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**SHV ENERGY**

# **Sustainability Report 2022**

## Advancing Energy Together







Throughout this report, you will find short impact stories that illustrate the positive influence of our programmes and initiatives. Click on the headline to be taken to the full-length impact story on our website.



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# CEO statement

SHV Energy's biggest sustainability impact remains the CO<sub>2</sub> emissions of our customers, based on their use of our products. Our continuing work on increasing the share of sustainable fuels in our product portfolio and developing affordable, pragmatic solutions for our customers is our most powerful tool to reduce our Scope 3 emissions.

2022 was a year of advancement towards our CO<sub>2</sub> reduction goal. At the highest decision-making level, we prioritised our investments in the development of sustainable fuels. The frequency and severity of extreme weather events continue to increase and, in turn, so does the pressure on businesses to act. At SHV Energy, we are ramping up several large-scale initiatives from intention to implementation.

For example, back in 2021 we established and officially incorporated a joint venture with UGI International for mass production of renewable and recycled carbon dimethyl ether (rDME), a fuel with enormous potential for defossilisation and meeting the energy transition needs of the customer segments we serve. In 2022, we secured land for the first plant and began to design it, with more plants in the pipeline.

We also further developed our vision for SunSource, the Indian solar energy company we acquired in 2021, which marked our first move into solar power. In 2022, we announced a longer-term strategic plan to double its capacity to one gigawatt in the coming years.

Our main focus when it comes to our CO<sub>2</sub> emissions is Scope 3, as that is where the biggest impact is. However, we do not neglect Scopes 1 and 2, as there are still significant savings to be made.

We ran an Open Innovation Challenge focused on reducing our Scope 1 and 2 CO<sub>2</sub> emissions. We had three outstanding winners, who will receive access to our resources, network and knowledge to further develop their solutions, and are exploring collaboration with two further finalists. Improving efficiency and harnessing innovative new technologies to improve how we work remains an important priority.

The health and safety of our employees and customers remained our utmost focus area in 2022. We are proud of our progress extending our health and safety initiatives and training to encompass more and more of our contractors, holding them to the same standards as our own employees. For example, we took steps to increase the driving training our transport contractors must undergo and improve the oversight we have of their routes and incident reporting.

The year also included substantial advancements in innovation. We innovate primarily to improve the health, safety and well-being of our employees and customers, and to lower our CO<sub>2</sub> emissions. In 2022, the Innovation team's use of data insights to make our processes more efficient continued to develop. In Brazil, data modelling is transforming logistics planning. In France,

delivery planning is evolving to become ever more accurate thanks to technology called digital twin. Increased efficiency in our business processes not only lowers costs but also translates to reduced Scope 1 and 2 emissions, which remains a priority area for us in years to come.

Another significant milestone was our entry into the Bangladeshi market through the purchase of Petromax. We anticipate that Bangladesh will be a key market for SHV Energy as a high-growth environment with a growing population. Solid fuels such as wood remain widely in use for heating and cooking in the country, which results in thousands of deaths annually from conditions related to poor air quality. We have an important opportunity to help accelerate the vital transition to clean-burning fuel, as well as to contribute to the safety, efficiency and professionalism of the wider liquefied petroleum gas (LPG) industry in the region. At the same time, we are creating stable employment for many people in a country with widespread poverty, which contributes to our aspirational goal around employee and community development.

When the invasion of Ukraine began, we responded rapidly. We chose to go above and beyond what was required to do what we

believed was right, which meant fully complying with sanctions but also proactively stopping certain gas import flows, using our supply flexibility to mitigate the disruption.

This flexibility and our strong supply infrastructure were very important for our business continuity in 2022, which was characterised by widespread worries about energy security, and enabled us to generally continue serving our customers. Adapting and navigating through this volatile geopolitical period and its resulting impacts on global supply chains was a challenge, but one we were able to weather without compromising our business performance or distracting from the bigger picture of our sustainability strategy.

As a family-owned company, we are uniquely positioned to plan for the long-term. In 2023 and beyond, we will continue Advancing Energy Together and progressing towards our sustainable business strategy, including the reduction of our CO<sub>2</sub> emissions, with continued motivation and focus.

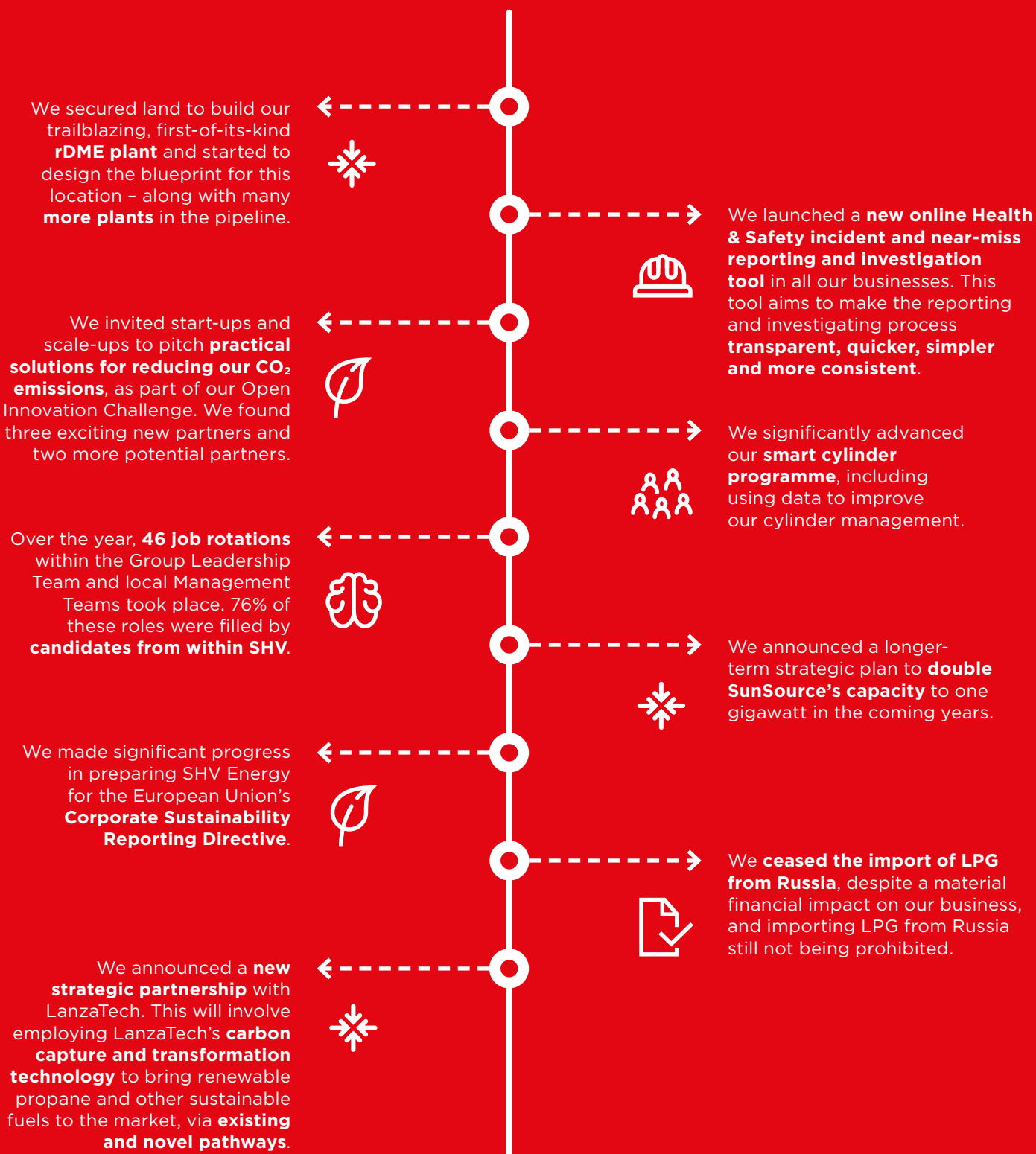
**Bram Gräber**  
Chief Executive Officer  
SHV Energy

»Our flexibility and strong supply infrastructure were very important for our business continuity in 2022. Going forward, as a family-owned company, we are uniquely positioned to plan for the long-term and generations to come«

BRAM GRÄBER, CHIEF EXECUTIVE OFFICER, SHV ENERGY



# Our 2022 highlights



# Who we are

Globally, SHV Energy aims to position itself within the changing energy market as a supplier of low-carbon and renewable energy options for applications beyond the utility grids. We serve many sectors, including the domestic, industrial, public, hospitality, agricultural, transport and automotive sectors.

