CLIMATE REPORT 2022

Climate objectives, emission values and plans for the future

DICHTUNGEN GASKETS | **ISOLATIONEN** INSULATION | **KOMPENSATOREN** EXPANSION JOINTS

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Frenzelit Climate Report 2022

Our company

For over 140 years, Frenzelit GmbH – a family-owned company with a rich tradition – has delivered reliable, effective performance at its numerous locations. What began as a local operation has now expanded into an international corporation with locations in the US, China, India and the Czech Republic.

Over 550 employees work hard each day to maintain our quality standards in the production of gaskets, insulation, expansion joints and heating systems.

We are committed to long-term partnerships with our employees and our suppliers and partners. For us, this is the ideal way to ensure the best possible product quality.

Our management system

In order to make organizational processes as simple, clear and concise as possible for everyone involved, we decided to set up our management system in accordance with the ISO 45001, 14001, 50001 and 9001 as well as the IATF 16949 standards. As a result, we have a certified quality management system along with qualified occupational health and safety, environmental and energy management systems that all feature a similar structure and are thus readily understandable to all our employees.

Our climate objectives: Carbon neutrality by 2035

As a manufacturer, we are aware of our responsibility towards our employees, customers, partners and the environment. That is why we want to keep our impact on the environment as low as possible. We use our environmental management system to analyze the areas of the production chain where we have may have an adverse effect on the environment. We are constantly striving to further reduce these impacts. This makes it easier for us to reach our climate objectives. It also allows us to support our customers and help them reach their own goals.

We have continued to revise and sharpen our climate objectives over the past few years. **Now our overarching objective is to achieve carbon neutrality by 2035 in terms of the Scope 1 and Scope 2 emissions at our location in Germany.** Consequently, we will continue to reduce our emissions in order to completely eliminate them as soon as possible. Transitioning our company in Germany to 100% green energy is an important step in this direction. **From 2023 we will purchase electricity exclusively from renewable sources. This will enable us to save around 2 474 t CO_2e – 35% of our current total emissions and 92% of our Scope 2 emissions worldwide. We are also launching a transformation concept that will identify measures to reduce our overall emissions by at least 40%.**

In view of the trends that have developed over the past several years, it is clear that we are on the right track to producing lower emissions year-on-year. The only time we were unable to meet these targets was during the COVID-19 pandemic: To minimize the risk of infection for our employees, we decided to operate our facilities with a much higher percentage of fresh air than usual. Ultimately, this led to higher energy requirements during the winter months and to greater GHG emissions as a result.

Last year we were able to further reduce our emissions compared to 2021. However, we are still above pre-pandemic levels. One of the main reasons for this is the high capacity utilization at our plants. In some cases, work was carried out 24 hours a day, 7 days a week in four separate shifts last year. We emitted a total of 6 983 t CO_2e.

Greenhouse gas emission reductions are evaluated using the bottom-up approach, i.e. all implemented measures are added together. Evaluation using the top-down approach would be much more complicated, as it is influenced by many factors that are difficult to calculate, such as weather, product portfolio or machine utilization.

Travel to and from our sites also generates emissions. To reduce these emissions as far as possible, we rely on short transport routes and procure our raw materials within Europe whenever feasible. Due to the pandemic, we also attempted to replace on-site appointments with digital meetings in recent years, which has eliminated a number of long-distance trips along with the associated emissions. Our digitalization efforts have been a tremendous help to us in pushing ahead with these objectives, which is why we were also able to offer our employees a wide range of options for working from home and will continue to offer many of these opportunities after the pandemic.

Digitalization has also helped us cut our paper consumption and has dramatically reduced our printing costs. Many documents that were previously printed on paper are now stored electronically and accessible to all our employees.

Our primary sources of emissions

This report includes the emissions of the Bad Berneck and Himmelkron sites in Germany, data from Frenzelit Inc. in Lexington, USA, from Frenzelit s.r.o. in Dolní Rychnov, Czech Republic and from the Private Limited Company in Bangalore, India, during the period from January 1 to December 31, 2022.

Our key indicators for electricity and natural gas were calculated from the quantities consumed and the emission value per kWh.. To calculate fuel emissions, we requested CO_2 emissions from oil companies.

