

Environmental Statement 2023



.hess

Vulkan seit 1898
Eine Marke von Hess

Hess GmbH Licht + Form

Environmental Statement 2023

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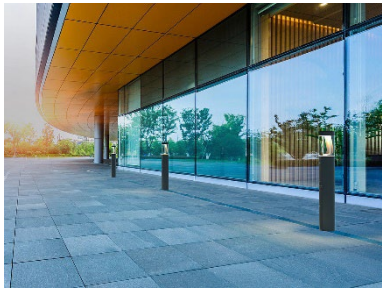


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1. Hess GmbH Licht + Form

Thanks to an extremely varied range of luminaires, Hess is able to fulfil every lighting design requirement for outdoor public spaces and exterior illumination of objects and properties. High-quality site furnishings complete the product portfolio. The perfect combination of luminaires and site furnishings enables the realisation of holistic concepts for the design of urban and open spaces – also, and especially, with expressive and extraordinary special solutions.



As the world's first manufacturer of LED streetlights, Hess played a pioneering role in innovative LED outdoor lighting already in 2003.

Hess offers a portfolio of innovative LED lights, which feature a unique design, modular LED technology and intelligent lighting management systems. The products are designed for the most demanding of conditions and, in keeping with the company slogan of “Hess – Enhancing urban spaces”, simultaneously meet the most sophisticated standards for design.



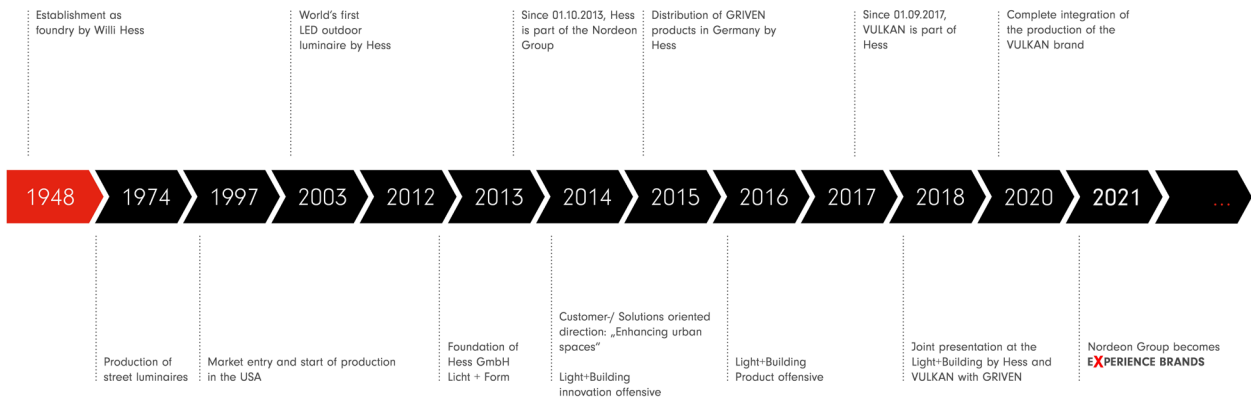
Vulkan – a Hess brand

Vulkan stands for products that are of premium quality in terms of engineering and also highly efficient. Vulkan’s roots go all the way back to the year 1898. This makes Vulkan one of the oldest brands in the lighting industry. Particularly within the German-speaking area, the company enjoys a very good reputation. Vulkan stands for luminaires that are the product of advanced engineering and that are offered at extremely attractive conditions. The combination of very high levels of energy-efficiency and long maintenance intervals result in very lucrative payback periods for Vulkan customers.



1.1 History

With the company founded as an industrial castings supplier in the Black Forest town of Villingen in 1948, today the entire Hess production, including development as well as special and custom production, is still located in Villingen. The administration, marketing, design, product management and lighting laboratory are also in Villingen. The product portfolio was optimally rounded out with the 2017 acquisition of “VULKAN”, which also belongs to Experience Brands.



1.2 Structure

Hess GmbH Licht + Form in Villingen has been part of Experience Brands since 1 October 2013. On 1 September 2017, Hess GmbH took over Vulkan, which is also part of Experience Brands and based in Springe.

At the beginning of 2021, the Nordeon Group officially changed its name to EXPERIENCE BRANDS. A total of some 20 professional consultants provide competent project support in Germany.

Hess exports to over 50 countries worldwide. Hess has a high profile as well as an excellent reputation and is continuing to expand its international presence (with expansion of its sales activities in France as well as a separate sales force in the United Kingdom).



1.3 Location information

The Hess headquarters in Villingen is certified according to EMAS. The total surface area of the company premises is 11,967 m². The surface area kept as an undeveloped area is 799 m². 4308 m² has been built on and 5257 m² have been sealed, for a total of 11,168 m². The built-on and sealed/impermeable surface area remains unchanged. No construction measures were taken in 2021.



Figure 1: Hess GmbH Licht + Form, Lantwattenstraße 22, D-78050 Villingen-Schwenningen

1.4 Our employees

The health of our employees is extremely important to us. For this reason, occupational health and safety are among our company's top priorities. We protect our employees from adverse health effects through comprehensive preventive measures. The ergonomic furnishing of our workplaces, both in production and in administration, ensures a healthy posture. The perfect arrangement of the keyboard and screen or the layout of the work equipment combined with the chairs and standing supports play a crucial role. Another focus is also on noise protection in production. By conducting regular inspections and updating the risk assessments, we ensure that possible weak points are recognised in good time before any injuries occur.

Apprenticeships at HESS:

- Construction mechanic (m/f/d)
- Machining mechanic (m/f/d)
- Industrial clerk (m/f/d)
- Electronics technician for devices and systems (m/f/d)



116 Employees

Full-time and part-time division

99 Full-time
17 Part-time



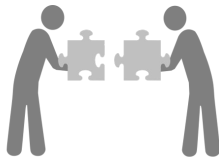
Average age

46 years



Length of service

13,2 years



Quote

35 Women
81 Men



2. Corporate philosophy

2.1 Hess and our guiding principles

Wherever cities, municipalities and landscapes are being designed and shaped today, Hess products are present. We are an up-and-coming medium-sized company. Our versatile product range enables custom design of public and urban spaces. In the lighting sector, our products range from pioneering, design-oriented LED luminaires to illuminating bollards and in-ground spotlights through to beautiful heritage lighting. In the design sector, we offer barrier bollards, park benches, roll-over tree grates and tree guards, planters, modern waste receptacles and a wide range of custom-made products.

The diversity of the products we offer demonstrates the customer focus of our company. We determine customer requirements as well as all relevant statutory and regulatory requirements. Fulfilling these requirements makes a significant contribution to increasing the level of our customers' satisfaction. With our many years of experience as well as our quality and environmental standards, we orient and align ourselves according to the needs of the market. To continue to achieve all of this, our quality and environmental policy has become an integral component of the HESS corporate philosophy.

2.2 Our policy



Our quality and environmental policy

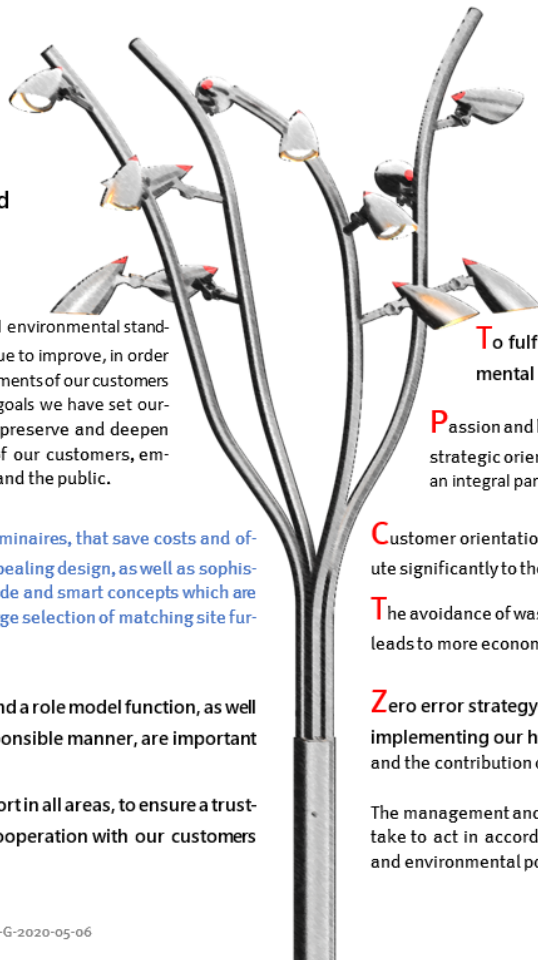
Highest quality and environmental standards, that we continue to improve, in order to meet the requirements of our customers and to achieve the goals we have set ourselves. We want to preserve and deepen the existing trust of our customers, employees, suppliers and the public.

Energy-efficient luminaires, that save costs and offer impressively appealing design, as well as sophisticated, custom-made and smart concepts which are rounded off by a large selection of matching site furnishings.

Self-regulation and a role model function, as well as acting in a responsible manner, are important pillars for us.

Service and support in all areas, to ensure a trusting and reliable cooperation with our customers and suppliers.

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IMH-5.3

Commitment to continuous improvement of our environmental performance, to prevent environmental impacts and to protect the environment. Our company undertakes, within the bounds of possibility and economic feasibility, to make the production of our products environmentally friendly by using suitable innovative technologies.

To fulfil our binding obligations, we regularly monitor relevant environmental laws and regulations and undertake to comply with them.

Passion and high demands on ourselves inspire us every day to continue to plan our strategic orientation in a market-oriented way. Our quality and environmental policy is an integral part of the Hess corporate philosophy.

Customer orientation, meeting expectations and the enthusiasm for our products contribute significantly to the satisfaction of our customers.

The avoidance of waste, as well as the responsible and economical use of natural resources leads to more economical work and very good environmental performance.

Zero error strategy and a sustainable avoidance of errors contribute to successfully implementing our high quality standards. This is only possible thanks to the willingness and the contribution of the entire staff.

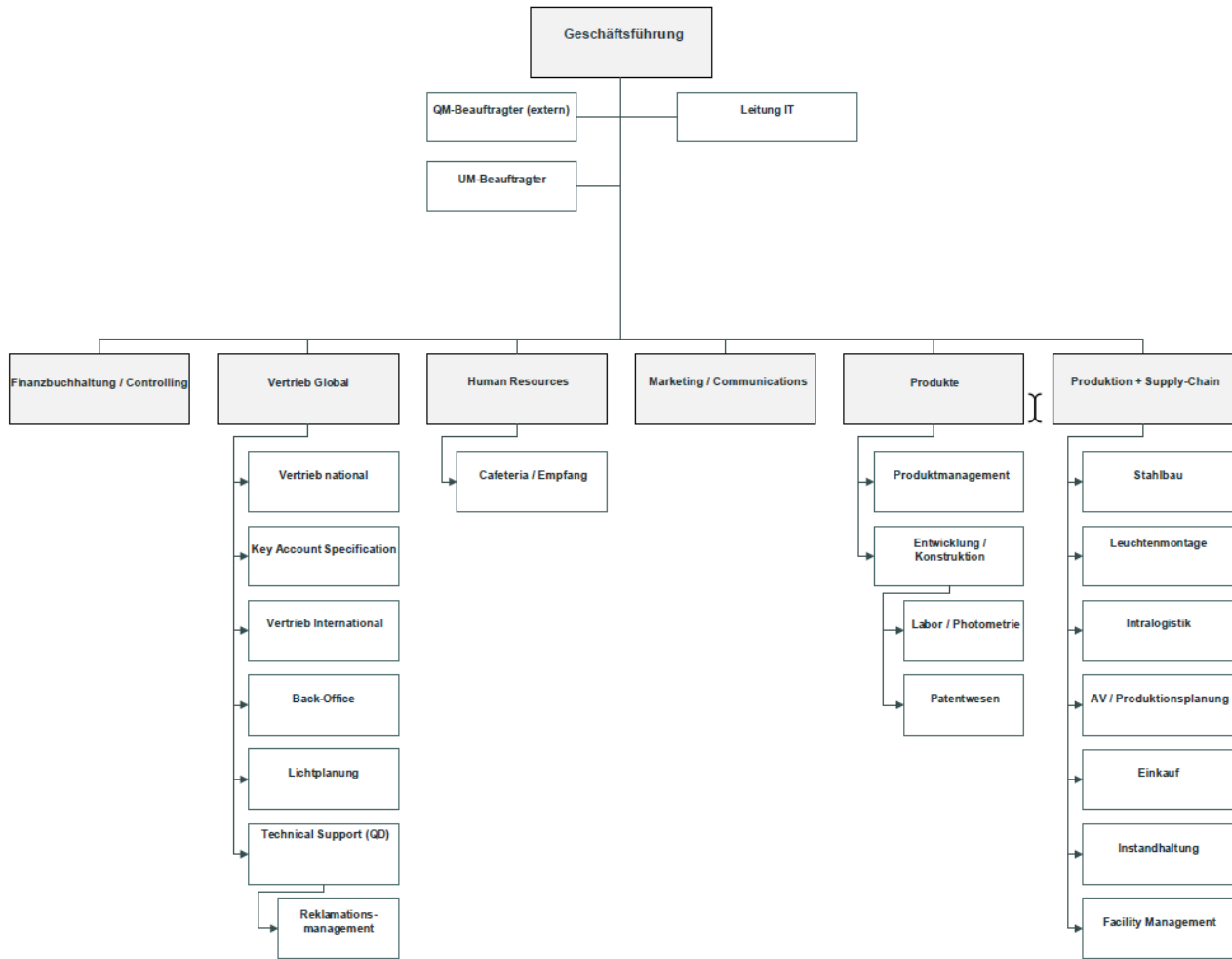
The management and its executives undertake to act in accordance with the quality and environmental policy stated above.