Our key products are LPG, LNG and bioLPG. Additionally, we provide services focused on supply and risk management.

We have 15,750 employees (average FTE 16,300) and 30 million customers, spread across the three regions and 25 countries where we operate. We are headquartered in Hoofddorp, the Netherlands.

**Our employees**

**Europe: 6,360**   **Asia: 4,701**   **Americas: 4,689**

**Our products**

LPG
 LNG
 bioLPG
 bioLNG

## Countries



**Our brands**

BUTAN PLIN
 CALOR
 GASPOL
 IPRAGAZ
 LIQUIGAS
 PINNACLE
 PRIMAGAS
 PRIMAGAZ
 SUPERGASBRAS

PETROMAX LPG
 EVE
 Innovative Energy Solutions
 SunSource ENERGY
 PRIMAGAS
 PRIMA LNG
 SHV ENERGY CHINA
 SUPERGAS
 SHV ENERGY SUPPLY & RISK MANAGEMENT





# Our products and services

## Our key energy transition achievements in 2022:

- 1

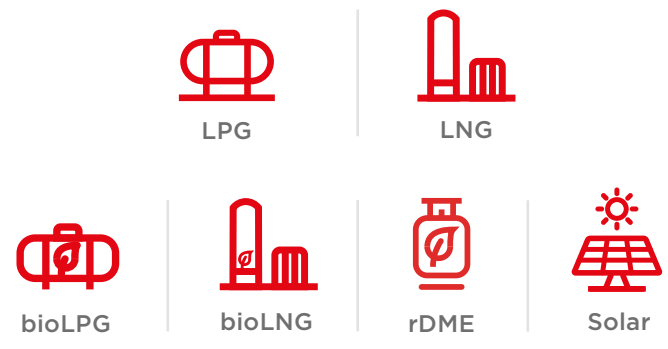
Through steadfast stakeholder engagement, our Sustainable Fuels team contributed to the growing awareness and understanding that renewable liquid gases are an essential part of the overall energy mix.
- 2

Dimeta, our joint venture with global LPG business UGI International, was officially established in March with the goal of advancing the production and use of rDME – a low-carbon sustainable liquid gas.
- 3

Our solar energy business SunSource constructed its first open-access solar farm, significantly boosting its capacity to 45 megawatt peak with further growth in the pipeline, while EM3 helped many customers progress towards their net-zero goals.

SHV Energy’s main contribution to the energy transition is through its products and services.

## — Our extended product portfolio —



### LPG and LNG

The energy solution we currently provide to most of our customers is LPG. We are a global leader in the distribution of LPG to both companies and domestic consumers, and this area of our business continues to grow. LPG is a key part of the off-grid energy transition. It is our strong belief that the energy transition is a long-term commitment that requires realistic and cost-effective solutions. By providing customers with LPG, we are replacing their use of more polluting energy sources such as oil and coal that contribute to poor local air quality.

LNG is another of SHV Energy’s specialties. LNG is a colourless, odourless liquid fuel. Switching to LNG offers a more sustainable solution to oil-based products for industrial applications and transportation as it releases significantly less CO<sub>2</sub>, NO<sub>x</sub> (nitrogen oxides) and SO<sub>2</sub> (sulphur dioxide), and virtually no particulate matter. We are active in the small-scale LNG market and very experienced in distributing LNG as an off-grid energy solution to our industrial customers and refuelling stations.

### BioLPG

BioLPG refers to renewable propane or butane. This functions in exactly the same way as traditional LPG but the feedstock differs: bioLPG is made from non-

fossil feedstock including waste, vegetable oil and residues. Using bioLPG can reduce CO<sub>2</sub> emissions by up to 80% when compared to traditional LPG, making it a key part of our defossilisation strategy. These CO<sub>2</sub> savings are calculated based on a 100% blend compared to the CO<sub>2</sub> emissions from conventional LPG. The level of CO<sub>2</sub> savings may vary per production batch as it depends on the feedstock used to produce the bioLPG.

We continued to procure volumes of bioLPG, but this was particularly challenging in 2022. Our short-term supply opportunities are sourcing renewable propane and butane produced as a by-product from both HVO (hydrotreated vegetable oil) and HEFA (hydroprocessed esters and fatty acids) processes. Both processes produce renewable diesel or sustainable aviation fuel with bioLPG as a by-product. The current market dynamics around bioLPG supply are difficult because of factors including the high price of vegetable oils and used cooking oil as commodities globally and the growing competition for substituting fossil fuels with bioLPG as an alternative chemical feedstock. Despite the challenging conditions, we diversified our network of bioLPG suppliers in 2022.

Another major focus in 2022 that made exceptional progress was exploring and developing new



»LanzaTech’s entrepreneurial journey from startup to Nasdaq is full of the ‘can do’ mentality we need for rLPG innovation!«

REBECCA GROEN, DIRECTOR OF SUSTAINABLE FUELS, SHV ENERGY

### IMPACT STORY

#### SHV Energy invests in LanzaTech

SHV Energy’s investment in LanzaTech, alongside other renowned investors, adds to the Sustainable Fuels core team’s strategic plan to increasingly defossilise SHV Energy’s fossil product portfolio via Futuria liquid gas, with Futuria being the new brand name for SHV Energy’s growing sustainable fuels portfolio.

LanzaTech is a pioneer in carbon capture and transformation innovation. A key focus of the investment and collaboration is to explore how LanzaTech’s expertise can help develop solutions to secure high-volume feedstocks for conversion to Futuria liquid gas and other sustainable fuels, which will help bring substantial volumes to the market.





routes to bioLPG that will enable us to further scale production to meet rising demand (see the research and development section later in this chapter).

### rDME

rDME refers to dimethyl ether produced from renewable or recycled carbon feedstock. For the past few years, SHV Energy has been driving the development of rDME and raising awareness of rDME as a sustainable, low-carbon liquid gas with potential to make a considerable carbon reduction impact in our collective ambition to defossilise.

SHV Energy is fully committed to scaling up production of rDME. It provides an excellent opportunity to produce a circular, community-scale fuel that can harness readily available sustainable feedstocks such as waste and residues. Compared to other solutions that are still in the research stage, rDME is far more advanced in terms of production readiness, therefore offering a more immediate solution for supporting the LPG industry and its customers to transition to a more sustainable future. Depending on site-specific economies, it is anticipated that rDME can be produced to be cost-effective compared with other renewable fuels.

### Sustainable fuels research and development

In order to expand our on-purpose bioLPG production research activities, we ran our second Open Innovation Challenge on sustainable fuels in 2022, this time targeting researchers in India following on from our global approach in 2021. The Open Innovation Challenge was an opportunity to leverage the significant sustainable fuels opportunity in India due to the abundance of potential local feedstock. India also benefits from a strong academic and technology

fields. We had many impressive entries and opted to award two winners: National Institute of Technology Calicut (NITC) and Institute of Chemical Technology Mumbai (ICTM).

Each winner received a €50,000 grant and will have the opportunity to collaborate with SHV Energy on developing their research into producing sustainable fuels with a locally available feedstock. NITC will focus on producing bioLPG from rice straw via fermentation to create butyric acid, while ICTM will explore the reforming of waste sewage.

SHV Energy has made considerable progress with our own research and development portfolio. We published a joint paper with Aston University on producing bioLPG from butyric acid and have a growing global community of enthusiastic academic and startup partners working hard to find new solutions.

2022 also included a significant milestone in one of our proprietary process routes and there is currently a patent application in progress for taking alcohols, such as bioethanol, and converting them to bioLPG and other hydrocarbons. This builds upon work we have been pioneering for three years. We have now partnered with US-based GTI Energy to further develop this process for commercial scale on-purpose production of bioLPG. This technology is a significant improvement on current commercial processes, with much higher yields expected. An explanation of this new process was published in an academic journal and was acknowledged by the World LPG Association (WLPGA) with an Innovation Award presented during LPG Week in New Delhi, India.

In addition, we announced a new strategic partnership with LanzaTech, which will involve employing LanzaTech's carbon



**»It is a pleasure to work with a company that is deeply committed to mitigating their climate impact and environmental effects on the planet«**

**AOIFE BURKE, US REGIONAL LEAD - ENERGY CONSULTANT, EM3**

### IMPACT STORY

#### **How EM3 unlocks energy and carbon savings**

A leading animal health company announced new sustainability goals at the beginning of 2022 that included accelerating the journey to carbon neutrality by bringing their goal forward to 2030. As part of this initiative, the animal health company partnered with EM3 to identify and unlock energy and carbon saving opportunities across Europe, the US and China.

