwarden's warehouse to reduce electricity consumption for heating. All aforementioned measures contribute to the reduction of Ausnutria's energy consumption.

Habit control is also pursued to reduce electricity usage. In the PRC, air conditioning temperature adjustment range is being limited. Inspections is also being done to avoid energy wasting behaviours, such as opening windows and turning on air conditioner at the same time. An evening energy-saving inspection is conducted every day after operation hours, to make sure air conditioning and lights are switched off after use. At the PRC headquarter office, 14.8% of electricity is saved in Year 2023.



Utilising Renewable Energy

The Group uses renewable energy extensively to lower its carbon footprint through the installation of solar panels and carbon credits. Ausnustria Australia continued to deploy new solar panels in various locations in Year 2023. In total, the use of solar panels in Australia helped reduced about 349 MWh of electricity, saving 22% of total electricity consumption in the region. The Group is also studying the viability of using solar energy in its production facility in Heerenveen, the Netherlands. The Group prioritises the acquisition of renewable energy certificates over conventional solutions due to the limitations of on-site generation. Ausnutria Netherlands continued to purchase renewable energy certificates voluntarily to achieve a 100% compensation.



Solar panels implemented in Keysborough Site

Key Highlights on Renewable Energy in Year 2023

100% of electricity consumption

for operations was offset in the Netherlands through renewable sources

Around 22% of total electricity consumption in Australia

was saved by solar panel system in the factories.

Managing Upstream and Downstream Carbon Footprint

Apart from carbon footprint of Ausnutria's operations, the Group strives to work closely with its upstream and downstream business partners to reduce its Scope 3 emissions.

Ausnutria seeks to lower its carbon footprint by minimising transportation for its supplies. Ausnutria Netherlands collaborated with Trivium Packaging, an innovative and sustainable metal packaging manufacturer, to provide a consistent and reliable supply of cans. The can manufacturing facility in Heerenveen, the Netherlands, which commenced operation in Year 2021, produces and delivers cans to factories in Heerenveen and Leeuwarden. The factory lowers the required transportation distance for can logistics and enable a more efficient travel route, minimising the associated GHG emissions.

PRESERVING WATER FOR FUTURE GENERATIONS

Ausnutria acknowledges the crucial importance of water management and uses an integrated approach to cut down on water use, recycle water, and effectively handle the wastewater produced by its operations. The Group has established a Group-wide water target to better manage its water consumption. Using Year 2019 as the base year, Ausnutria aims to:

reduce water consumption intensity by 35% by Year 2025

Ausnutria's production of milk powder essentially involves wet processes. To optimise water consumption, the production facilities in Ommen, the Netherlands, adopt a closed-loop water system. Condensed water is collected during the manufacturing process and reused in other parts of the process, such as boiling and ultrafiltration. The Clean-in-Place (CIP) sanitary cleaning system in Kampen, the Netherlands, was upgraded with solutions that facilitate the recovery and reuse of final rinse water for the next cleaning cycle. This replacement reduces water consumption by around 12.4% in Year 2023. In the PRC, automatic sensors for water taps are used in the factories to avoid unnecessary water consumption while condensed water in air-conditioning systems is also recycled. In Year 2023, the PRC adopted an automatic sensor for the cleaning taps and deployed a recycled water system for cooling the air-conditioning system in the production workshops. Ausnutria Australia continued to improve water efficiency in the cleaning regime for Gut relief products in Year 2023, thereby reducing the amount of water needed for requirements cleaning by 5%.

In order to avoid wastage of water, the Group also conducts routine equipment inspections to detect and promptly fix water leakages from taps, pipelines and valves. Water consumption data is tracked and closely monitored in order to prepare for an upcoming feasibility study on water recycling and reuse systems. The Group gradually reduces water wastage and enhance water efficiency through the above initiatives to meet its water reduction target.