Alexander Hartlieb
Managing Director



2.3 Structural organisation

Hess GmbH Licht + Form employs a total of almost 120 people.



Date 01/10/2023

The heads of department and representatives report directly to the Managing Directors. The heads of department are directly responsible for the results of the work in their area of responsibility, while the management representatives are responsible for the respective subject areas across departments. The entire management system is evaluated at regular intervals as part of a management review. The topics of quality, the environment and occupational safety are coordinated across departments and checked for compliance with the relevant targets. The environmental officer is responsible for verifying the environmental performance and for compliance with the environmental programme, as well as for adapting the environmental management system to changing operational processes. Within the scope of environmental management, the various process managers at Hess are also responsible for the compliance of environmental-related activities in the various processes at the sites.

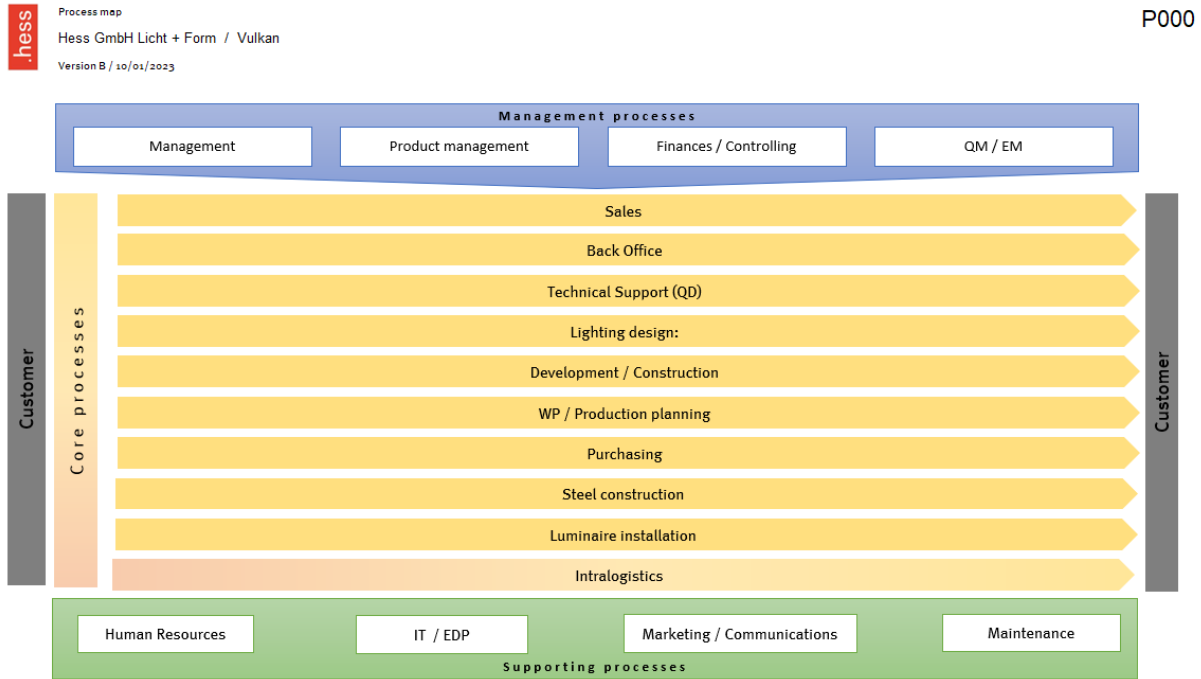
Hess regularly checks the legal conformity and regulatory developments in the environment sector and ensures that all relevant laws are complied with. This verification found that all relevant laws were complied with.

2.4 Processes

Development and production of LED luminaires, illuminating bollards, in-ground spotlights, barrier bollards, park benches and poles require the processes described below.

All cast products are manufactured for us by suppliers, including products such as tree grates, planters and waste receptacles.

Development of all products mentioned, takes place at the Villingen-Schwenningen site. These products are shipped by commissioned forwarding agents.



Production is broken down into two primary areas – steel construction and luminaire production.

Steel construction activities	Luminaire production activities
<ul style="list-style-type: none"> ▪ CNC machining ▪ Grinding ▪ Welding ▪ Plasma torching ▪ Machining 	<ul style="list-style-type: none"> ▪ Assembly of electromechanical modules ▪ Adhesive work

Plants, systems and equipment

The following plants, systems and equipment are available at the Villingen site:

- | | |
|--|--|
| <ul style="list-style-type: none"> ▪ Gas heating ▪ Compressed air system ▪ Gluing workstation ▪ CNC machining centre ▪ Welding workstations ▪ Smoke extraction systems | <ul style="list-style-type: none"> ▪ Air extraction ▪ Lifts ▪ System for recovering energy from waste heat ▪ Lathes and grinding benches ▪ Plasma torches ▪ Cranes |
|--|--|

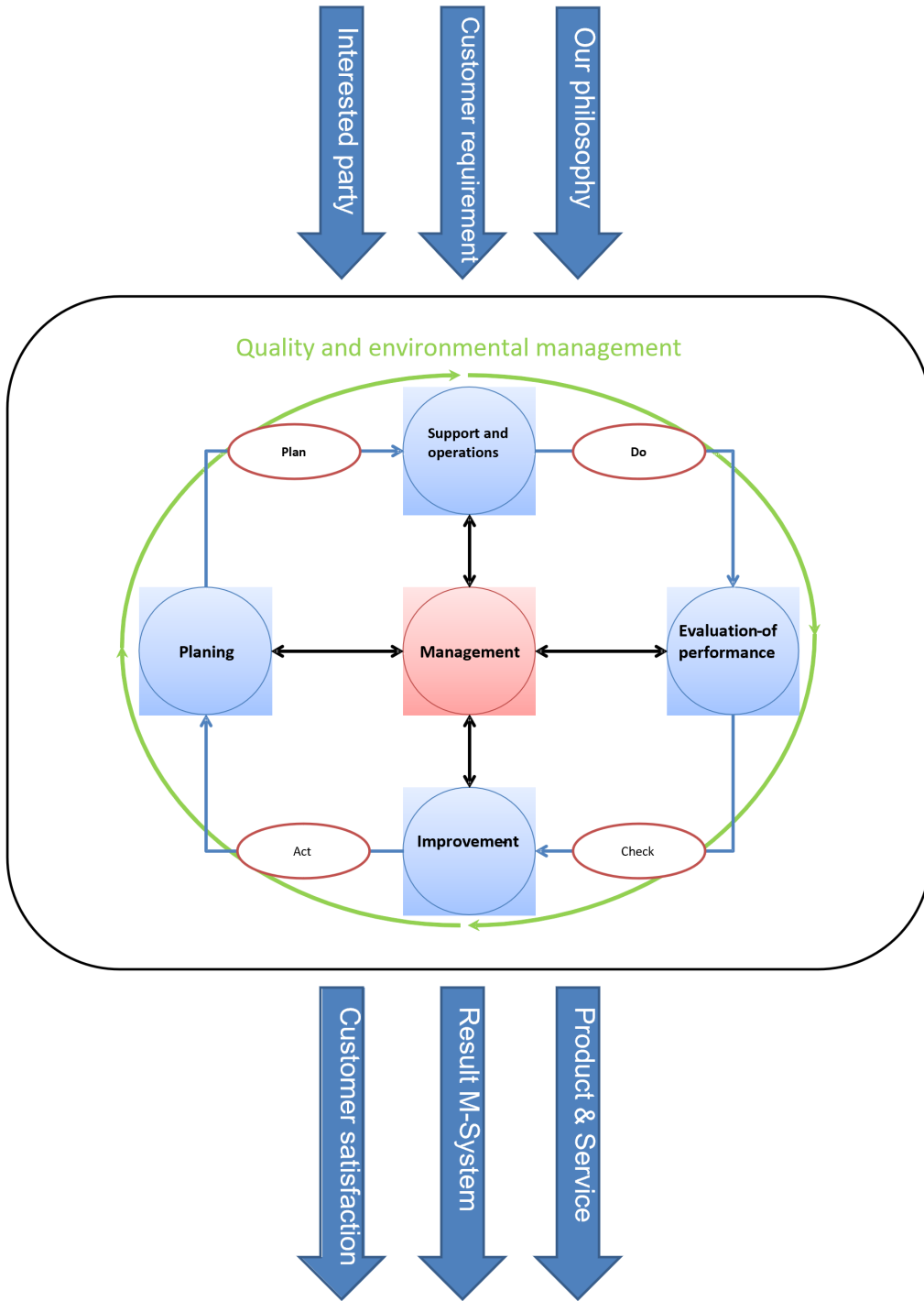
3. Our environmental management

Our Quality and Environmental Management department operationally implements our environmental management system. In the area of environmental and waste management, the company's management has appointed a Waste Management Officer who reports directly to the Managing Director.

Quality and environmental management are jointly documented in our Integrated Management System.

The quality and environmental management system is influenced by our customers' requirements and our corporate philosophy as well as by the following stakeholders.





4. Sustainability strategy

Last year, Hess developed a sustainability strategy to implement the environmental policy.



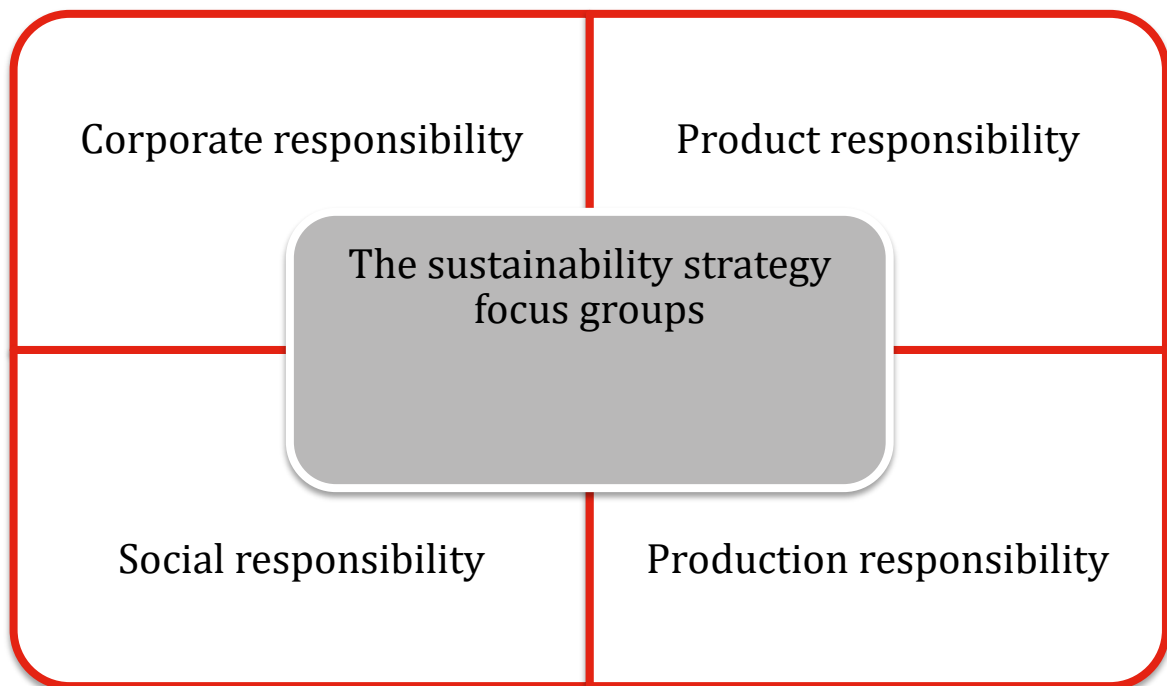
This was based on intensive dialogue with internal and external parties and the life cycle assessment.

