

### Background

At a time when the effects of climate change are becoming increasingly apparent, the need for transparency, accountability and action in addressing carbon emissions has never been more critical.

This CO<sub>2</sub> emission report serves as an insightful analysis that sheds light on environmental footprint of Nordic Gluten Free Bakery.

#### Commitment

Our commitment to reducing CO<sub>2</sub> emissions is not driven solely by environmental responsibility, but also by the recognition that it represents smart business practice.

By reducing our carbon footprint, we position ourselves as a leader in our industry, address environmentally conscious customers and identify opportunities for cost savings.

# Motivation

With the impending legislation on CO<sub>2</sub> reporting means that it is necessary to reduce emissions. With this report, we try to focus on our CO<sub>2</sub> footprint in order to potentially improve efficiency and reduce costs.

### Consumer Choice

Consumers are increasingly choosing products with a lower carbon footprint. With this report we are providing the needed transparency to choose both healthy and environmentally conscious food products.

## Goals for 2030



The plan towards CO<sub>2</sub> neutrality in 2030 involves addressing five emissions reductions:

- Energy reductions and efficiency measures in our operations.
- Electricity supply from renewable energy sources
- Offset of non-avoidable emissions through compensation projects
- Information campaigns for employees and idea management
- Engagement of suppliers across the value chain

We will engage more with our key suppliers encouraging them to reduce their emissions that affect the products and services they provide to us.

# What are we reporting?

This report will outline and report the six greenhouse gases covered by the Kyoto Protocol and in accordance with ISO 14064-1:2019. If a direct emission source is excluded, it can be justified in accordance with the principles expressed in the overall coverage of ISO 14064-1:2018.

This report includes Nordic Gluten Free Bakery's direct emissions (Scope 1) from sources the company owns or controls and indirect emissions (Scope 2) resulting from the production of purchased electricity, heat or steam in its annual non-financial report as well as the ESG- indexes that require such information.

 $CO^2$ 

CH

#### **GHG Scopes**

- Direct emissions of greenhouse gases (Scope 1) Direct emissions arising from sources owned or controlled by the company.
- Indirect emissions of greenhouse gases (Scope 2) Indirect emissions from the production of purchased electricity consumed by the company and district heating.
- Other indirect emissions of greenhouse gases (Scope 3) Indirect emissions that are a consequence of the company's activities, but which originate from sources not owned or controlled by the company.

#### Method

N,0

Data used to calculate the CO<sub>2</sub> emissions in this report include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons and hydrofluoro- carbons, and will be summarized and reported as CO<sub>2</sub>-eq. A carbon dioxide equivalent or CO<sub>2</sub> equivalent, abbreviated as CO<sub>2</sub>-eq, is a metric measure used to compare emissions of different greenhouse gases based on their global warming potential (GWP), by converting amounts of other gases to the equivalent amount carbon dioxide with the same global warming potential.

PFCs

SF

NF,

**HFCs** 

# **Industry Average**

Nordic Gluten Free bakery emits **1,58 kg** CO2eq per kg bread, notably lower than the industry average of **1,93 kg** CO2-eq per kg for artisan bread production. This highlights our significantly greener approach, showcasing a ~18% kg CO<sub>2</sub>-eq per kg improvement over typical industry practices.





**Data Collection:** Collect data on greenhouse gas emissions (GHG) from various sources within the industry.

**Conversion to CO<sub>2</sub>-equivalent:** Convert emissions of other greenhouse gases (e.g., methane, nitrous oxide) into CO<sub>2</sub>-equivalent using their respective global warming potentials (GWPs). This allows for a common metric to compare emissions of different gases.

**Normalization:** Normalize the emissions data to a common unit of measurement, typically kilograms of CO<sub>2</sub>-equivalent per unit of output (e.g., per kilogram of product produced). This ensures that emissions can be compared across different products or processes within the industry.

Calculating the industry average CO<sub>2</sub>-equivalent emissions per kilogram (CO<sub>2</sub>-eq/kg) typically involves gathering data from multiple sources within the industry and then aggregating and analyzing that data to determine an average value.

**Aggregation and Analysis:** Aggregate the normalized emissions data from various sources within the industry and analyze it to determine the average CO<sub>2</sub>-eq/kg. This may involve statistical analysis techniques to account for variability within the data set.

#### **Direct emissions**

Scope 1 emissions are direct emissions from sources owned or controlled by the reporting entity. They include emissions from the combustion of fossil fuels in owned or controlled boilers, furnaces, vehicles, and other equipment.