GHG source of emissions	Emissions factor Germany	Emissions factor Czech Republic	Emissions factor USA	Emissions factor India
Electricity	254 g/kWh CO_2e	594 g/kWh CO_2e	300 g/kWh CO_2e	148 g/kWh CO_2e
Natural gas	190 g/kWh CO_2e	200 g/kWh CO_2e	315 g/kWh CO_2e	No use of gas
Solvents	1.09 kg/l CO_2e	No use of solvents		
Fuel	2.64 kg/l CO_2e			

Table 1: Emissions factors used

GHG source of emissions	Emission value
Electricity	2 703 t/a CO_2e
Natural gas	3 780 t/a CO_2e
Solvents	253 t/a CO_2e
Fuel	247 t CO_2e
Total	6 983 t/a CO_2e

Table 2: Emission values by source of emissions

Emission values

Emission values may vary slightly due to rounding values in some places or various options for determining the level of consumption.

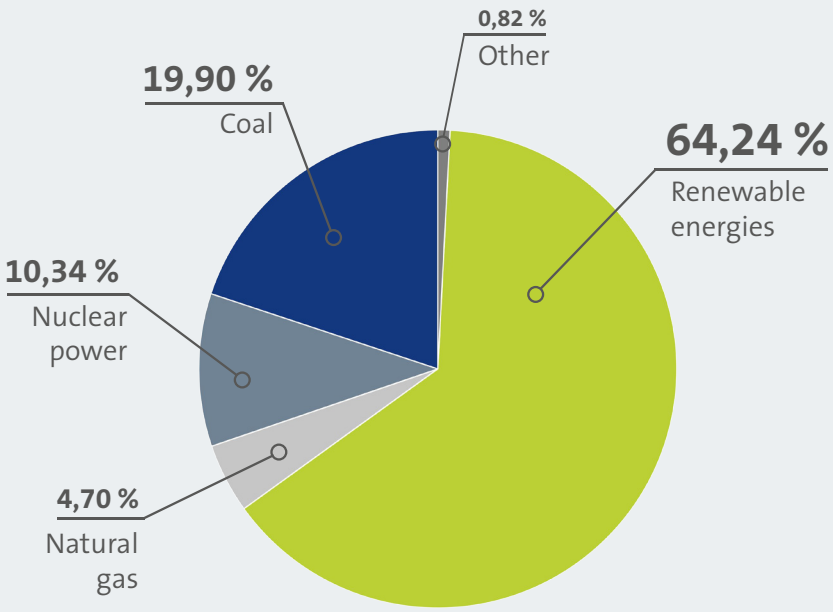

Figure 1: Electricity mix

Location	Electricity	Natural gas	Fuel	Solvents	*Total*
Bad Berneck (GER)	1 684 t CO_2e	3 054 t CO_2e	240 t CO_2e	245 t CO_2e	5 223 t CO_2e
Himmelkron (GER)	790 t CO_2e	670 t CO_2e		8 t CO_2e	1 468 t CO_2e
Dolní Rychnov (CZE)	74 t CO_2e	55 t CO_2e		–	129 t CO_2e
Lexington (USA)	154 t CO_2e	0 t CO_2e		–	154 t CO_2e
Bangalore (IND)	1 t CO_2e	–	8 t CO_2e	–	9 t CO_2e
Total	2 703 t CO_2e	3 779 t CO_2e	248 t CO_2e	253 t CO_2e	6 983 t CO_2e

Table 3: Emissions by location

Company/Division		Electricity	Natural gas	Fuel	Solvents	*Total*
Frenzelit GmbH (GER) + Frenzelit s.r.o. (CZE)	**Mobility (MD)**	519 t CO_2e	143 t CO_2e	25 t CO_2e	–	687 t CO_2e
	Industry (ID)	1 903 t CO_2e	3 430 t CO_2e	165 t CO_2e	253 t CO_2e	5 751 t CO_2e
	Central divisions (CD)	126 t CO_2e	206 t CO_2e	50 t CO_2e	–	382 t CO_2e
Frenzelit Inc. (USA)		154 t CO_2e	0 t CO_2e	–	–	154 t CO_2e
Frenzelit India Pvt. Ltd. (IND)		1 t CO_2e	–	8 t CO_2e	–	9 t CO_2e
Total		2 703 t CO_2e	3 779 t CO_2e	248 t CO_2e	253 t CO_2e	6 983 t CO_2e