Internally, contacts from the different divisions were therefore involved in the discussions.

Externally, the municipalities, communities and architects were consulted. This made it possible to draw on almost 85 years of expertise and experience. The aim of this survey was to identify the social, economic and environmental aspects of the company's business that are significant for Hess.

The most efficient levers were determined on the basis of the life cycle assessment.

It was therefore possible to develop an environmental programme that is specifically tailored to the company's needs and also takes the interests of the parties concerned into account. The results were divided into corresponding focus groups.



4.1 CORPORATE RESPONSIBILITY

In times of economic crisis, corruption and fraud, it is becoming increasingly important for companies to address various stakeholders' trust issues. To be able to operate credibly and transparently as a company, it is important to firstly identify any potential risks the business activity poses, secondly any that exist in the company environment, and to develop appropriate countermeasures.

As a medium-sized company, Hess has been proving its persistence and vision in its business activities for almost a century.



Examples of measures already implemented:

- ✓ Supplier code setting out regulations and obligating suppliers to exercise care
- ✓ Ongoing evaluation of suppliers
- ✓ Maintaining environmental and quality management certifications
- ✓ Maintaining product certification
- ✓ Independent verification and confirmation of product promises by notified bodies
- ✓ Technology driver (world's first LED streetlight manufacturer)
- ✓ Compliance policy to prevent corruption, bullying, etc.

4.2 PRODUCT RESPONSIBILITY

This field of action describes how Hess takes responsibility at the product level. Target is to conserve resources and protect the environment. Hess therefore uses competent partners in the region and almost exclusively materials from certified material manufacturers and avoids the use of potential risk substances in all products and packaging. In addition, Hess focuses on the longevity of its products, their reparability, the recyclability of its packaging and guarantees its partners and customers full product transparency.



Examples of measures already implemented:

Internal

- ✓ Comprehensive environmental impact analysis
- ✓ Average service life of our products is over 30 years
- ✓ Extending the service life through technology upgrades, e.g., lamp → LED
- ✓ Integrating new technologies for environmental protection (e.g., charging station for electric mobility, intelligent lighting systems, light spectra for insect protection)
- ✓ Link: [Hess | CITY ELEMENTS](#)
- ✓ Use of recyclable or reusable product packaging
- ✓ Use of returnable packaging for intralogistics

External

- ✓ 90% of suppliers come from Germany
- ✓ Requesting and verifying that suppliers comply with Reach and RoHS
- ✓ Setting out regulations and obligating suppliers to exercise care

Hess product lines' other sustainable advantages at a glance

Hess product lines offer numerous advantages.

<p>1. Benefit Our products combine functionality and aesthetics according to the Bauhaus philosophy “form follows function”. Technical challenges are implemented at the highest level of design. Lighting systems allow for maximum flexibility.</p>	<p>7. Benefit Modern electronic drivers are more efficient than in the past and their performance is also constant.</p>
<p>2. Benefit “Product families” create a uniform look through their compelling expression of design, blend into the landscape in many ways and ensure the harmonious design of urban space.</p>	<p>8. Benefit The quality of workmanship also has an effect on a luminaire’s service life, since, for example, the light intensity decreases if any dirt enters. That’s why we at Hess have always attached great importance to the quality of our luminaires.</p>
<p>3. Benefit The targeted lighting and illumination of architecture with efficient technology and attractive design creates art, cultural added value and enhances the urban space.</p>	<p>9. Benefit LED lighting is basically infinitely dimmable. Therefore, the luminaires can be adapted to the lighting requirement or the respective situation using intelligent control systems. As a result, maximum energy can be saved, for example, through night-time dimming in different stages or by lighting that adapts to the traffic conditions.</p>
<p>4. Benefit Energy savings of 70% or more can be achieved and maintenance costs considerably reduced by significantly increasing the LEDs’ efficiency and extending the maintenance intervals. In the case of a conversion, this results in extremely attractive payback periods.</p>	<p>10. Benefit Our dimming systems can be combined with various LED modules and luminaires and thus contribute to further savings in electricity and therefore carbon emissions.</p>
<p>5. Benefit Selecting the correct lamp not only determines the operating costs but also the subsequent costs. These are very low thanks to the long service life and maintenance intervals of LEDs.</p>	<p>11. Benefit In addition to energy savings and reduced light emissions, light beam image splitting leads to reduced glare and very uniform lighting.</p>
<p>6. Benefit Reduced light pollution means no illumination of the night sky and therefore less disturbance for nocturnal animals. Far fewer insects are attracted due to the low UV content in the light generated by LEDs. Animals are therefore</p>	<p>12. Benefit Recycling materials conserves resources. In the spirit of sustainability, most of our products are reusable. Another clear bonus for the environment.</p>

protected as a whole and the luminaires end up far less dirty.

4.3 SOCIAL RESPONSIBILITY

As a medium-sized company, Hess is aware of its social responsibility. This means that Hess takes social aspects into account when making business decisions. Starting with the company itself, this field of action is initially aimed at its own employees. Hess' declared aim is to be perceived as an attractive employer for all relevant occupations. Furthermore, the company is involved beyond the company itself and takes responsibility towards customers and society.



Examples of measures already implemented:

Internal:

- ✓ Successful employee retention
- ✓ Increased environmental awareness in the company through interdepartmental collaboration

External:

- ✓ Targeted marketing of new energy-saving systems and products
- ✓ Establishment of a representative and advanced customer centre to get municipalities, schools, and others, excited about sustainable products

4.4 PRODUCTION RESPONSIBILITY

For Hess, environmentally-friendly production means making the best use of all resources. Therefore, the company pays special attention to resource conservation and efficiency through continuous process and site improvement at its production site. The efficient use of energy and closed loop recycling management, as well as the conscious use of resources are at the top of the agenda for Hess. Hess' efforts are aimed at using materials and energy as efficiently as possible in order to minimise

any negative environmental impact from its business activity and therefore actively contribute to environmental protection.



Examples of measures already implemented:

- ✓ Use of state-of-the-art machines and equipment
- ✓ New assembly stations with one-piece flow
- ✓ LED technology throughout production
- ✓ Separation of waste by type for secondary raw material utilisation or appropriate disposal
- ✓ Switch to local waste disposal companies

5. Our environmental aspects

An environmental impact is any direct or indirect influence of activities and products on the environment, whether harmful or not. Both direct and indirect environmental impacts were recorded according to area. In determining the environmental impacts, factors that include the following direct and indirect environmental aspects were taken into consideration and evaluated.

5.1 Life cycle assessment

Life cycle	Extent		Capacity for it to be influenced by us or by the customer		Relevant
Product development	High	In the course of development, it is possible to control which materials are used.	High	We can specify which materials are used. The customer can only influence the design and features of the luminaire.	Yes
Raw material extraction	High	The way the raw materials are extracted or refined. Aluminium is a particularly negative example here – due to the high energy input in its production.	Low	We can only exert control through the use of materials and try to steer customer requirements accordingly.	Yes, but secondary
Transport directly to us	Means	The distance, the type of packaging and the use of returnable load carriers influence the energy expenditure and cause exhaust emissions as well as possible disposal costs of the packaging material.	Means	(1) Common definition of what the packaging should look like. (2) Avoidance of unnecessary transport (3) Choosing suppliers who are close by, if qualified according to supplier evaluation.	Yes
Transport to suppliers	Means				
Transport from the supplier to us	Means				
Further processing at the supplier for finished module	Means	The crucial factors here are the energy input, the possible exhaust emissions and the quantity and type of auxiliary materials for production such as lubricants, compressed air, etc.	Low	In addition to the further development of the supplier's QM system, we can potentially work towards the promotion of an environmental management system.	Yes, but secondary
Further processing at the supplier into a semi-finished module	Means				
Final assembly of finished modules	Means				

Further processing of semi-finished modules	Means			(3) Active evaluation of the quantities of auxiliary materials to be used in production	
Disposal of production waste	Means	The crucial factor is the amount of scrap (waste) as well as the proportion of not OK materials that need to be disposed of.		(4) Reuse of non-hazardous raw materials and auxiliary materials used in production takes precedence over legally compliant disposal	
Disposal of auxiliary materials used in production	Means	Which auxiliary materials are necessary in production? What risks are they associated with? What are the required quantities? Do I have to take structural measures for safe disposal?		(5) If non-hazardous raw materials cannot be reused, they must be recycled. (6) Hazardous auxiliary materials used in production must be disposed of in accordance with statutory requirements.	
Packaging of the products	Means	How much and what packaging materials are used. Can these be disposed of by the customer? What is the cost of proper disposal?	High	(1) Choice of packaging material (2) Arrangements for disposal after use through contracts with waste disposal companies	Yes
Transport to the customer	Means	What distance needs to be travelled?	Low	We are active worldwide.	No
Operated by the customer	Low	How high is the luminaire's energy consumption? How high is the maintenance effort? What materials are needed for maintenance? (In normal operation)	Means	Operating instructions on how operation and maintenance should take place → Recommendations for optimal use.	Yes
Disposal of the product by the customer	Means	Are there arrangements for disposal at the customer's site? Can the customer dispose of everything according to the laws that apply to it?	Means	(1) This can be managed in Germany. (2) It is not possible to assure economic arrangements throughout the EU/worldwide.	Yes

5.2 Evaluation criteria

Crucial evaluation criteria are:

- Environmental risk
- Extent
- Influenceability

5.3 Significant environmental aspects

Energy & emissions

Energy consumption at the site is a significant environmental aspect. Machines and equipment in the production halls consume large amounts of electrical energy. However, the heat energy required for production processes and building heating also plays a major role. There are three burners at the Willingen-Schwenningen site. The combustion

Risk of environmental accidents

Possible risks in the company were identified using specific risk analyses. Generally, a fire is considered to be the most likely "incident". In the event that grinding or welding sparks start in the suction system or adjacent objects ignite, there is an extinguishing concept, fire safety officers, assistants and close coordination with the local fire brigade.

<p>of gas generates emissions. These emissions are kept low thanks to modern burner technology. Compliance with the prescribed limit values is ensured through measurements.</p>	<p>Regular checks of emergency equipment are also carried out. First-aid instructions and emergency drills are also part of the fire and accident prevention measures.</p>
<p>Waste / recycling The main waste at the site is scrap metal and wood waste. An external service provider takes care of the disposal of waste generated at the Villingen-Schwenningen site. Plastic waste is also produced at the site in the form of packaging film and plastic packaging tapes. These are collected separately from one another and taken away by an external waste disposal company.</p>	<p>Use of resources and raw materials All the raw materials and auxiliaries used are recorded using information technology. In addition to the use of metal, packaging materials such as cardboard boxes and very thin plastic air pillows as well as adhesives and solvents are used in production. An up-to-date hazardous material register is available.</p>
<p>Local phenomena (noise, aesthetic impairments, etc.) There are no significant noise emissions outside the factory halls. However, noise must be regarded as a significant environmental aspect, since noise pollution is caused by the use of the machines in the production plant at the site. All employees are therefore provided with personal protective equipment, some of which are individually adapted. Up-to-date risk assessments for the factory halls are available.</p>	<p>Water / waste water In the context of production processes, water consumption plays a minor role at HESS. There is normal water consumption mainly by the sanitary facilities and cleaning activities at the site.</p>

5.4 Direct environmental aspects

The following direct environmental aspects have been assessed, as there is a provable environmental hazard:

- Emissions into the atmosphere.
- Discharges and drainage into bodies of water.
- Generation, recycling, reuse, transport and disposal of solid and other wastes, especially hazardous wastes.
- Use of natural resources and raw materials (including energy).
- Use of additives and auxiliary materials as well as semi-finished products.
- Transport (freight).
- Risk of environmental accidents and environmental impacts arising or likely to arise from incidents, accidents and potential emergency situations.
- Impacts on biodiversity.

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The following direct environmental aspects were not assessed, as there is no evidence of an environmental hazard for them:

- Use and contamination of soils.
- Local phenomena (noise, vibrations, odours, dust, aesthetic impairment, etc.).

The architecture of the entire headquarters was built as a model manufacturing site. There is therefore no aesthetic impairment of our surroundings. Biodiversity is affected neither by our production, nor by our administrative activities nor by our internal plant traffic.

Assessment of the extent and ability to influence is provided in the following table: The determination is based on whether it is relevant to our environmental performance. If it is relevant, it must be taken into account in the environmental programme.