EM3 calculated that through power purchase agreements or solar installations, 63% of emissions could be reduced. The remaining 37% of overall emissions require energy efficiency interventions, electrification and biofuels procurement to avoid purchasing carbon offsets. In total, the initiative will create a cost avoidance of €14 million by 2030.





»At RSPL Group, we are committed to operating in an environmentally responsible manner, with renewable energy being a crucial aspect of our sustainability strategy«

VENKAT DURGAMWAR, GENERAL MANAGER, ENVIRONMENTAL SUSTAINABILITY & EV TRANSPORTATION AND RENEWABLE POWER, RSPL GROUP

IMPACT STORY

SunSource Energy’s Uttar Pradesh solar project

To support Uttar Pradesh, India’s most populous state, in its sustainable growth ambitions, SunSource Energy successfully commissioned its 45 Megawatt peak (MWp) offsite open-access solar power project. This is one of the largest open-access solar projects in the state. Over 130,000 solar panels have been installed across 164 acres of land to generate solar power. It will supply clean power to nine leading corporations for a period of 25 years, helping them and UP progress towards their net-zero targets. The leading corporations include India’s largest bottlers of Coca-Cola and PepsiCo, a metal company, RSPL Group – a fast-moving consumer goods conglomerate in India, and Taj Hotel, among others.

capture and transformation technology to bring renewable propane and other sustainable fuels to the market via existing and novel pathways. We see huge potential in harnessing this technology to support important industrial processes for the production of materials like steel, glass and cement, capturing the waste off-gas with useful components and converting them into feedstock that then becomes bioLPG.

Scaling our impact through partnerships

In partnership with KEW Technology, SHV Energy set up a business called Circular Fuels Limited (CFL) in 2021 that will produce rDME from waste. It currently operates a gasification plant called the Sustainable Energy Centre in Wednesbury, UK. Construction continued on its rDME synthesis plant in 2022, demonstrating the full end-to-end waste to DME process. This plant will have the capacity to produce five tonnes of rDME each day. CFL plans to develop a pipeline of full-scale commercial rDME plants worldwide, the first of which will be in Teeside, UK. The plant will incorporate innovative, advanced gasification and reformation

technology to convert municipal solid waste into rDME. We expect this site will start production in 2025, producing more than 50,000 tonnes of rDME each year.

SHV Energy and UGI International launched a new joint venture called Dimeta in March 2022, after EU approval was granted in 2021. Dimeta was created to advance the successful adoption of rDME to help defossilise the LPG industry globally.

To encourage adoption, 40% of the rDME produced and sourced by Dimeta will be sold to SHV Energy’s local businesses (for example Calor GB), 40% to UGI and 20% to other businesses in the LPG industry. In 2022, Calor GB started identifying target pilot customers and equipment manufacturers to demonstrate the viability of rDME and the carbon intensity reduction that it offers.

To prepare for the safe introduction of rDME, we have been working closely with national and global industry associations and standardisation committees, including the WLPGA, to review and update the technical standards to ensure it is regulated in a safe and transparent manner.



Our position in renewable solutions

Our current product portfolio is focused on LPG, LNG, and increasingly bioLPG, with other fuels like rDME beginning to play a role. However, the energy mix is constantly developing and we are determined to keep playing a significant part in its future. Our renewable solutions business, which includes energy transition services and distributed generation, continues to go from strength to strength.

We see enormous opportunity in providing energy transition services such as energy efficiency. Our 2020 acquisition of EM3 laid the foundation of this capability and we continue to build on it.

EM3’s services were demanded more in 2022 due to energy availability concerns and high prices. Many companies,

particularly in energy-intensive industrial or manufacturing spaces, continue to execute their net-zero pathways to mitigate the impact of high energy prices on their business, meaning energy efficiency is growing in relevance. EM3, via its key account management approach, continued to provide excellent services to enable its customers to reduce energy consumption. Further, its use of data analytics for ongoing energy management services continues to build momentum.

2021 saw our first move into solar energy with the acquisition of a majority stake in our Indian business SunSource. In 2022, we strengthened and developed SunSource’s business and acquired its remaining shares (making it a 100% subsidiary of SHV Energy). For the first time, it commissioned and now operates an open-access solar project (45 MWp). Entering into the open-access market will

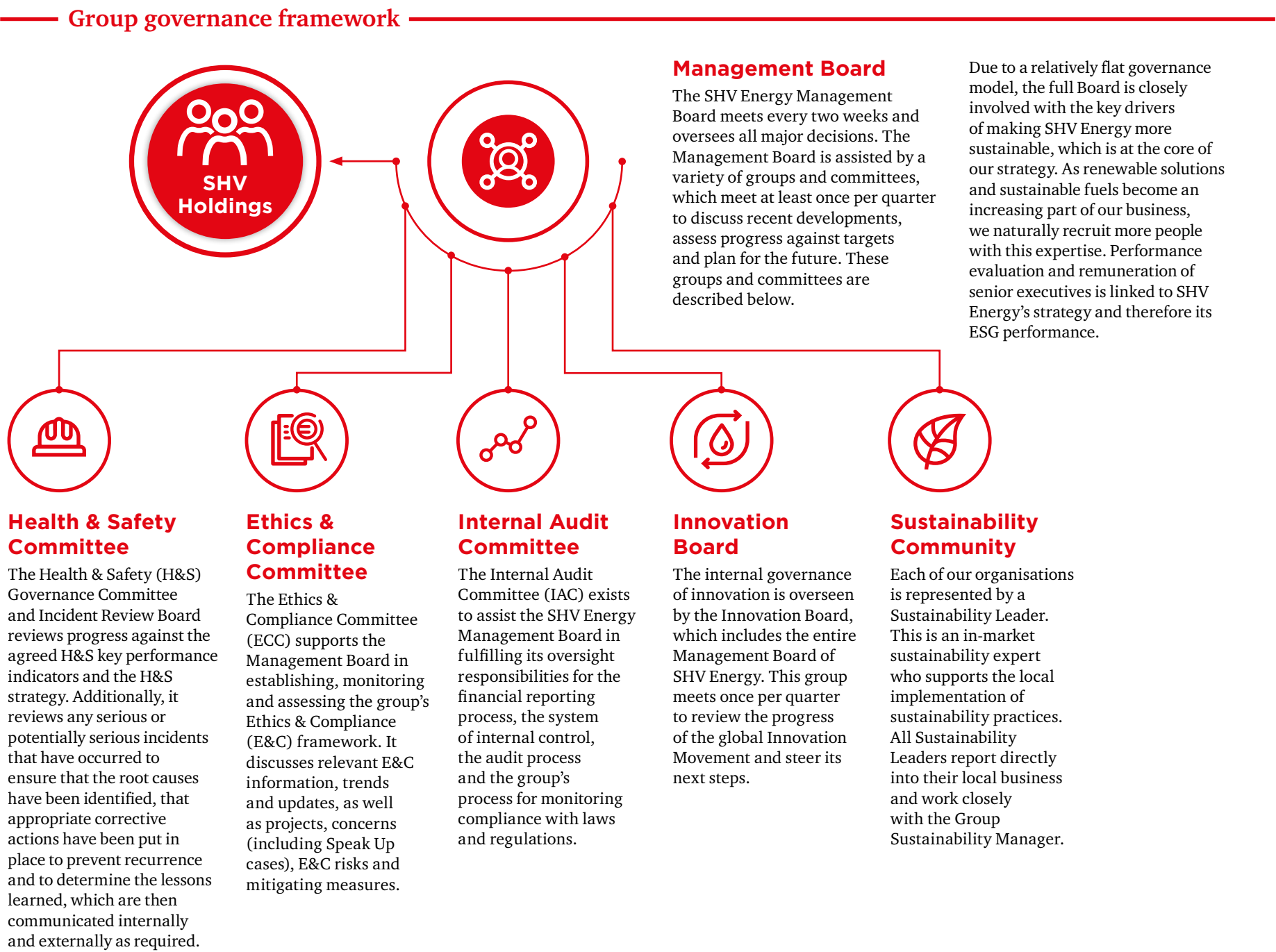
enable SunSource to provide solar solutions to larger commercial and industrial customers in four key states in India.