Table 4: Emissions by division

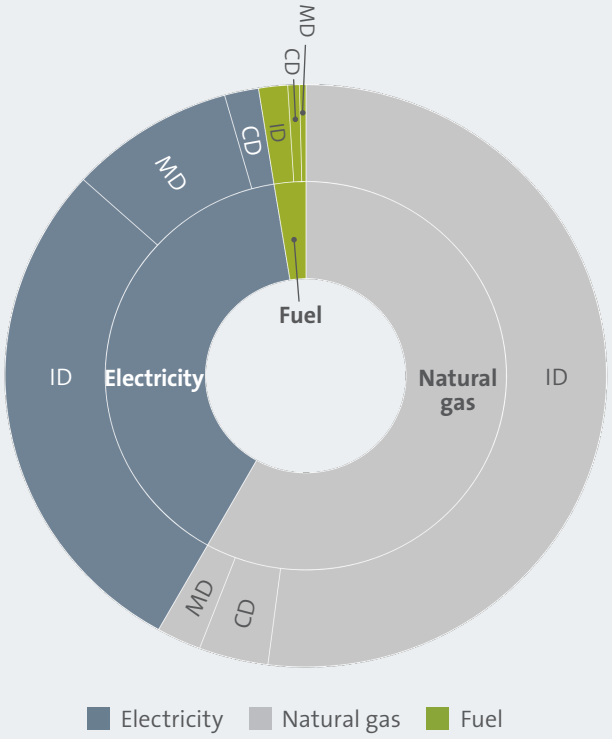

Figure 2: Breakdown of emissions by division

Location	Scope 1	Scope 2	*Total*
Bad Berneck (GER)	3 539 t CO_2e	1 684 t CO_2e	5 223 t CO_2e
Himmelkron (GER)	678 t CO_2e	790 t CO_2e	1 468 t CO_2e
Dolni Rychnov (CZE)	55 t CO_2e	74 t CO_2e	129 t CO_2e
Lexington (USA)	0 t CO_2e	154 t CO_2e	154 t CO_2e
Bangalore (IND)	8 t CO_2e	1 t CO_2e	9 t CO_2e
Total	4 280 t CO_2e	2 703 t CO_2e	6 983 t CO_2e

Table 5: Emissions by scope (locations)

Company/Division		Scope 1	Scope 2	*Total*
Frenzelit GmbH (GER) + Frenzelit s.r.o. (CZE)	Mobility (MD)	168 t CO_2e	519 t CO_2e	687 t CO_2e
	Industry (ID)	3 848 t CO_2e	1 903 t CO_2e	5 751 t CO_2e
	Central divisions (CD)	256 t CO_2e	126 t CO_2e	382 t CO_2e
Frenzelit Inc. (USA)		0 t CO_2e	154 t CO_2e	154 t CO_2e
Frenzelit India Pvt. Ltd. (IND)		8 t CO_2e	1 t CO_2e	9 t CO_2e
Total		4 280 t CO_2e	2 703 t CO_2e	6 983 t CO_2e

Table 6: Emissions by scope (divisions)

Our measures to date

As our data clearly shows, we have already managed to implement a number of emissions reduction measures. In order to keep our consumption of fossil energy sources as low as possible, we expanded our photovoltaic system at the Himmelkron site. The existing system with 299.75 kWp was extended by 464 kWp.

We have also made an effort to reduce the heating requirements in the individual plants. We have decided to carry out multiple renovations to increase energy efficiency. In Plant 0 (Bad Berneck site) the exterior facade was replaced by new sandwich panels, which reduced heating energy requirements by approximately 20%. This resulted in GHG savings of just under 60 t per year. The renewal of the heating cascade at our Czech site also reduced GHG emissions by around 6%. The plant is now more efficient, saving us 4 t of emissions each year.

However, we want to do more than simply optimize our heating energy requirements. To save energy related to lighting we equipped all our plants with smart LED lamps. They use presence detectors and daylight controls to turn on and off automatically, thus minimizing the need for permanent illumination. This step alone saves us a great deal of energy, and our annual GHG emissions dropped by 144.5 t.

We take regular steps to raise awareness among our employees to ensure we are able to identify potential savings opportunities as early as possible in the future. Some of last year's measures included refreshing our energy efficiency manager training program and training new energy efficiency managers. Energy efficiency managers are the first points of contact in the respective production departments when it comes to saving energy. Their suggestions for improvement have already helped us discover multiple areas where energy was previously wasted and which we were able to correct through reorganization measures. The energy efficiency managers meet every three months to discuss the situation in the individual departments and where further improvements may be needed.