Extent is high and can be influenced	→	relevant = yes
Extent is intermediate and can be influenced	→	relevant = yes
Extent is high and can be influenced only in part	→	relevant = yes
Extent is intermediate and can be influenced only in part	→	relevant = yes
Extent is low and can be influenced	→	relevant = yes, but secondary
Extent is low and can be influenced only in part	→	relevant = no
Extent is low and cannot be influenced	→	relevant = no

Direct environmental aspects	Extent		Influenceability		Relevant
Emissions into the atmosphere (greenhouse gas)	High	Largest proportion of emissions	Yes	Control of energy consumption	Yes
Emissions into the atmosphere (dust from freight)	Low	In relation to greenhouse gases	No	Cannot be influenced where our products are used worldwide.	No
Discharges and drainage into sewage system	Means	The water consumption per capita for our company is below the average in Germany	Yes	Influence from working from home. However, the effect is not that crucial, since we do not need any process water in production.	Yes
Generation, recycling, reuse, transport and disposal of solid and other wastes, especially hazardous waste	High	In 2022, we were at 74 tonnes	Yes	Especially in the area of waste from packaging (from delivered goods) and the use of paper and cardboard.	Yes
Use of natural resources and raw materials, including energy	High	2022 total consumption: 1672 MWh	Yes	Through savings in lighting and heating.	Yes
Use of raw materials, additives, auxiliary materials and semi-finished products	High	2022 total consumption: 182 tonnes	Yes	Sensible handling and purchasing of materials.	Yes
Transport (in relation to goods and services)	Low	Since emissions from freight are not relevant compared to emissions from energy consumption.	Yes	Through the choice of suppliers and service providers	Yes, but secondary

Risk of environmental accidents and impacts arising or likely to arise from incidents, accidents and potential emergency situations.	Low	Highest risk is from leakage from trucks in the dispatch yard – has never happened! Fire on the premises – has never happened before.	Yes	Through emergency measures, such as spreading binder and binder barriers in the drains.	Yes, but secondary
Impacts on biodiversity	Low	Given the built-up and sealed/impervious surfaces.	No	The current production area is required for the necessary throughput.	No

5.5 Indirect environmental aspects

	Extent		Influenceability		Relevant
Design and development Composition of the product range	High	Through the use of LEDs, our customers can cut their emissions in half. The light spectrum of LEDs has far fewer detrimental effects on nocturnal insects. This also reduces the use of cleaning agents for outdoor illumination.	Yes	Through: Exclusive development of new LED luminaires. Discontinuation of all existing products that cannot be further developed in the direction of LEDs. Continuous implementation of new LED generations.	
New markets	High	Through further developments in the area of LEDs and sensible networking with sensor technology to reduce energy consumption even further.	Yes	It is closely linked to design and development.	Yes*)
Packaging	High	The effort required for disposal of packaging from our suppliers' products/materials is substantial.	Yes	Selection of environmentally friendly and disposable packaging materials and its reduction to a necessary maximum.	Yes
Transport	Low	To some extent we are bound to certain forwarding agents due to products that are sometimes quite bulky. This also applies to the products/materials from our suppliers. This does not make them any less bulky.	Yes	Sensible bundling of freight in order to consume as little transport space as possible so that its impact on the environment through emissions can be reduced.	Yes, but secondary
Use and reuse	Low	The reuse of used packaging material is only possible to a very limited extent and hardly ever happens.	No	Due to aesthetic and hygienic reasons, the reuse of packaging materials is only possible to a limited extent.	No

Environmental performance and behaviour of suppliers Disposal of waste	Means	The materials and products we purchase may require disposal that is environmentally critical (e.g. paint production). Waste from the production of our products may also have an impact on the environment.	Yes	In the area of supplier loyalty, accelerate sustainability requirements.	Yes
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*) Since 2014, we have only relied on new developments with LED technology. The combination with sensor technology and control options to reduce the energy consumption of LED outdoor lighting is possible in a standardised way for many products.

6. Environmental objectives

Our environmental objectives are set out in an ongoing environmental programme. This programme is monitored, controlled and further developed through the management evaluation.

The decisive factor in the choice of environmental objectives is the assessment of direct and indirect environmental aspects.

Table 1: Environmental objectives

Target	Indicator (actual values)			Target values		Result	Justification
	2020	2021	2022	2022	2023	2022	2022
Reduction of energy consumption (and greenhouse gases) <i>Total energy</i> <i>Unit: MWh/ThMA</i>	9.50	10.77	10.70	10.50	10.65	Target not achieved	The target from the previous year was narrowly missed, but improvements compared to the last environmental statement are still recognisable. The measures were implemented.
Reduction in waste generation <i>Total waste</i> <i>Unit: t / ThMA</i>	0.60	0.42	0.47	0.45	0.45	Target achieved	Due to increase in non-hazardous waste (mixed scrap). Clearing out old stocks.
Reduction of material consumption <i>Total material consumption</i> <i>Unit: t / ThMA</i>	1.54	1.09	1.16	1.40	1.30	Target achieved	

Reference value: "ThMA = per 1,000 hours worked by all employees"

Not all of our planned targets could be achieved in 2022. The additional workload, caused by the pandemic, weighed too heavily on company operations. There were constantly new and important priorities. Furthermore, more efficient assembly stations were set up, which led to a reduction in employee hours and to increased output, and therefore consumption as well.

7. Annual environmental data and facts

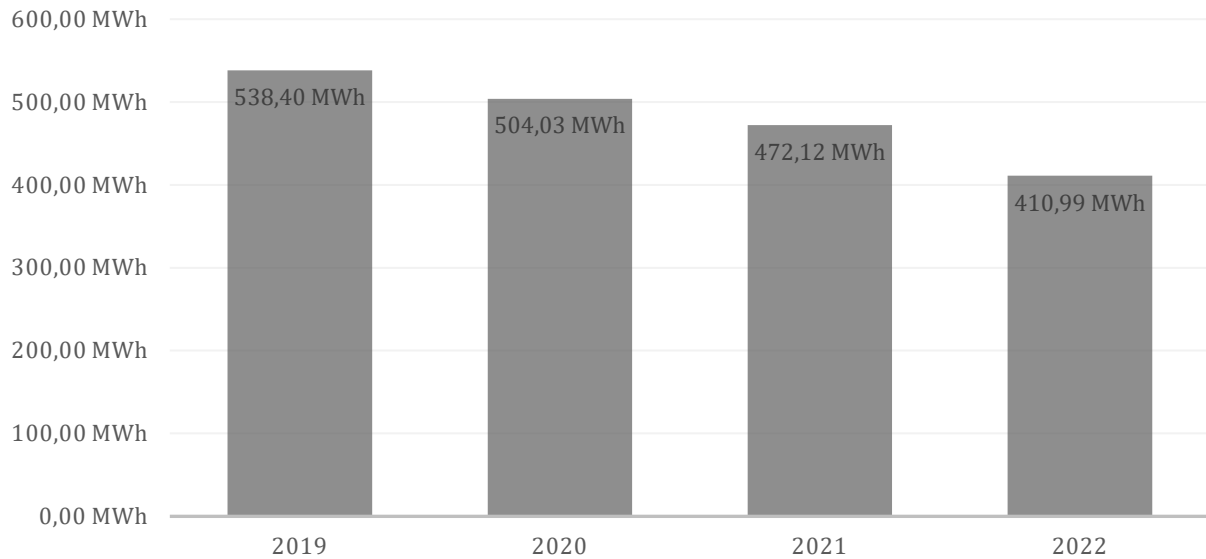
Reference value:

The reference value used is “per 1,000 hours worked by all employees”. This is abbreviated as “*ThMA*” in all of the following tables (The differences, compared with the reference years, are due to the reduction in the number of employees/employee hours)

Year	2019	2020	2021	2022
ThMa	196.6	173.9	159.6	156.3

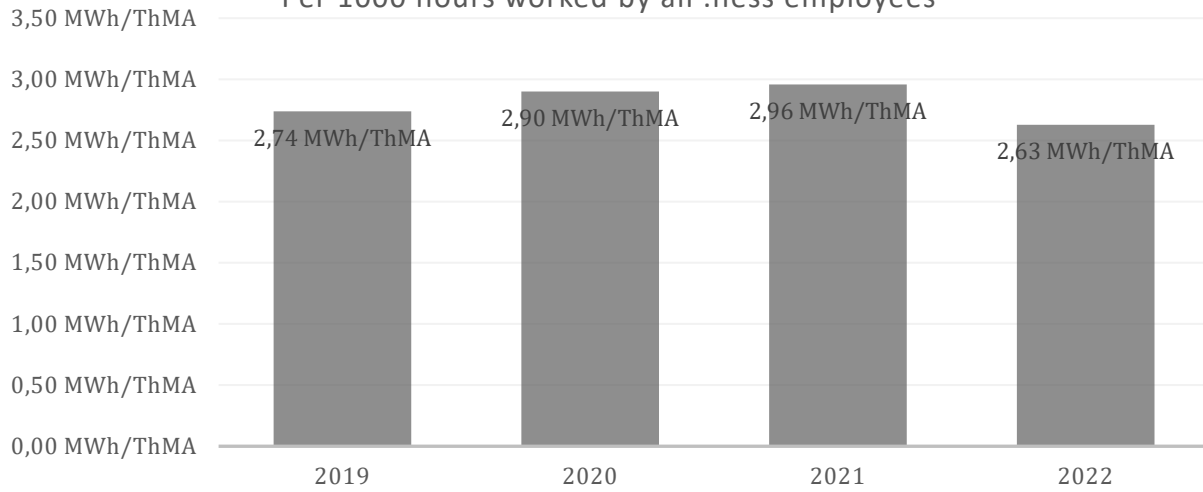
7.1 Energy

Annual comparison of total electricity consumption



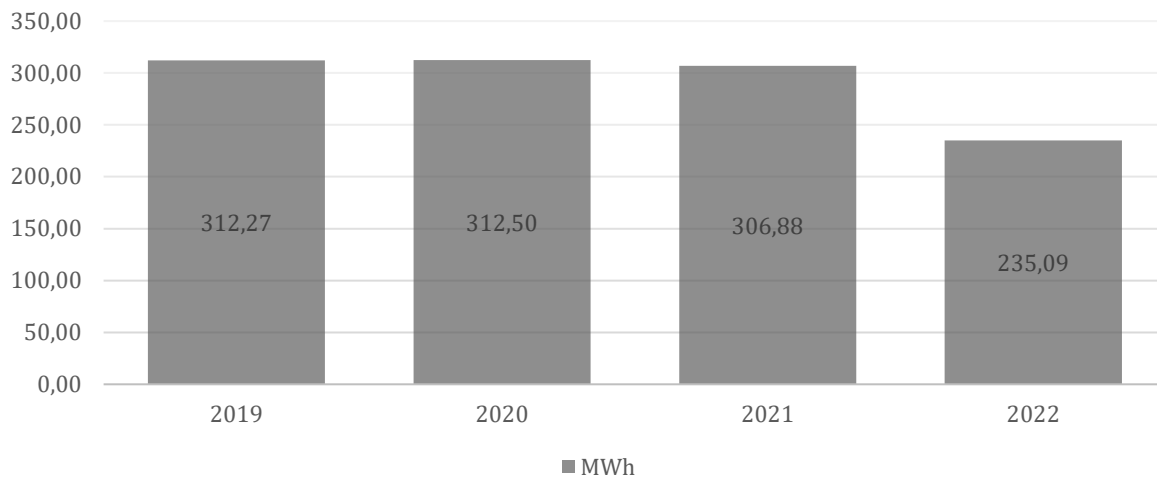
Conclusion:
Positive trend

Annual comparison of electricity consumption
Per 1000 hours worked by all .hess employees