SunSource has been exposed to the same supply chain challenges as the rest of the solar industry, including India-specific new regulations meaning increased import duties. Whilst this is a challenge for all Indian solar developers, SunSource continues to develop careful and strategic plans to remain on track for the target of one gigawatt peak by 2027.

2023 looks to be another year of significant growth for our renewable solutions business. As well as continuing to grow the two operational companies that we have, we are looking to make a further acquisition in one of our key geographical strategic areas to expand our energy transition services.



# Corporate governance



# Our ESG project team

A recent addition to our corporate governance structure is our Environmental, Social and Governance (ESG) Reporting project team, led by the newly appointed Director of Sustainable Development, who has overseen the company's overall ESG activities since May 2022. This cross-departmental group was formed in July 2022 to manage SHV Energy's preparation for several pieces of upcoming sustainability reporting legislation, the foremost of which is the European Union's Corporate Sustainability Reporting Directive (CSRD).

CSRD aims to bring sustainability reporting to the same level of quality as financial reporting while driving more transparency and data comparability between organisations.

The project is sponsored by our Chief Financial Officer and colleagues from Sustainable Development, IT, Finance, and Internal Audit and Risk are part of the team, tasked to prepare for the requirements of this new regulation.

**Risk management and ESG reporting**

Risk management is led from our head office by our Head of Group Internal Audit and Internal Control. Our individual businesses do their own risk mapping at a local level, which feeds into the central Internal Audit team's global-level risk analysis. SHV Energy currently tracks 11 major risks, some of which are linked to environmental or sustainability impact. The central Internal Audit team's role in the ESG Reporting project includes quality assurance of data, coordination of the local internal control and risk managers in our businesses and working to clearly define the criteria and key performance indicators that will be rolled out as a result of the project.

**ESG reporting progress in 2022**

An ESG Project Manager was appointed to coordinate the project team and stakeholders in the businesses.

SHV Energy has until 2026 to be fully compliant with CSRD requirements and intends to use this time wisely, since there are important impacts to the organisation in terms of data collection, risk management processes and assurance that need to be tackled in the short term.

During this year, the project team has identified the functional areas that need to be involved, completed a benchmarking exercise and taken the first steps towards conducting a double materiality assessment.

Additionally, three of our businesses have been engaged in early discussions around SHV Energy's ESG positioning and performance.

**The next steps for our ESG reporting**

Preparing the double materiality assessment is a significant milestone that we began preparing in 2022. Its results will allow us to finetune our sustainability agenda and make our policies, objectives and metrics CSRD-proof.

While the single materiality assessment allows us to understand the most relevant impacts that our organisation has on society and the environment, adding the financial dimension to the analysis will allow us to understand the main risks and opportunities that the assessed topics also bring to our organisation.

We see the regulatory changes as an opportunity to drive our sustainability performance and become a stronger, more future-proof and successful business and remain an employer of choice.



# How SHV Energy creates value



# Stakeholder engagement

As a group of companies that focuses on value creation, stakeholder engagement is critical to the success of our businesses. We continuously engage with our stakeholders through a range of channels and use their input to create, validate and improve our sustainability strategy. We often work alongside our businesses to engage stakeholders such as customers, employees and suppliers.

Stakeholder group	Channels of engagement	Discussion topics in 2022
<b>Employees</b>	Meetings Newsletters Polls and questionnaires Speak Up Sustainability Report Councils Yammer (social networking platform) Videos	Code of Conduct Collaboration Company strategy and results Compliance register COVID-19 Health and Safety Sustainability awareness campaign Trade compliance
<b>Customers</b>	Conference calls Newsletters Social media and campaigns Calls and meetings	Company strategy and results COVID-19 Product safety Research and development Sustainable fuels
<b>Suppliers</b>	Audits Contracts Direct correspondence Supplier Code of Conduct	Health and Safety Supplier Code of Conduct Sustainable supply chain
<b>Regulators/government authorities</b>	Collaboration initiatives Conferences Direct correspondence Meetings Calls and meetings	Energy transition Innovation Investments Product safety Regulatory issues Sustainable fuels
<b>Local communities</b>	Meetings Social media and campaigns	Impact on society Product safety
<b>NGOs</b>	Collaboration initiatives Conferences	Company strategy and results Energy transition Innovation Product safety
<b>SHV Holdings family</b>	Meetings	Company strategy and results Investments

## Engaging globally and locally

Our stakeholders anchor SHV Energy's identity around delivering our mission of Advancing Energy Together. To ensure transparency and ongoing dialogue, we regularly engage with our stakeholders directly through our operations or global initiatives.

Increased remote working enables our businesses in European Union (EU) member states to engage with national representatives in the European Parliament via video conferencing. This provides an opportunity to share the reality of our customers around an inclusive and just energy transition, and provide insight into a pan-European investor. In addition to existing liaisons for the European Parliament, European Commission and European Council, a new EU Affairs Manager role was created in 2022.

We are a member of key industry associations and initiatives. Building upon 2021's European focus, we expanded our horizons in 2022 to join global initiatives and organisations, including Low Carbon Fuels Coalition, the Biomethane Industrial Partnership and the Biofuture Campaign. The Biofuture Campaign is an initiative of the Clean Energy Ministerial (CEM), bringing together the world's leading energy transition companies, related international organisations and companies to accelerate a clean

energy transition. The campaign is aimed at showcasing pathways that advance the development of bio- and waste-based fuels, chemicals and materials. SHV Energy participated in the CEM forum to support actions that harmonise rules on CO<sub>2</sub> accounting and sustainability while highlighting the importance of off-grid renewable liquid gases like renewable LPG and rDME. The forum also provides an opportunity for policy dialogue.

Through our presence in various working groups, we engage with other members and key industry stakeholders to demonstrate how our products are part of a resilient, clean and sustainable energy system. We co-operate and engage with regulators and government authorities – both directly and through trade associations – in the development of bioLPG while highlighting the role of bioLPG and LPG in rural off-grid areas.

As a company, SHV Energy commissioned Gemserv to undertake a review of rural heating options to compare various heating systems (LPG boilers, bioLPG boilers, heat pumps and hybrid heat pumps) across 144 building archetypes in eight EU countries, in terms of lifetime cost, upfront cost and CO<sub>2</sub> emissions. We also undertook a deep-dive, together with Delta Energy & Environment, into the role of hybrid heat pumps in decarbonising off-grid homes as an immediate, practical, affordable and resilient heat decarbonisation

solution. Hybrid heat pumps combine an electrically driven heat pump with a boiler running on gas, including (bio)LPG or rDME. The heat pump generally meets 60-80% of the building heat demand, with the boiler providing a boost in cold weather or for hot water generation.

## Community engagement

We strive to be a good corporate citizen. In geographies where our filling plants and refurbishing stations are located close to residential areas, our colleagues organise various public outreach activities. Our businesses also support their communities in numerous ways.

For example, our Irish business Calor has a charity-based partnership with an organisation called Samaritans Ireland (see the impact story on page 53 for more detail). This charity provides emotional support to those who need it most – 24 hours a day, seven days a week, 365 days a year – throughout Ireland, by providing a free helpline manned by volunteers.

In Brazil, Supergasbras works on a range of socio-environmental projects in its local communities, supported by national volunteer programmes. These include local initiatives supporting emergency humanitarian causes, such as major floods, and other social problems increased by the COVID-19 pandemic. Supergasbras also runs educational initiatives that contribute to local economic, social and environmental development.

## Our key industry associations and initiatives







## Advocating for the energy needs of rural areas

As our main customer base in Europe lives outside of cities, we are particularly attuned to the needs of rural communities and how they must be considered in government policy. We set up the Future of Rural Energy in Europe (FREE) initiative in 2010 to champion the energy needs of these communities, which are often overlooked despite numbering 130 million people. We consider it a major milestone of recognition for rural relevance that in 2020, the European Commission launched a consultation to develop a long-term strategy for rural areas for the first time.

We launched the European Rural Barometer Survey in 2021, which aimed to give these energy users a voice in energy and climate policy at both national and EU levels by analysing their understanding of relevant EU policies. Our first survey showed that 70% of rural respondents agree that more focus should be put on helping off-grid regions achieve their climate change ambitions. In 2022, a second edition of the survey was designed to give us a clearer view on what these rural communities need to successfully transition in terms of sustainable energy. Across 11 European countries, 10,598 respondents were surveyed. The results revealed that the cost of installation and cost of monthly bills are the most important

factors when choosing a new heating system.