ADOPTING AN EXTENSIVE WASTE MANAGEMENT PLAN

The Group has developed a comprehensive set of procedures to manage waste from its inception to its final disposal, with the aim of minimising the associated environmental consequences. The Group also created 3 waste targets to direct its waste management activities and encourage recycling. By Year 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%

To support the above targets, Ausnutria continuously explores methods that divert waste from landfills. The Group works closely with licensed waste operators in the area to collect and properly dispose of waste in compliance with local laws. Ausnutria is equipped with all the necessary facilities to handle waste in an environmentally responsible manner. A baling machine is used in Australia's diary manufacturing plant to reduce the amount of cardboard waste produced from raw material packaging. Ausnutria has improved and re-organised the packaging for its dairy products in the PRC to reduce the use of cardboard, thereby minimising the demand for transportation and the 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 2023, Ausnutria maintained 100% recycling rate for paper and wood and 99% for plastic.



Since Ausnutria's primary business involves the manufacturing of dairy products, the majority of non-hazardous waste generated originates from the residual of milk and milk powder. In Australia, rest milk and milk powder are sold for animal feed to reduce waste generation, whereas in the Netherlands, a contracted external service provider transforms most of the rest milk and milk powder into biomass. In Year 2023, Ausnutria maintained 100% recycling rate for rest milk and rest powder. The Group also takes special precautions while handling hazardous waste produced during the production of dairy and nutrition products. Chemical waste is routinely sent to licenced third parties for disposal after being stored properly in designated sealed containers. The Group encourages all employees to practise waste separation and recycle waste at source to minimise waste generation across operations.

PROMOTING GREEN DEVELOPMENT WITH ECO-FRIENDLY PACKAGING AND PRODUCT DESIGNS

Ausnutria strives for environmentally-friendly development and seeks to reduce the impacts of its product design on the environment. The Group uses tinplate products for a eco-friendly packaging, for the reason that tins could be 100% infinitely recycled. Additionally, special packing guidelines are established, such as refraining the use of dichromate to avoid hazardous waste generation and discharge and moving to a more energy-efficient method of tinplate production.

Ausnutria uses passivated tinplate instead of chromium to manufacture milk powder cans in response to the country's call for green development. By using chromium-free passivation cans, hazardous wastewater is avoided along with the related environmental hazards. In Year 2023, PRC and the Netherlands continued to purchase from sustainable suppliers that provide packaging materials certified with FSC chain of custody certification. Cardboard packaging for several products in PRC was also reduced from 230g to 200g, reducing paper consumption by 13%. In Year 2023, final packaging process in the Netherlands has been optimised, achieving a 50% decrease of stretch wrap foil on pallets. Inline auto sampling is also done during powder processing, instead of sampling the tins after powder sampling, resulting in fewer disposal of finished and filled tins. In the future, the Group will continue to adhere to the above principles and strive to achieve continuous upgrade in packaging to avoid wastage and promote green development.

To promote green product design, Ausnutria has formulated two 'Green Product Design Standards', for infant formula milk powder and modified milk powder respectively, which has been included in the database of Hunan Provincial Department of Industry and Information Technology as the basis for green product design evaluation. In Year 2023, through the review and approval of the Changsha Municipal Bureau of Industry and Information Technology, Ausnutria infant formula milk powder (12-36 months old, stage 3) was selected as the 2022 Changsha City Green Design Product. This will be included as an important consideration in government's procurement, showing that Ausnutria's efforts for green development have been officially recognised.

ADDRESSING AND MANAGING CLIMATE RISKS WITH RESILIENCE STRATEGIES

Ausnutria is aware of the potential effects and risks that climate change poses to its operations. The Group worked with a third-party consultant to conduct a thorough evaluation of the climate risk to its supply chain and operations. For each operating location, desktop research was conducted to determine the significant physical and transition risks, their likelihood and the possible 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	logistics through trucking route disruptions and freight delays.

Risk type	Impact	Justification
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.
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 seize 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.	

Supply chain disruption

	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.

Climate risks are taken into account by Ausnutria when developing its factories. Sponge city features were included in the Smart Factory's design in the PRC to improve readiness for anticipated change in rainfall patterns. The Group intends to increase the facility's climate resilience and better manage flood risks with stormwater management. The development of Smart Factory takes infiltration, retention, storage, purification, reuse, and discharge into consideration and is well-prepared to face extreme weather conditions with its design. It incorporates a rain garden, permeable pavement and a sunken green space that collects surface runoff so that it is able to resist rainstorms with a return period of 1 in 50 years.