Conclusion:
Positive trend

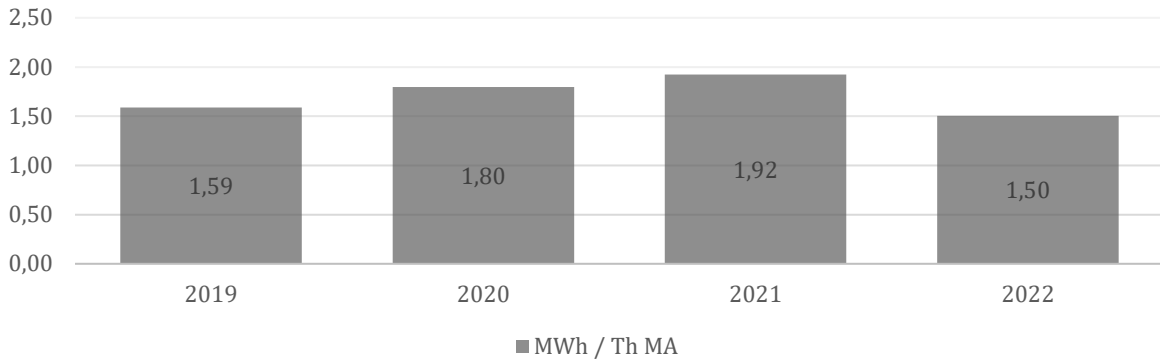
CONSUMPTION OF RENEWABLE ENERGIES



Conclusion:
Positive trend

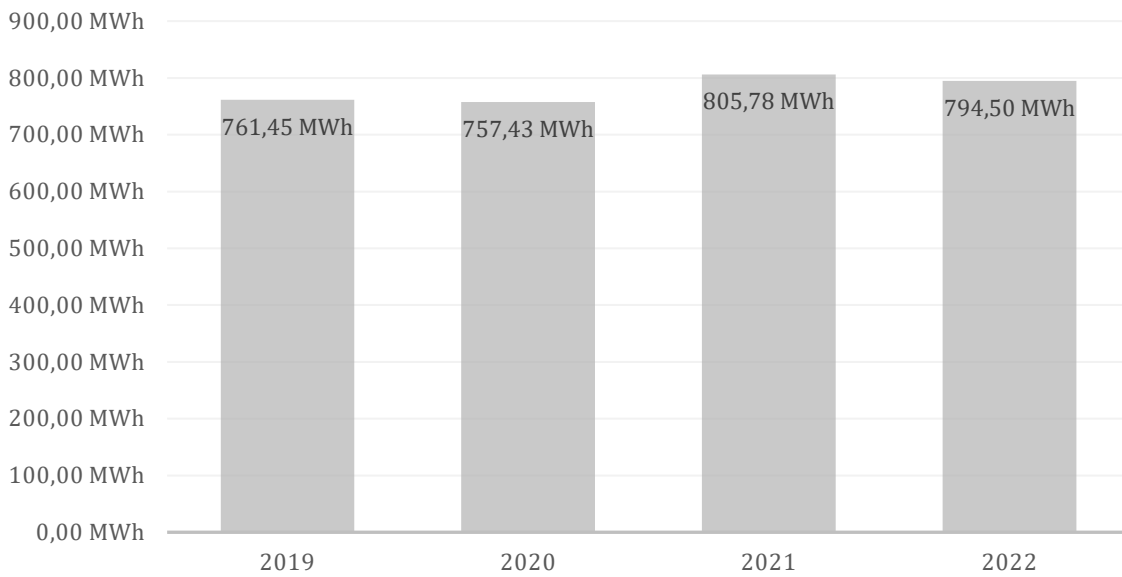
ANNUAL COMPARISON OF
CONSUMPTION OF RENEWABLE ENERGIES

PER 1,000 HOURS WORKED BY ALL EMPLOYEES



Conclusion:
Positive trend

Annual comparison of gas consumption



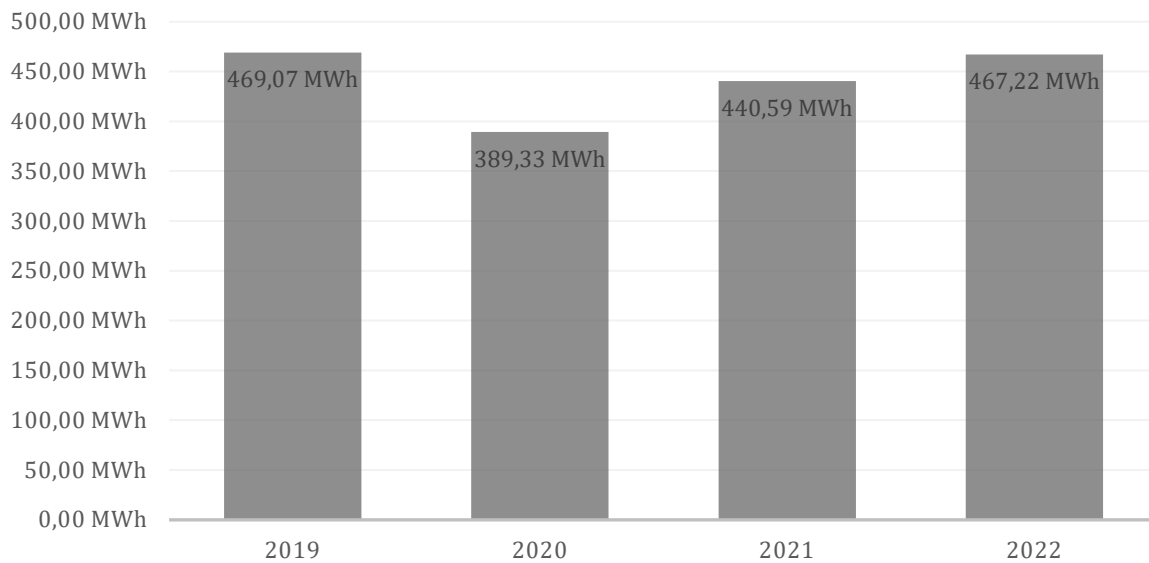
Conclusion:
Positive trend

Annual comparison of gas consumption (adjusted for weather) per 1,000 hours worked by all employees

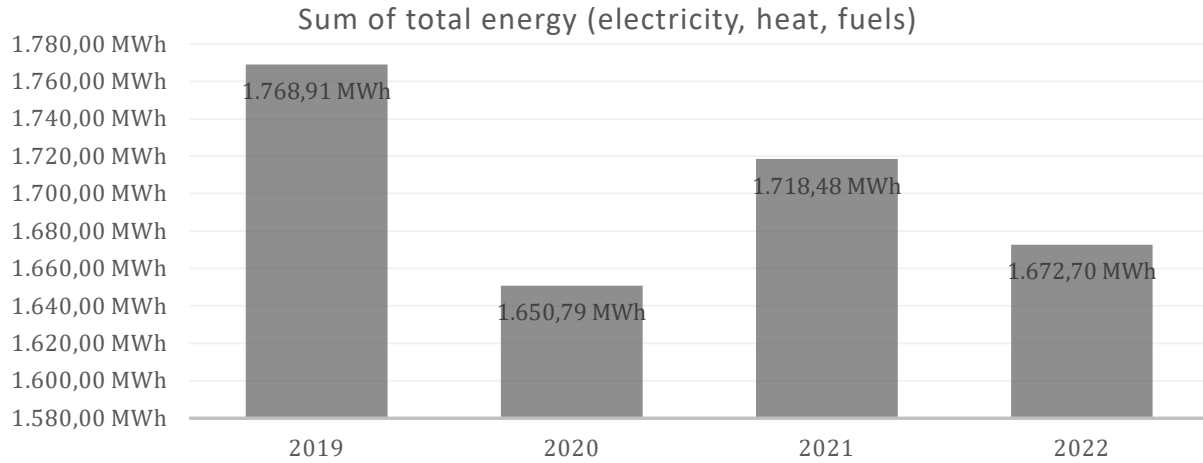


Conclusion:
Almost the same.

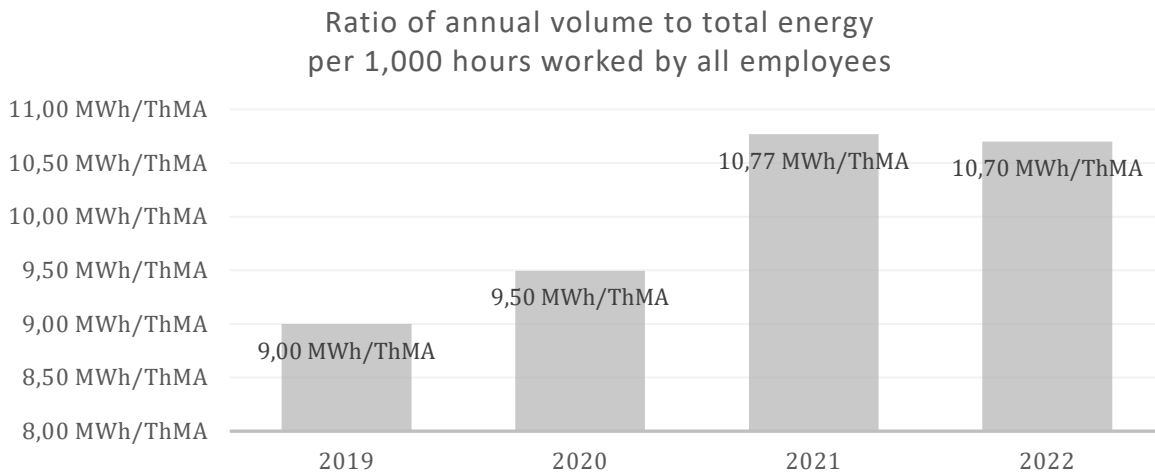
Annual comparison of fuels .hess



Conclusion:
Hardly any business trips or customer visits were carried out in 2020 due to contact restrictions. For this reason, 2019 is used for comparison here. This shows a slight reduction. Consumption will also be greatly reduced in the coming years due to the vehicle fleet being changed to battery-powered vehicles.



Conclusion:
 Positive trend

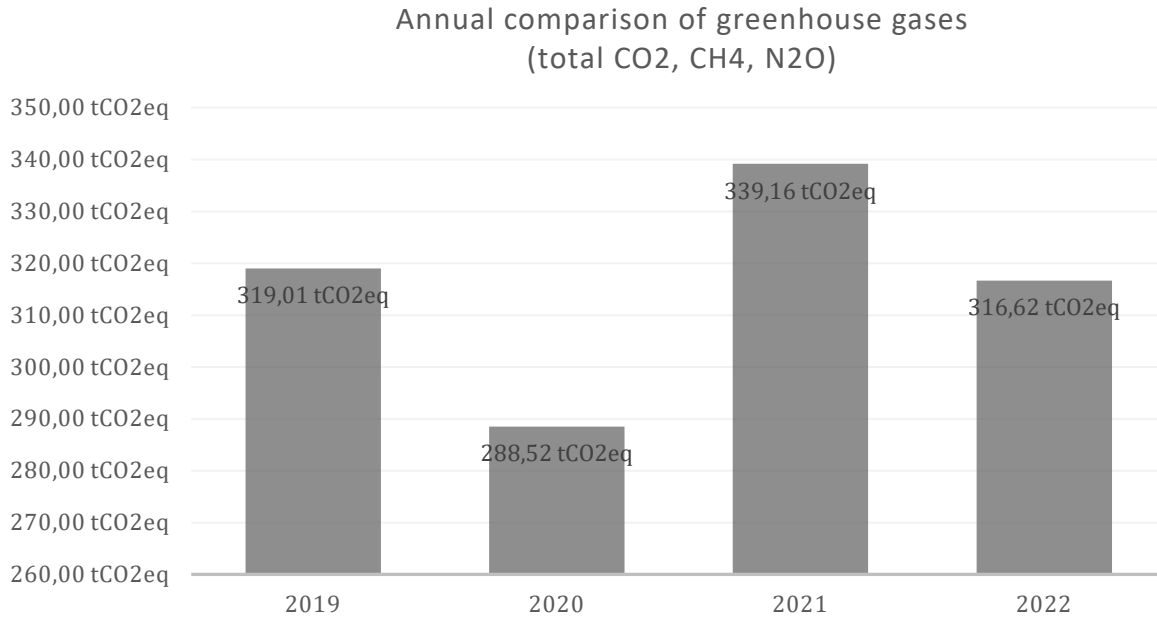


Conclusion:
 Positive trend

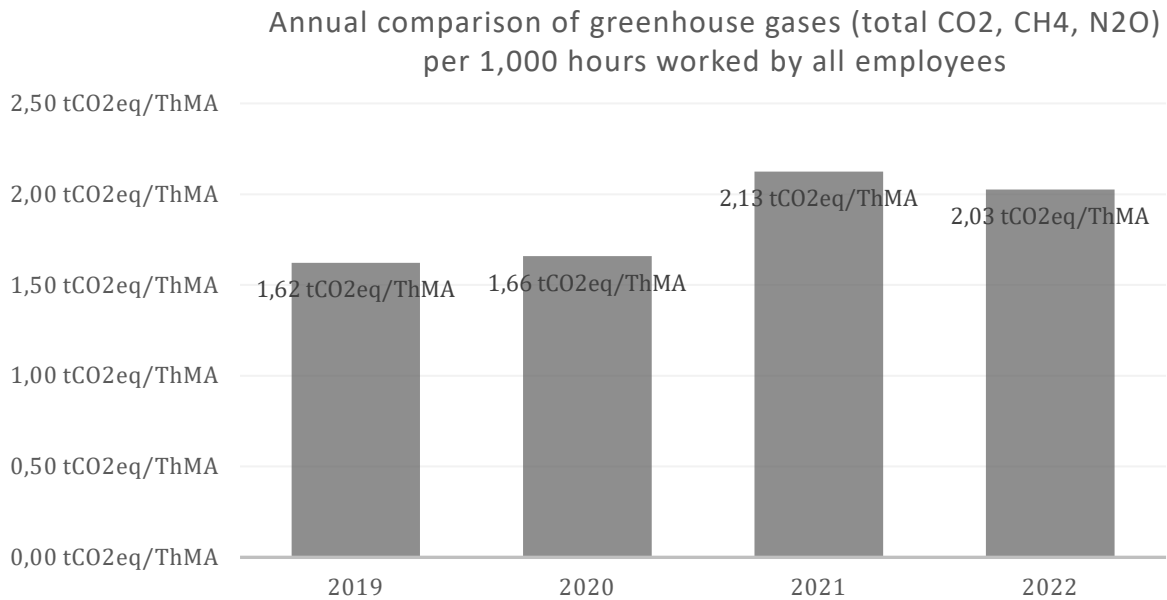
7.2 Emissions

Our gas heating systems are subject to Germany’s Small and Medium-Sized Combustion Plant Ordinance (1. BImSchV [Federal Emission Control Ordinance]). Compliance with the limit values is regularly checked by the chimney sweep. The last inspections (October 2021 KÜO [Sweeping and Inspection Regulations], October 2021 1. BImSchV) did not reveal any shortcomings. The waste heat from the air compressor is used to heat the main building.