We also continued commissioning local studies to make policy tangible for our stakeholders, working closely with our European businesses to tell the stories of their rural communities and their energy needs. For example, the FREE initiative, alongside Liquid Gas Europe and the European Committee of Manufacturers of Domestic Heating and Cooking Appliances, sent an open letter in June 2022 to the European Parliament on the Energy Performance of Buildings Directive, warning against the risk of limiting consumer choice and leaving vulnerable consumers behind, instead calling for an inclusive and multi-technology approach.

# Materiality assessment

Every few years, we carry out a materiality assessment to determine which aspects of our sustainability agenda are most important to our stakeholders, and whether our agenda of the key strategic sustainability topics is still up to date.

## Identifying material topics

Material topics are topics that represent SHV Energy's most significant impacts on the economy, environment and people.

Our latest full materiality assessment, which served as an input for the existing materiality matrix, was conducted in 2020. This assessment consisted of media analysis, benchmark analysis and the creation of an online survey that was sent to different stakeholder groups. When evaluating materiality, we have taken into account the relevance of information for stakeholders and the impact of our

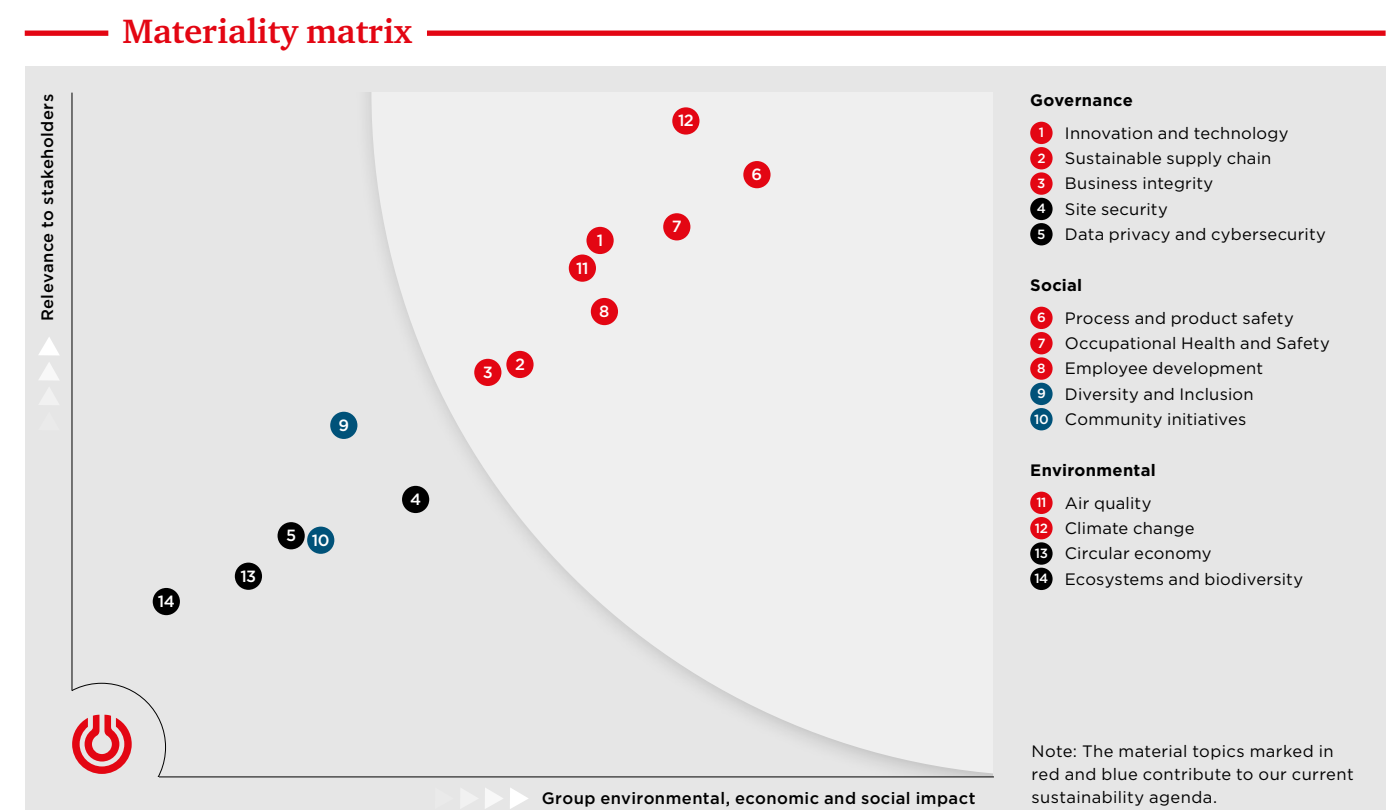
organisation on the topics from an economic, environmental and social perspective. Each of the most material issues was mapped against our aspirational goals. The findings of the assessment were validated and approved by the Management Board.

In 2022, we performed a manual check of the material topics in line with the new Global Reporting Initiative standards. We reviewed the significance of the impacts, where actual impacts were determined by the severity of the impacts and potential impacts by severity and likelihood. As a result of this exercise, we decided not to change the prioritisation of the

most significant impacts for the 2022 report, and instead conduct a double materiality assessment according to the European Sustainability Reporting standards in 2023. The results of the new assessment will be published in the 2023 Sustainability Report.

## Our response to material topics

Although all material topics are important to our company and our stakeholders, in this report we describe our progress on 10. The matrix below outlines the top eight topics identified as most significant to society and the environment, as well as two additional topics we have selected as significant.





# Our strategy

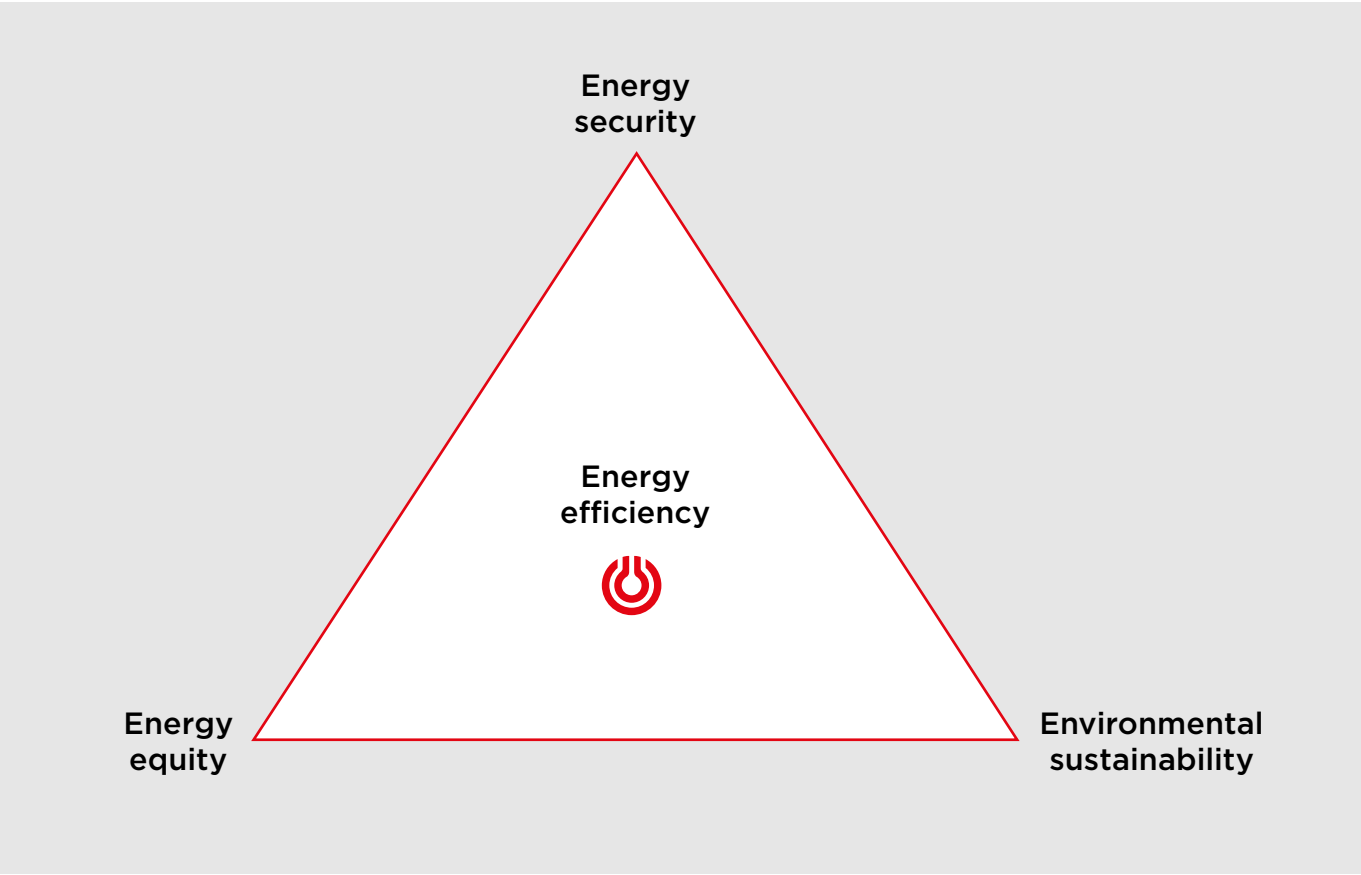
We supply over 30 million customers around the world with energy for their domestic heating, industrial heating, cooking and transportation needs. Primarily serving off-grid communities, we make cleaner energy combinations accessible and affordable for as many customers and businesses as possible. We strive to achieve this while minimising our impact on the environment and without compromising on the highest Health and Safety standards.