Emissions development in recent years

Our consumption of electricity, natural gas and fuel, and thus also our greenhouse gas emissions, have steadily decreased over the last few years. This is also evident through constant monitoring and measurement of our key indicators. Due to the pandemic and the correspondingly higher percentage of fresh air required to run our plants in order to reduce the risk of infection along with high capacity utilization rates at our plants, our emissions only increased significantly in 2021. Due to the high capacity utilization rates at our plants in 2022, we were unable to reduce our emissions below pre-pandemic levels.

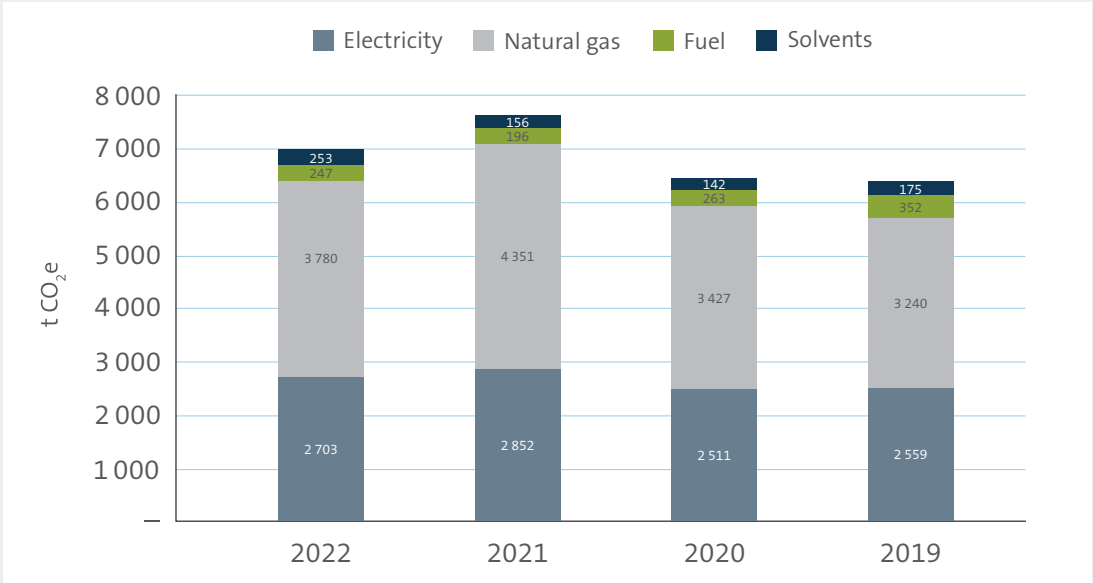

Figure 3: Emissions development

Source of emissions	2022	2021	2020	2019
Electricity	2 703 t CO_2e	2 852 t CO_2e	2 511 t CO_2e	2 559 t CO_2e
Natural gas	3 780 t CO_2e	4 351 t CO_2e	3 427 t CO_2e	3 240 t CO_2e
Fuel	247 t CO_2e	196 t CO_2e	263 t CO_2e	351 t CO_2e
Solvents	253 t CO_2e	156 t CO_2e	142 t CO_2e	175 t CO_2e
Total	6 983 t CO_2e	7 555 t CO_2e	6 343 t CO_2e	6 325 t CO_2e

Table 7: Development over the past four years

Our plans for the near future

Electric vehicles as company cars
We have modified our car policy and are already ordering the first electric vehicles as company cars. We will also install a total of 20 charging stations.

Exhaust air heat as space heating
To minimize energy loss, we want to reuse the waste heat from our compressed air stations and use it to heat workspaces.

Replacement of old machine drives
We intend to replace outdated and inefficient drives in our machines with new, energy-efficient versions. This will reduce the energy requirements of machines that currently work well but consume too much energy so we can continue to use them.

Bicycle leasing with BusinessBike
Beginning in 2023 our employees will be able to lease a bicycle with the help of our partner BusinessBike. The bikes can be used for personal trips and/or the commute to work.

More sustainability for your process

Sustainability is more than environmental protection. In our production we consider key ecological aspects such as the reduction of CO_2 and conservation of resources, always with economic and social sustainability in mind. We help our customers make their processes and products more sustainable.

The ecovadis Silver Seal of Quality, which is awarded to the top 25% of participating companies, assesses various dimensions of sustainability and is proof of Frenzelit's "structured and proactive approach to sustainability". It reaffirms our commitment to sustainability and motivates us to continue on our chosen path. However, our pursuit of continuous progress will not permit us to settle for anything less than Gold status. Instead, it challenges us to steadily enhance our processes and achieve our ultimate goal of obtaining the Gold Seal.

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