Scope 2 emissions are indirect emissions associated with the consumption of purchased electricity, steam, heating, or cooling by the reporting entity. These emissions occur as a result of the generation of electricity or heat that the organization purchases from an external source, such as a utility provider. While the organization does not directly control the generation of electricity or heat, it can influence these emissions through choices related to energy procurement and efficiency measures. The scope 1 emissions stem from oil burning ovens for bread baking. This accounts for the majority of the energy related emissions, and is the main focus of the upcoming reductions for the coming year.

In the past year we have been using a heat recapture mechanism where heat from freezing/refrigeration plants you remove heat from the products. In the past, this energy was allowed to disappear in condensers, where the refrigerant is cooled down before it goes back into the freezer and is compressed again. What we do now is that we remove the largest part of the energy from cooling systems in a heat exchanger, so that we get heat that can be used for heating rooms and hot domestic water.

Together with the addition of solar panels this adds up to a total of 15% reduction in electricity consumption.

The solar panels account for an 11% reduction in electricity consumption and the recapture accounts for another 4%.



**15** % Reduction

# Electricity

With electricity being the one source of energy with the most variance on emissions, it is worthwhile to take a deeper look at the month over month emissions.

It is apparent that the summer months yield a lower carbon footprint with more renewable energy sources available. Increased solar and wind energy usage reduces reliance on fossil fuels, cutting emissions.

Firstly, the carbon intensity - grams of CO<sub>2</sub> per KWh is measured for each month. This number varies with the number of hours of sunlight and the average wind speed, both of which determine the amount of green energy produced in a given month, which affects the total carbon emissions caused from electricity production that month.



What becomes apparent is that even if electricity consumption remains mostly constant from month to month, the amount of CO<sub>2</sub> emitted can still vary. As an example take the months of August through October where production was mostly constant but because carbon intensity went down so did the total emissions month over month.

# Supply chain emissions

Supply chain emissions (scope 3) related directly to production covers more than 80% of the total CO<sub>2</sub> emission. Nordic Gluten Free Bakery focuses on delivering high quality, healthy food products with as lean a process as possible. Less than 1% of the total emissions come from administrative overhead.





The bulk of the emissions from production come from the use of gluten free flour. Our focus on product quality shows among other things from the low 3% emissions from flavorings.

Our focus on a lean production process is also evident from the fact that only 5% of our emissions come from packaging. We focus on eliminating waste in all of our processes.

Our dedication to a lean production process is evident from the mere 5% of our emissions originating from packaging.



We prioritize waste elimination across all operations, aiming for efficiency and sustainability.

By reviewing our processes regularly, we seek to minimize resource usage and environmental impact. Our focus extends beyond emissions reduction to sustainable practices that optimize resource utilization and minimize waste. This focus aligns with our sustainability goals and underscores our commitment to responsible business practices.

#### **Global goals**

Nordic Gluten Free Bakery recognizes that climate change is a global problem that requires urgent and collective action and undertakes to contribute to the decarbonisation of the global economy.

We believe that companies can play a pioneering role in the fight against climate change.

At Nordic Gluten Free Bakery, we recognize the power of collective action in driving decarbonization and fostering a more sustainable global economy. We firmly believe that businesses, regardless of size, can serve as catalysts for positive change in combating climate change. As such, we are dedicated to implementing concrete measures aimed at reducing our carbon footprint and promoting environmental stewardship, aligning with Sustainable Development Goals (SDGs) 12 and 13. SDG 12 (Responsible Consumption and Production) underscores the need for sustainable consumption and production patterns. Through this lens, we strive to minimize waste generation, optimize resource use, and promote sustainable practices across all facets of our operations. By sourcing locally produced ingredients, reducing packaging waste, and implementing efficient production processes, we aim to contribute to the achievement of SDG 12.

SDG 13 (Climate Action) emphasizes the urgency of taking action to combat climate change and its impacts. As part of our commitment to SDG 13, we prioritize efforts to reduce greenhouse gas emissions and promote climate resilience. By investing in energy-efficient technologies, transitioning to renewable energy sources, and implementing carbon reduction strategies, we are actively working towards aligning our business practices with the goals of SDG 13. Through this report, we affirm our accountability and commitment to actively contributing to the fight against climate change and advancing the principles of responsible consumption and production. By embracing sustainability as a core value, we aspire to make a meaningful contribution to the global effort to build a more sustainable and resilient future for generations to come.