Our approach is pragmatic and proactive – our products are not the only or ultimate energy solution for everyone, but they play a key and very practical role in the overall energy mix. Above all, they are tailored to meet the specific needs of specific groups. Through our local businesses, we serve the significant proportion of

the global population who are not connected to the gas grid. Often, these people or businesses are based in rural areas and rely on higher-carbon and more-polluting sources of solid or liquid energy like coal and oil for activities including cooking, heating, hot water, manufacturing and farming.

There is no one-size-fits-all energy solution. Empowering these overlooked groups by providing cleaner, safer and lower-carbon energy options is a key step towards defossilisation and an integral part of how SHV Energy drives the different local energy transitions across geographies.

## The energy trilemma



### The energy transition

The energy transition refers to accelerating the fundamental change of the entire economy, improving its energy- and resource-efficiency, and eventually working towards defossilisation and climate neutrality. To maintain momentum towards this aim, change must be inclusive and accessible. Achieving a sustainable energy balance will be a key factor in providing the level of CO<sub>2</sub> emission reduction necessary to meet global climate change goals.

Our mission of helping these underserved groups participate in the energy transition goes beyond our responsibility to simply supply energy. One aspect of our purpose, Courage to care for generations to come, involves helping our customers climb the energy ladder towards a clean, efficient and just energy future.

Gaseous solutions – both on and off the grid – will be crucial in delivering cost-effective decarbonisation and eventually defossilisation. These solutions include new bio-based and renewable fuels such as our bioLPG product, as well as a new sustainable fuel we are pioneering called rDME.

### Our role in the energy transition

Our role in the energy transition is three-fold. Firstly, our traditional LPG and LNG products switch customers away from more polluting fuels such as heating oil, coal and wood. Secondly, we are developing and distributing new non-fossil molecules that allow customers to transition without completely replacing their energy infrastructure. This part of our business continues to grow. Thirdly, our expansion into renewable solutions like energy efficiency and solar energy means we can have an even greater impact, by providing more services to more customers.

We are committed to serving our customers around the world today and tomorrow. Our growing sustainable fuels offering will play a key role by continually expanding our search for immediate, viable and cost-effective solutions for our customers. In 2022, challenging market conditions made the availability and affordability of feedstock a temporary challenge, but we anticipate the expansion of our network of suppliers will help to mitigate this.

Through new partnerships, collaboration, and research and development activities, we will continue growing our team focused on sustainable fuels investment to help us provide innovative, viable and cost-effective solutions for our customers. We have dedicated sustainable fuel stakeholder engagement resources to support these ambitions, ensuring our participation in key conversations at the policy level on legislation and trends that affect sustainable fuel development, affordability and implementation.

### The energy trilemma

Several conditions need to be in place for the energy transition to become a reality. Together, these constitute the ‘energy trilemma’. Our global presence and local relevance allow us to continuously balance its three points, which are energy security, energy equity and environmental sustainability.

**Energy security** is a particularly strong point for SHV Energy – we are a reliable and resilient energy partner for hard-to-reach off-grid customers around the world. This reliability was particularly vital in 2022, when energy security, along with energy affordability, became top of mind after the invasion of Ukraine and resulting disruption to global gas supply chains.

In terms of **energy equity**, our decentralised, cleaner energy

solutions are becoming more relevant as the economic gap widens around the world. Our scalable solutions are flexible and affordable to allow people everywhere to access vital energy.

We continuously iterate how we approach **environmental sustainability**. We contribute to cleaner air and a safe and stable climate for generations to come by helping our customers switch from highly polluting fuels to LPG and LNG, all while investing in the sustainable fuels of the future, such as bioLPG and rDME, which can reduce CO<sub>2</sub> emissions by up to 80%. The steps we are taking to promote solar energy and rDME are described in more detail in the chapter of this report called ‘Our products and services’. We are also reducing emissions in our own operations and engaging our colleagues on sustainability through global internal communications campaigns.

**Energy efficiency** underpins the energy trilemma and drives much of our Innovation team’s work. We leverage the skills of our business EM3, which specialises in industrial energy efficiency, to help customers cut costs and improve their footprint.

### Driving the industry forward

The ‘together’ aspect of our mission Advancing Energy Together refers to all of our key stakeholders, not just our colleagues and customers. We must collaborate with a broad network to make the energy solutions of the future a reality – including policymakers, energy experts, other players in the energy sector, startups and academics.

Our role in advancing the local energy transitions also involves encouraging the wider LPG sector’s participation. SHV Energy is an active member of relevant trade associations and industry groups (the details of which can





be found in the ‘Stakeholder engagement’ section of this report) which are instrumental in driving cross-sector collaboration. We assume our responsibility as an industry leader by holding the industry advocacy chair at the WLPGA, an LPG industry trade association that we have a history of closely collaborating with. To support the global LPG industry in its energy evolution, SHV Energy continues to chair the renewable LPG working group.

We were a sponsor of 2022’s Global LPG Week held in New Delhi, where our CEO Bram Gräber was a featured speaker. The theme of this year’s event was ‘Humanising Energy’, in acknowledgement of how energy lies at the core of many current global challenges that directly impact everyone, from climate

change to the cost of living. Other speakers included experts from within the LPG industry and external sustainable development specialists, such as the Director of the Energy Hub of the United Nations Development Programme. The discussion centred on how LPG can meet individuals’ needs while contributing to a sustainable future.

For example, there is currently a clear disparity between energy options available to people in different countries. People and businesses in mature markets such as Europe and North America are increasingly able to transition towards defossilised pathways, but their counterparts in emerging markets must also be able to access practical clean energy options today. SHV Energy is taking

action to address this inequality through its entrance into the Bangladeshi market in 2022 with the acquisition of Petromax. Operating in Bangladesh provides an important opportunity to drive the transition to LPG as a cleaner energy alternative than the more polluting fuels that are still widely in use there. Access to clean-burning fuels like LPG improves local and indoor air quality, consequently lowering the risk of many respiratory illnesses.

### **Raising awareness of air quality as an urgent issue**

Compared to climate change, poor air quality receives relatively less attention, despite harming millions of people every year. Our products help reduce levels of key air pollutants. For example,

LPG produces 180 times less particulate matter compared to burning wood. In Brazil alone, for example, the high consumption of firewood indoors generates enormous harm to health and brings a cost of approximately €540 million per year from premature deaths, according to a study conducted by two Brazilian universities (Pontifical Catholic University of Rio de Janeiro and Rio de Janeiro State University).

Through Cooking for Life, the WLPGA traditionally has a strong focus on improving indoor air quality and the health benefits of switching to LPG in developing countries. As an active WLPGA Industry Council member, we are determined to ensure that air quality and related health impacts of energy choices are accounted for in local energy

and climate plans, as well as economic growth strategies at the government level. Together, we can ensure these policies are truly sustainable for both people and planet.

### **Mitigating the impact of climate change on our operations**

As of 2021, climate change is considered one of the top risks to SHV Energy’s business and is now monitored closely. Extreme weather such as flooding can disrupt our supply chain and impact demand for our products. In 2022, we began defining specific actions we can take to mitigate the impact of climate change on our day-to-day operations and ensure we are as well-prepared as possible.