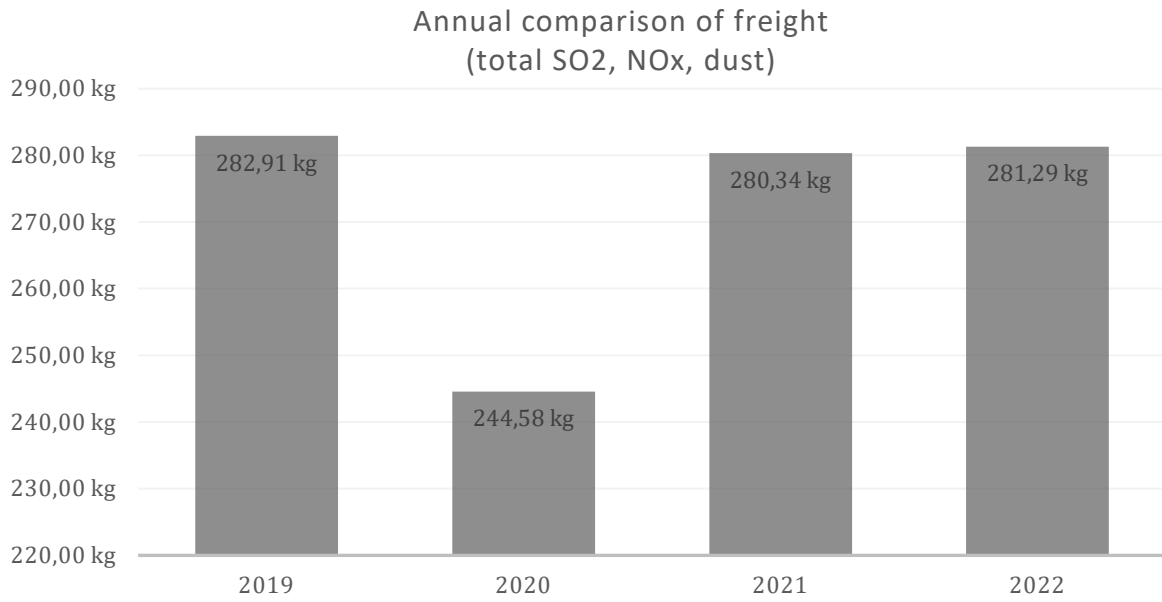
7.3 Total emissions from freight and greenhouse gases (indicator)



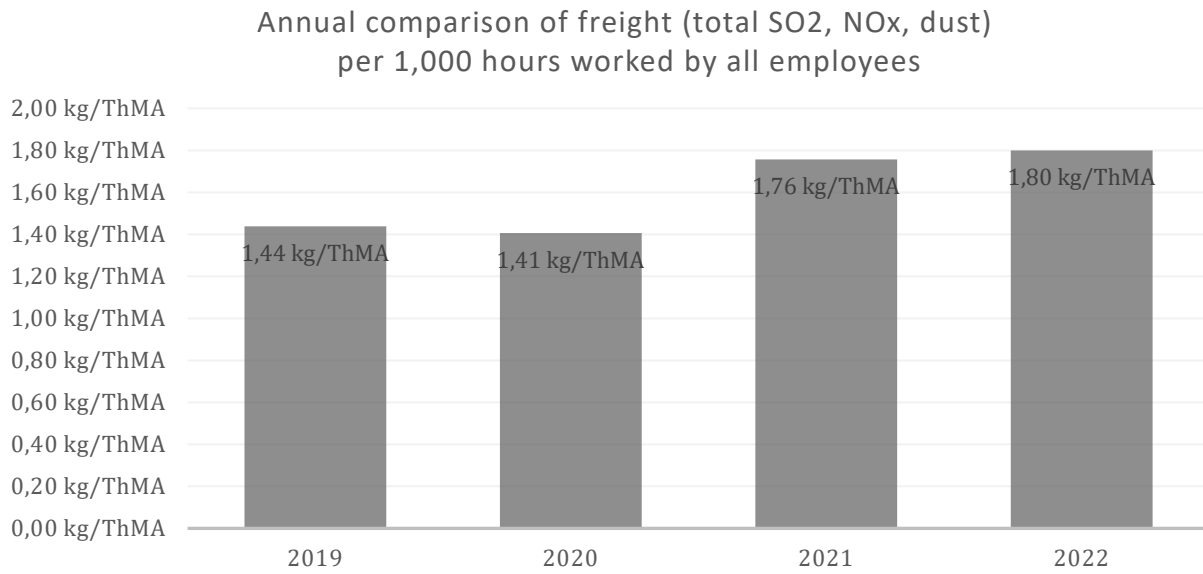
Conclusion:
Positive trend



Conclusion:
Positive trend

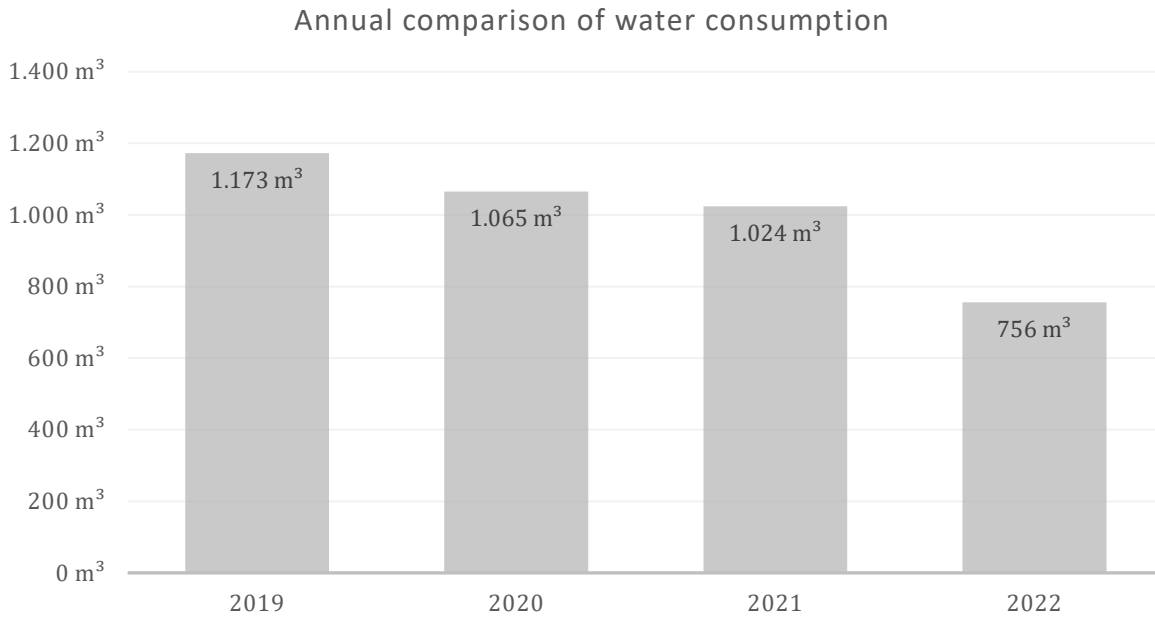


Conclusion:
 Nearly stable compared to 2021. No increased input into the environment.

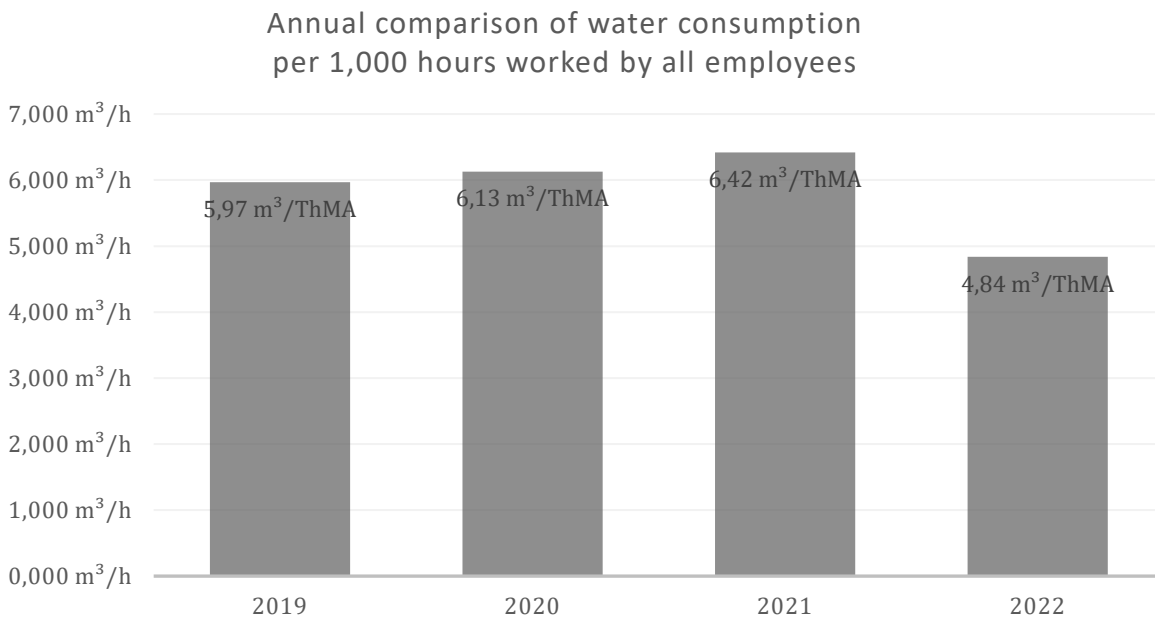


Conclusion:
 Nearly stable compared to 2021. Slight increase.