One country where extreme weather impacted our operations in 2022 was India, which experienced its fifth-warmest year since 1901. The intense heat contributed to an increase in cyclonic disturbances in the North Indian Ocean (15 disturbances versus the average of 11.2). These harsh weather conditions influenced Supergas’ operations. For example, the Kruibeke LPG cargo vessel was unable to berth and discharge its cargo at the Porbandar terminal for nearly two weeks in July due to high swell, strong wind and heavy rain. Due to its particular position on the coast, the Porbandar terminal is more vulnerable than other ports to weather-related disruption. However, we can expect similar disruption to occur in future, at Porbandar and other ports, due to the increasing intensity and length of India’s monsoon season.





## Our aspirational goals

Our sustainability activities are guided by our five aspirational goals. These are:



### IMPROVING HEALTH, SAFETY AND WELL-BEING

The health, safety and well-being of our employees, contractors and customers is our number one focus area.



### EMBEDDING INNOVATION

We apply an innovative mindset to solving the challenges of the present and creating the opportunities of the future.



### SUSTAINING THE ENVIRONMENT

We contribute towards cleaner air and a safe and stable climate for generations to come.



### ENHANCING EMPLOYEE AND COMMUNITY DEVELOPMENT

We strive to provide employees and local communities where we work with the opportunities to develop themselves.



### SAFEGUARDING INTEGRITY

Fair and honest business conduct is of the highest importance to us.

The goals were developed through a materiality assessment and used to create a group-level sustainability agenda, meaning all our businesses must report on them. 'Embedding innovation' is a new aspirational goal introduced as a result of our updated materiality assessment in 2020.

## SHV Energy and the Sustainable Development Goals

We continue to support the UN Sustainable Development Goals (SDGs). Through our business operations, we make the world a cleaner, healthier and safer place, and our work on the SDGs supports that same goal.

Our business activity touches directly or indirectly on many of the goals, but we have focused our efforts on the SDGs that most closely align with our current business strategy, value creation and aspirational goals.

We have identified the following four SDGs where we believe our contribution will have the biggest impact:

### 7 AFFORDABLE AND CLEAN ENERGY

Making affordable and clean energy widely available, particularly for off-grid rural customers with limited options, is at the core of our business.

### 13 CLIMATE ACTION

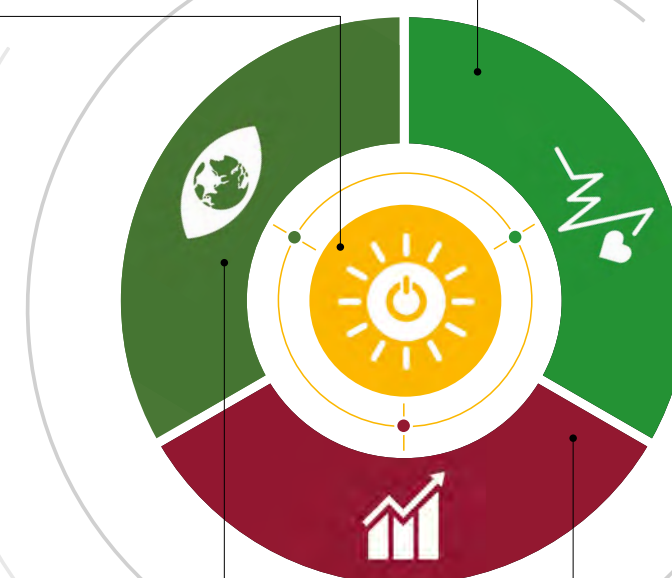
By providing sustainable products to our customers and developing sustainable business models, we combat global warming and improve local air quality. We have set an ambition to minimise SHV Energy's negative impact by improving our carbon impact (see page 47 for a definition of carbon impact).

### 3 GOOD HEALTH AND WELL-BEING

By distributing LPG and switching our customers to cleaner energy sources, SHV Energy helps to eliminate smoke exposure while cooking and improves air quality in cities. This contributes to a reduction in premature mortality and illnesses.

### 8 DECENT WORK AND ECONOMIC GROWTH

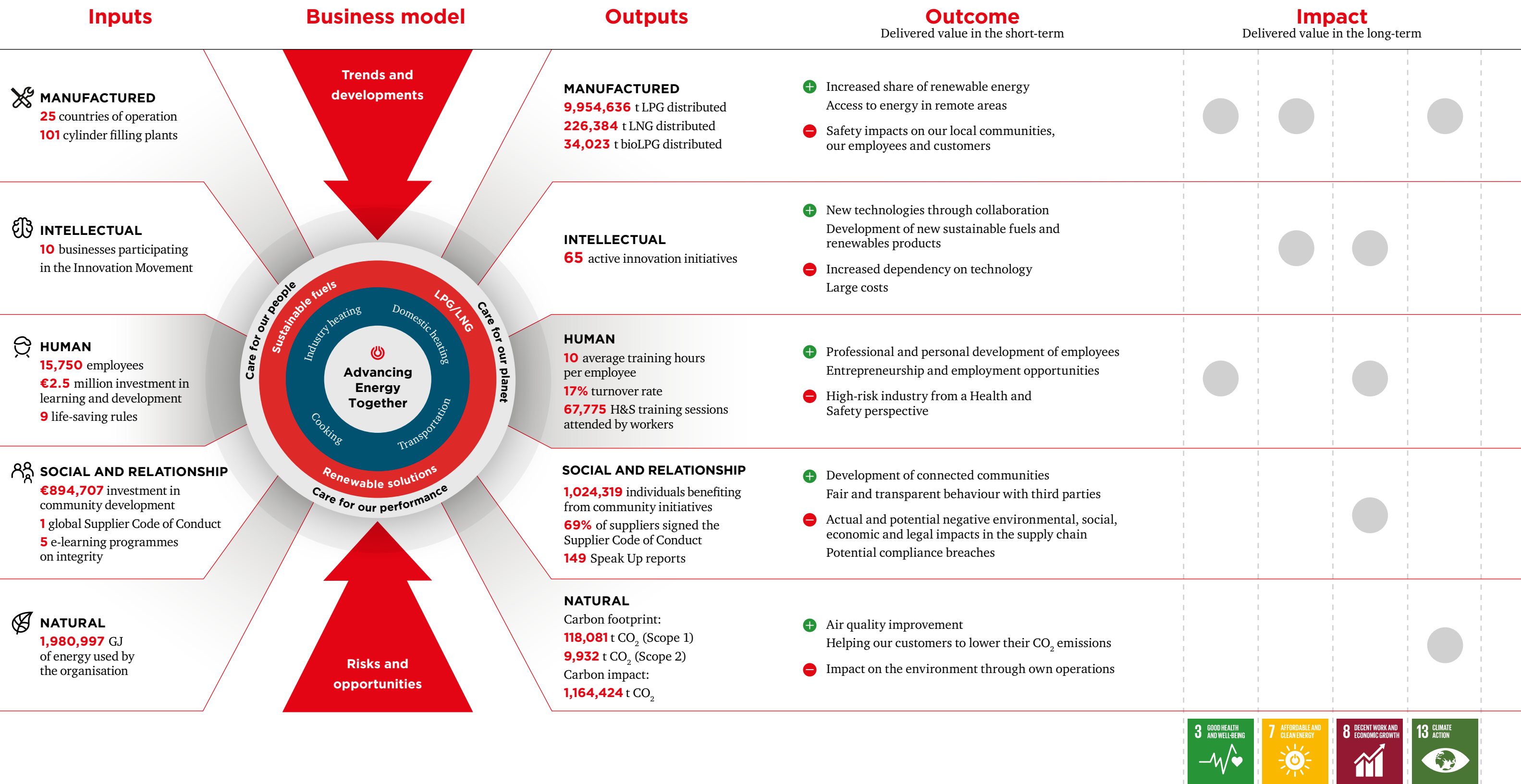
SHV Energy promotes productive activities, entrepreneurship, creativity and innovation. We invest in the development of our employees and ensure our working environments are safe and secure, as well as providing best practice safety guidance to the wider LPG industry. We work to improve the development of connected communities and to lead responsible value chain practices.





# Value creation model

We drive sustainable value for all of our stakeholders through a combination of manufactured, intellectual, human, social and relationship, and natural capitals. Our mission, 'Advancing Energy Together', encompasses SHV Energy's long-term viability in creating positive impact.





# Our performance



# Improving health, safety and well-being



## Our key achievements in 2022

The health and safety of our employees and those who work on our behalf is our number one focus area. Safeguarding the well-being of the employees who make our business operations possible, as well as our customers and communities, is a key part of ensuring our impact on the world around us is as positive as possible.