7.4 Water consumption



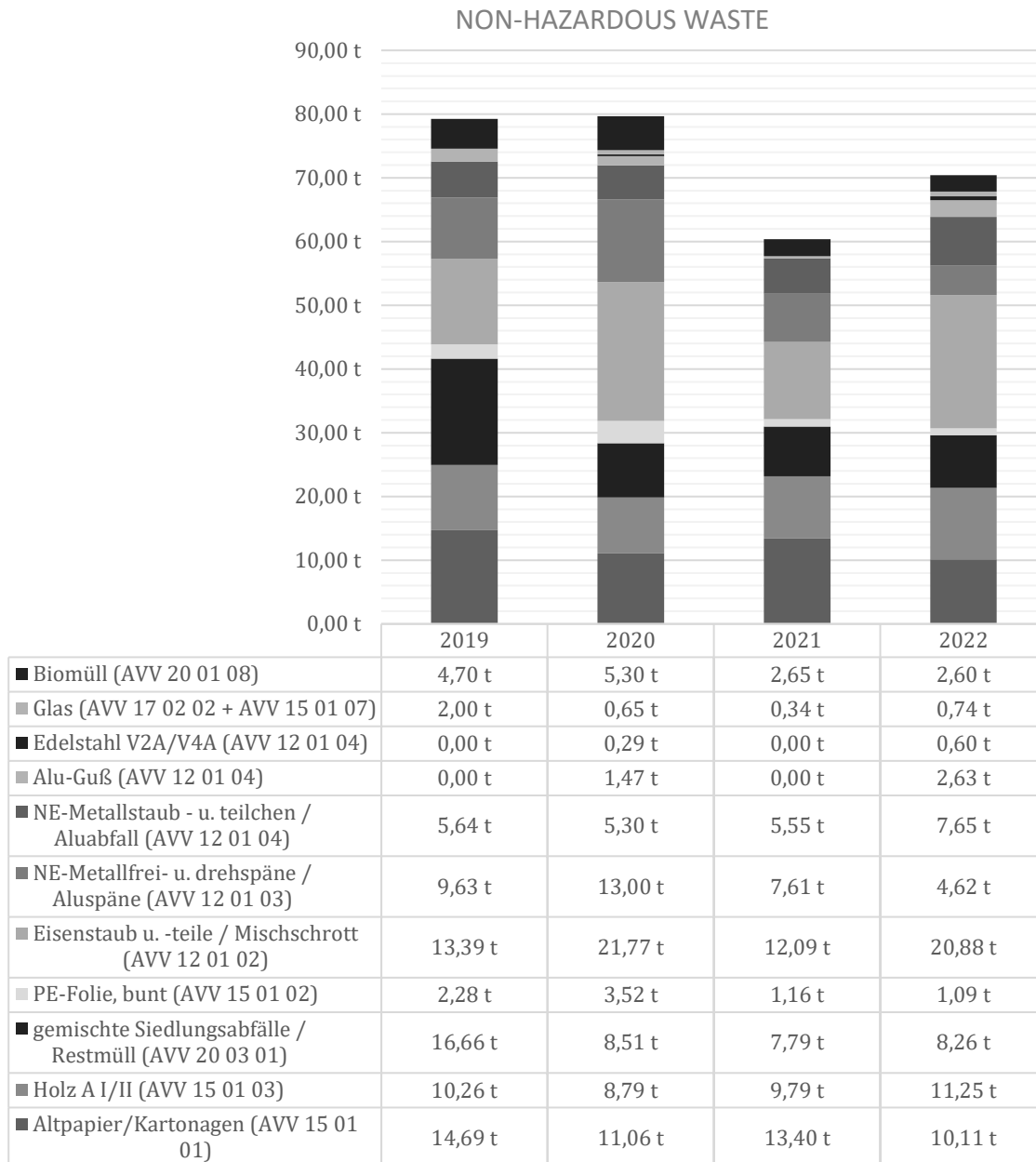
Conclusion:
 Positive trend



Conclusion:
 The drop in water consumption in 2019 is presumably due to the elimination of the process water volume needed as a result of deinstalling the wet separator.
 The increase in employee-related water use in 2020/2021, can be attributed to various factors, such as a slight increase in water use for personal hygiene due to the coronavirus. Thus, we could not adjust

the water requirement comparably, for health and safety reasons. A significant reduction can be seen in 2022.

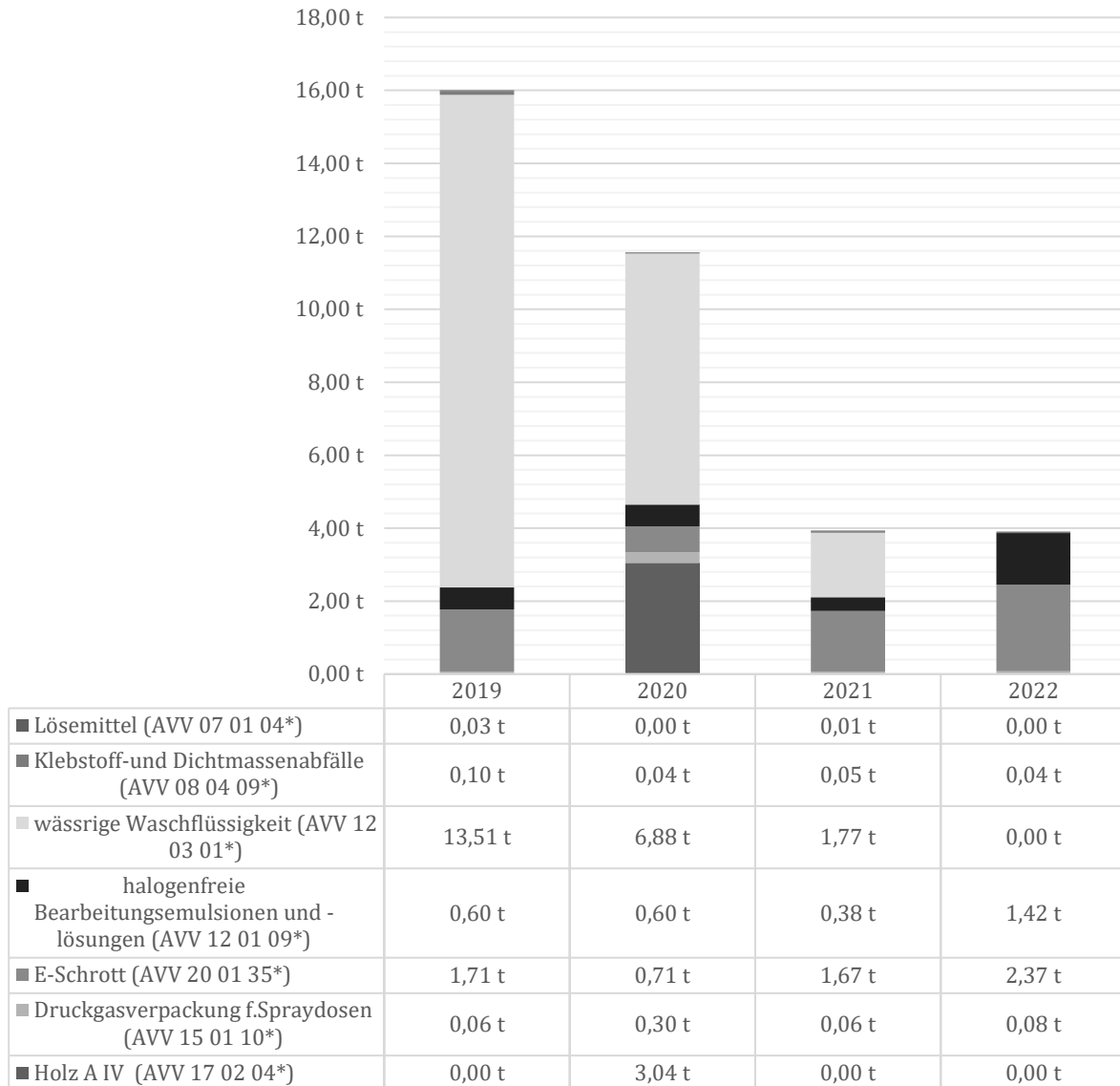
7.5 Waste



Conclusion:

The increase in non-hazardous waste in 2020 was primarily due to the dismantling or disposal of a design object at the Hess outdoor display and the scrapping of old stock. A significant reduction in waste can be seen in 2021. In 2022, a special scrapping of old stocks was carried out, which led to an increase.

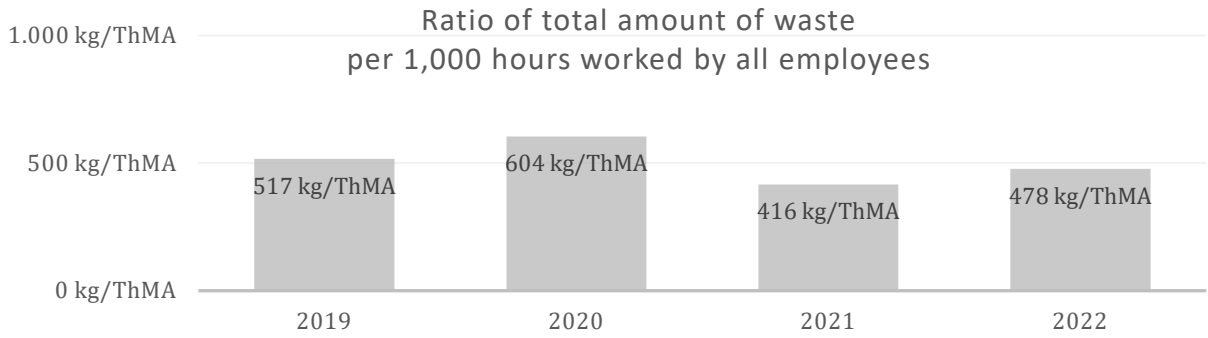
HAZARDOUS WASTE



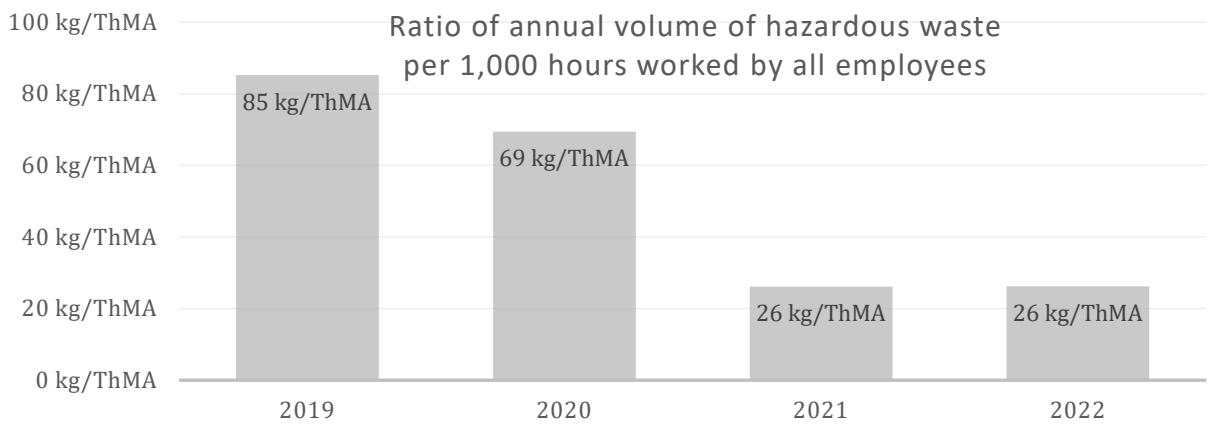
Conclusion:
Slight reduction in hazardous waste in 2022.



Conclusion:
The increase was caused by the special scrapping of non-hazardous waste.



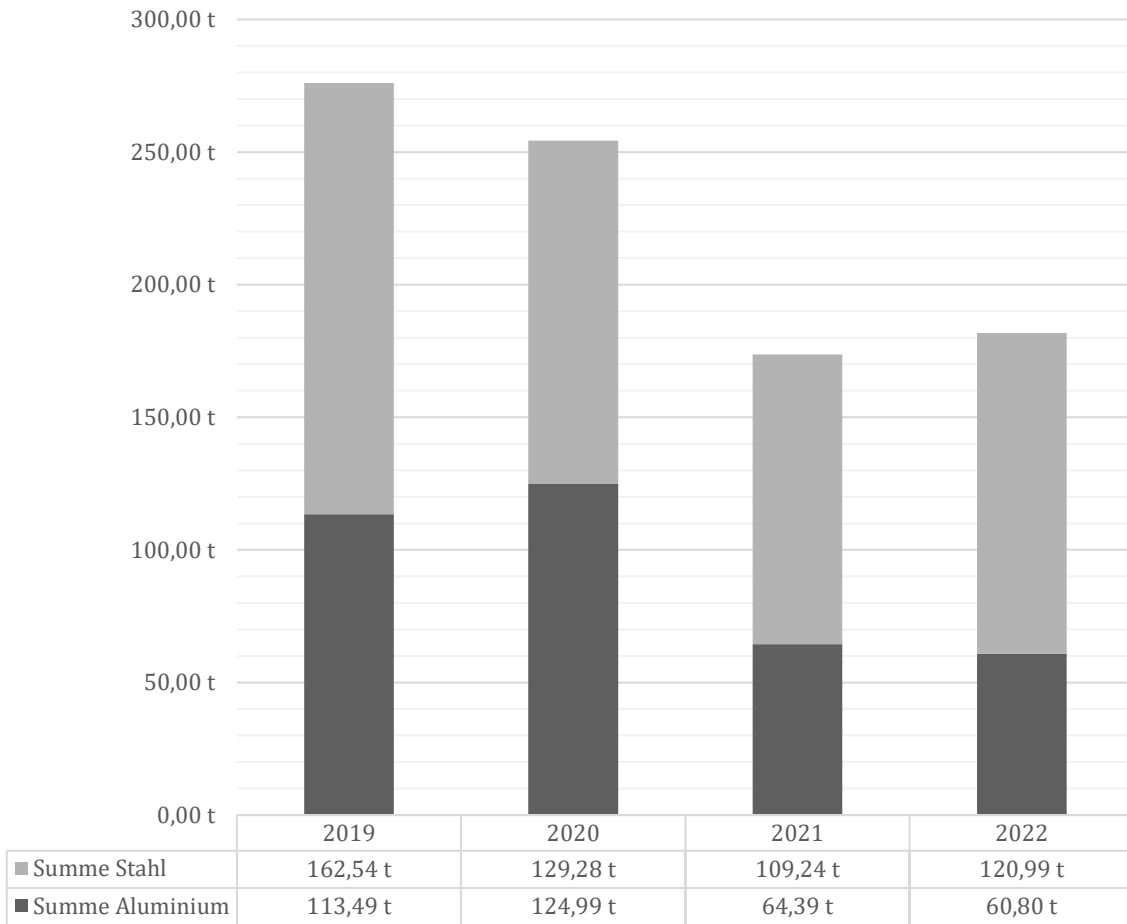
Conclusion:
The figure has fallen, as no special scrapping took place in 2021. Due to the continuous increase in product output and lower number of employees in 2022, there was an increase in the amount of waste.



Conclusion:
-

7.6 Total material consumption (indicator)

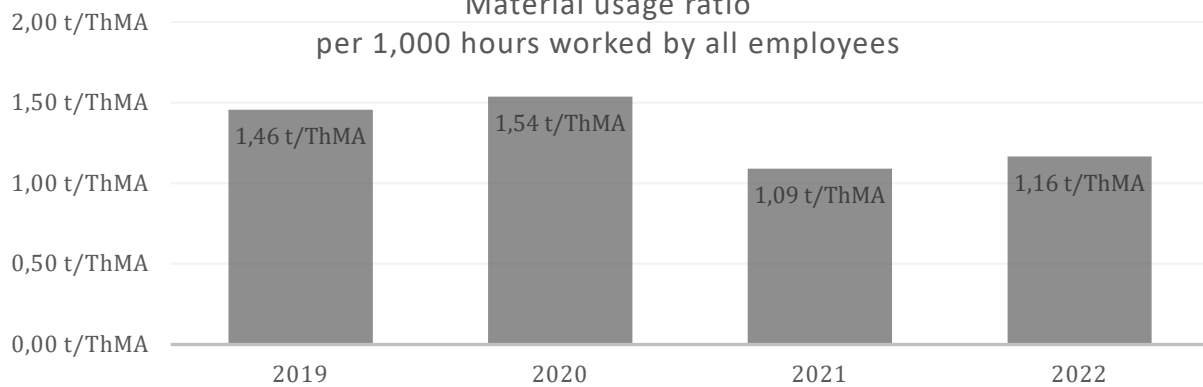
Annual consumption of material



Conclusion:

In previous calendar years, the demand on the market was for highly material-intensive products. This trend will not change and cannot be controlled by the company. The reduction in 2020/21 is due to the adjusted order situation. An increase in material consumption is certain due to the current projects which will be implemented in the coming months or years.

Material usage ratio
 per 1,000 hours worked by all employees



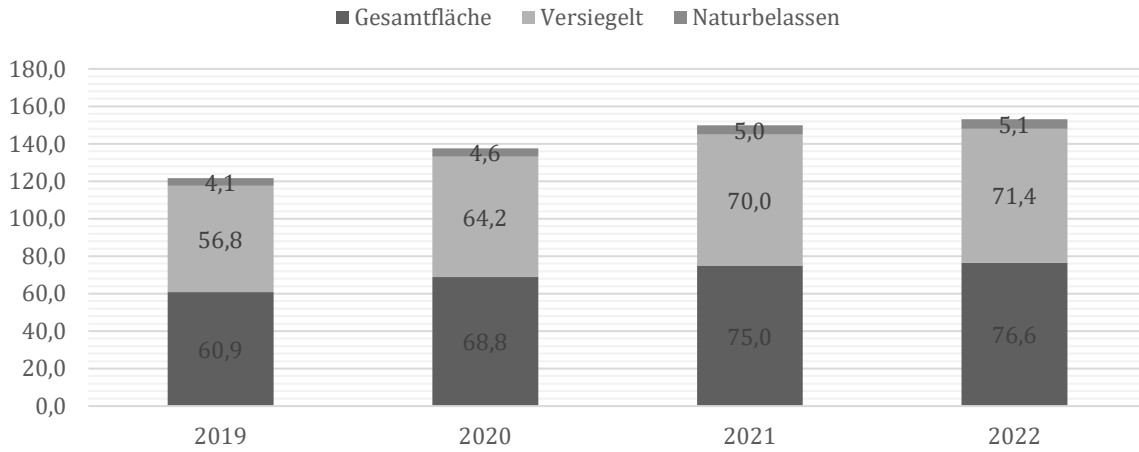
Conclusion:

-

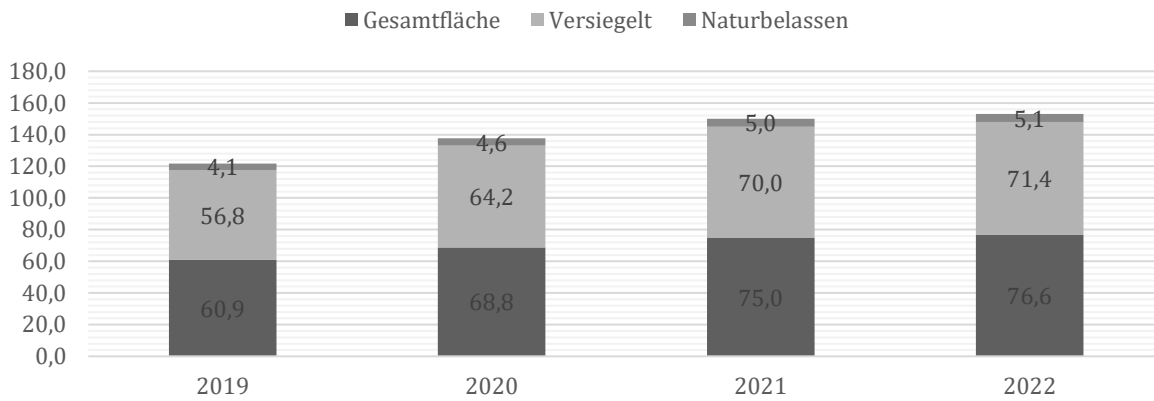
7.7 Surface area use

- Total surface area 11,967 m²
- Sealed/impervious surface area 11,168 m²
- Undeveloped surface area 799 m²

Ratio m² / Th ma



ANNUAL COMPARISON OF SURFACE AREA USE PER 1,000 HOURS WORKED BY ALL EMPLOYEES



Conclusion:
Almost the same.

8. Significant environmental requirements and their implementation

The following legal regulations relevant to us influence our operational processes and ultimately our obligation to ensure that products can be disposed of in an environmentally sound manner at the end of their product life cycle:

▪ **Germany's Hazardous Substances Ordinance (GefStoffV)**

Hazardous Substances Ordinance for protection against hazardous substances. Implementation of the resulting obligations was ensured by recording, creating and implementing the following items:

- ✓ Register of hazardous substances
- ✓ Risk assessments
- ✓ Operating instructions
- ✓ Safety data sheets
- ✓ Regular briefings and training

▪ **1. Germany's Emission Control Ordinance (BImSchV)**

Small and Medium-Sized Combustion Plant Ordinance – First Ordinance on the Implementation of the Federal Emission Control Act:

- ✓ The flue gas losses specified in the ordinance may not be exceeded by our gas-firing systems. The chimney sweep uses recurring checks and measurements to ensure that prescribed limit values are complied with.

▪ **Germany's Regulation Concerning Fluorinated Greenhouse Gases (F-Gase-V)**

The fluorinated gases used as refrigerants in many air-conditioning and refrigeration systems are to be minimised.

- ✓ In our company, there are 6 air-conditioning systems that exceed 5 tonnes of CO₂ equivalent. These are subjected to an annual leak test conducted by licensed companies. All tests are documented.
- ✓ No deviations from the permissible values could be detected.

▪ **Germany's Commercial Waste Ordinance (GewAbfV)**

Ordinance on the Management of Commercial Municipal Waste and of Certain Construction and Demolition Waste (Commercial Waste Ordinance):

- ✓ All types of waste and their disposal-relevant information are listed in our waste route plan, which is accessible to all employees.
- ✓ The waste we generate is collected separately and prepared for reuse and recycling where appropriate.
- ✓ Municipal solid waste is pre-treated by our waste management companies in accordance with the regulations. The confirmation according to Section 3 (2) GewAbfV and Section 6 (1) GewAbfV is on hand.
- ✓ The documentation is always kept up to date.

▪ **REACH and RoHS**

The aim of the Restriction on Hazardous Substances (RoHS) Directive is to protect human health and the environment. This includes environmentally sound recycling and disposal of waste electrical and electronic equipment.

The chemicals regulation REACH relates to the registration, evaluation, authorisation and restriction of chemicals.

- ✓ REACH and RoHS affect us in the procurement and use of substances in production.
- ✓ Implementation of the specifications is rooted in development.
- ✓ We only use substances that include all pertinent REACH information on the safety data sheet.
- ✓ Our suppliers are obliged to comply with the REACH and RoHS directives.
- ✓ We ensure that our products are marked with type plates that make it easy to identify them.
- ✓ Procedures are in place to ensure the conformity of our products.
- ✓ Registration in the EAR [German Electrical Used Equipment Register]

▪ **Ecodesign Directive**

The objective of the directive is to improve the environmental performance of products in regard to energy consumption, taking into account the entire product journey, by specifying ecodesign requirements.

- ✓ We adhere to the objectives of the Ecodesign Directive.
- ✓ The Ecodesign Directive affects the new development as well as the further development of our products. This means that all luminaires, that are new or further developed, are only equipped with LEDs that can achieve energy savings of up to 70%.
- ✓ In addition, our electronic and associated components can be replaced and repaired and are therefore not disposable products.

9. Declaration of validity

9.1 Environmental Statement

The next validated environmental statement will be issued in the fourth quarter of 2022.

9.2 Validation confirmation

Michael Hub
Umweltgutachter
Berater Umwelt, Qualität, Sicherheit

ERKLÄRUNG DES UMWELTGUTACHTERS ZU DEN BEGUTACHTUNGS- UND VALIDIERUNGSTÄTIGKEITEN

Der Unterzeichnende, Günter Jungblut, EMAS-Umweltgutachter mit der Registrierungsnummer DE-V-0056, akkreditiert oder zugelassen für den Bereich (NACE-Code)

- 27.4 Herstellung von elektrischen Lampen und Leuchten
- 31.01.2 Herstellung von sonstigen Objektmöbeln
- 46.14.9 Handelsvermittlung von elektrotechnischen und elektronischen Erzeugnissen a.n.g

bestätigt, begutachtet zu haben, ob die gesamte Organisation, wie in der aktualisierten Umwelterklärung der Organisation

Hess GmbH Licht + Form

Liegenschaft: Lantwattenstraße 22, D-78050 Villingen-Schwenningen

Hess GmbH Licht + Form – Business Unit Vulkan

Liegenschaft: Lantwattenstraße 22, D-78050 Villingen-Schwenningen

mit der Registrierungsnummer DE-169-00082

angegeben, alle Anforderungen der

Verordnung (EG) Nr. 1221/2009 zuletzt geändert durch

Verordnung (EU) 2018/2026 (EMAS)

über die freiwillige Teilnahme von Organisationen an einem Gemeinschaftssystem für

Umweltmanagement und Umweltbetriebsprüfung

erfüllt.

Mit der Unterzeichnung dieser Erklärung wird bestätigt, dass

- die Begutachtung und Validierung in voller Übereinstimmung mit den EMAS-Anforderungen durchgeführt wurden,
- das Ergebnis der Begutachtung und Validierung bestätigt, dass keine Belege für die Nichteinhaltung der geltenden Umweltvorschriften vorliegen,
- die Daten und Angaben der aktualisierten Umwelterklärung der Organisation ein verlässliches, glaubhaftes und wahrheitsgetreues Bild sämtlicher Tätigkeiten der Organisation innerhalb des in der Umwelterklärung angegebenen Bereichs geben.

Diese Erklärung kann nicht mit einer EMAS-Registrierung gleichgesetzt werden. Die EMAS-Registrierung kann nur durch eine zuständige Stelle gemäß EMAS-Verordnung erfolgen. Diese Erklärung darf nicht als eigenständige Grundlage für die Unterrichtung der Öffentlichkeit verwendet werden.

Frankfurt am Main, 03.12.2023

Michael Hub, Umweltgutachter
DAU-Zulassungsnummer: DE-V-0086

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Zugelassen von der DAU – Deutsche
Akkreditierungs- und Zulassungsgesellschaft
für Umweltgutachter mbH, Bonn
DAU-Zulassungs-Nr.: DE-V-0056

Environmental verifier

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