Our ambition is to have zero incidents and we are progressing towards that goal year-on-year. To support this goal, all employees and contractors of SHV Energy are empowered, encouraged and expected not to work in unsafe conditions, or any conditions that they believe to be unsafe. Individuals (both internal and external) can address any questions and concerns directly to their Line Manager, Supervisor, Health and Safety Manager, or through our EcoOnline platform.

We also ensure all incidents and near misses are discussed and investigated thoroughly to prevent them reoccurring. Lessons are then communicated across the organisation. Health and Safety excellence happens when everyone, regardless of their position, is a Health and Safety leader.

SHV Energy also aims to be a Health and Safety leader in the energy industry. We frequently work with the World LPG Association (WLPGA) to define best practice on topics including product safety and COVID-19 protocols.

# 1

▼ We successfully launched our **new online incident and near-miss reporting and investigation tool** in all our businesses, which aims to make the reporting and investigating process **transparent, quicker, simpler and more consistent**.

# 2

▼ SHV Energy **acquired the LPG company Petromax in 2022**, as detailed elsewhere in this report. Our Health & Safety team created an **integration plan** to mature its safety standards and bring them in line with our own.

# 3

▼ The waning of the COVID-19 pandemic and lessened travel restrictions meant we were able to **relaunch our audit programme** with in-person audits instead of virtual. We added **cross-business audits** for the first time to facilitate knowledge-sharing.

### PROGRESS IN 2022:

**55% ↓**  
reduction in SIFs\*  
compared to 2021

**16% ↑**  
increase in pSIFs\*\*  
compared to 2021\*\*\*

\*Serious injury or fatality

\*\*Potential serious injury or fatality

\*\*\*Due to a rationalisation and reclassification of existing incidents, see page 32 for more information





## A year of focus and flexibility

2022 was characterised by delivering on many programmes and initiatives, several of which had been in the planning stages for a long time. For example, our six Health and Safety (H&S) 'Engines for Change' have been in development for several years, as we created and refined them in consultation with our businesses. Each of the following engines is at a different stage, but 2022 was the first year that all were delivered on.

- Visible H&S governance
- Visible felt leadership (VFL) roadmap
- Operational discipline and process safety
- Cultural change programme
- Occupational health
- Incident and near-miss reporting alignment, reporting and investigation

Our overall Health & Safety performance was encouraging. We set a 20% reduction target for our two lagging metrics and achieved a reduction of 32% in

the lost time injury frequency rate and a reduction of 17% in the total recordable case frequency rate. Even one incident is one too many, but the progress is positive.

To ensure consistent reporting, a comprehensive review was performed on previously reported incidents that were subsequently entered into our Health & Safety incident management system EcoOnline. The review resulted in an increase of pSIFs due to several existing incidents being reclassified.

However, we did find that an unusual proportion of our incidents related to transportation. One of the methods we used to tackle this rise was the global Open Innovation Challenge, run in collaboration with our Innovation team, which was themed around resolving our transportation issues. The Transport Safety Working Group (TSWG), structured with the collaboration of the Group H&S Team and our businesses, continually focused on the areas to be improved. Their contributions added significant value to the

development and implementation of the Transport Safety Compliance standard. As was the case in 2021, we saw high turnover of employees in filling plant and transportation roles, which we know to be an industry-wide issue linked to the global labour shortage. To mitigate any risk as a result of turnover, we are conducting more rigorous screening and training of new applicants.

Whilst any increase in incidents is concerning, a temporary increase in small incidents can also point to increased awareness and maturity of health and safety across the organisation, as it means incidents are now being reported where previously they may not have been.

In addition to our transport innovation campaign, we continued to collaborate with the Innovation function on reducing manual handling injuries. This multi-year project has resulted in several solutions progressing from initial innovation through to development, testing and user acceptance, all the way to widespread use in our businesses.

## Our performance at a glance

### Risk management in 2022

**7,532**

leadership tours planned



**1,131**

audits planned



**275**

SIF/pSIF corrective actions raised



### Achievements in 2022

**0**

employee fatalities



### Product safety in 2022

**100%**

of our product and service categories covered by and assessed for compliance with product safety procedures



**67,775**

H&S training sessions attended by workers



LPG cylinders



LPG tanks



LPG bulk



LNG installations





»This project allows us to further develop the safety culture at Liquigas, integrating it with sustainability aspects: we drive our vehicles better and emit less CO<sub>2</sub>!«

NICCOLÒ CAMBIAGHI, SAFETY MANAGER, LIQUIGAS ITALY

IMPACT STORY

Driver training at Monza

During SHV Safety Week, Liquigas Italy organised a training course for its LPG drivers on safe and sustainable driving: an innovation project combining safety, sustainability, operations, logistics and human resources. Liquigas Italy designed the course to engage drivers both physically and emotionally while reflecting together on self-awareness and presence while driving. They then held a practical session on the famous Monza racetrack to practise safe and sustainable driving techniques. With the black box device installed in each vehicle, Liquigas Italy was able to monitor many driving KPIs that can help reduce accidents and diesel consumption.

Our seven CARE habits



I CHALLENGE FOR HEALTH & SAFETY



I CHANGE WITH HEALTH & SAFETY IN MIND



I COMMUNICATE ON HEALTH & SAFETY



I LEAD BY EXAMPLE



I LOOK AFTER PEOPLE AND THE ENVIRONMENT



I REPORT INCIDENTS & NEAR MISSES



I START HEALTH & SAFETY READY

COVID-19

The lingering effects of the pandemic had much less of an impact on 2022 than the two previous years, particularly as the year progressed. We maintained a risk-based approach and relaxed our protocol into guidance. We continued to track positive cases amongst employees, who continued to be required to isolate.

Campaigns and events

We launched our cultural change CARE campaign in 2021, which then continued into 2022 and beyond. All campaign content is translated into local languages for maximum engagement and feedback has been positive so far. We anticipate that this will be a five-year campaign and we will continue to implement our learnings as we progress. The programme materials have also been made available to our sister companies and SHV Holdings.

Another notable success was our annual Global Health and Safety Week, which runs simultaneously across SHV Energy and all its sister companies. The focus was on behavioural-based safety (our CARE programme) and Life-Saving Rules. We were able to do many more in-

person events compared to 2021, with bigger gatherings and more involvement of employees' families. One exception was our Chinese business, which maintained a mostly virtual event due to continuing COVID-19-related restrictions.

Leading the industry in health and safety

As one of the biggest and most established businesses in the LPG industry, we feel a responsibility to share our expertise and move the overall industry forward. We have been working closely with the WLPGA for several years, including on the topic of health and safety. Year-on-year, trust and transparency is increasing between members and we all see the benefits in sharing safety-critical information for the purpose of knowledge-sharing and our collective good.

We feel strongly that the health, safety and well-being of employees and customers should always be at the forefront of LPG businesses' minds. With this in mind, we presented on the topic at the WLPGA's global conference, marking the first dedicated session on health and safety in the event's history.

Occupational health and safety

The launch of a new health and safety reporting software, which was rolled out to almost all our businesses, has simplified reporting incidents and near-misses. Increased engagement and a slight increase in reports is already apparent. The rollout will complete in 2023.

Process safety assurance

Process safety is an area of renewed focus for SHV Energy in recent years. As no global standard existed on process safety assurance, we wrote our own SHV Energy process safety standard in 2020, which was then applied globally. This standard includes a red, amber or green status rating against 11 key elements of process safety, which then gives an overall status for each of our businesses, as well as SHV Energy collectively.

With support from an external specialist auditor, we previously used a risk-based approach to assess process safety in our 22 terminals responsible for the highest volumes of product. The data collected from this exercise showed we needed to roll our process safety assurance further down the value chain. Initial assessment of our filling plants was completed in 2022 as part of our ongoing ODPS programme. We use a combination of independent and internal assurance to gain a clearer picture of process safety – initial data shows a positive trend.

The controls that our Health and Safety team implement to keep our people safe are supported by additional controls from other departments, such as audits conducted by our own Internal Audit team or the Audit team at SHV Holdings. Our colleagues specialising in internal control and business support framework ensure we align with the controls put in place as part of these audits. We also participate in maintaining the group risk register to ensure it remains up to date from a health and safety perspective.



Keeping our customers safe

Our responsibility to ensure the health and safety for all our stakeholders does not only apply to our work colleagues and contractors, but also to our domestic and commercial customers. Many customers switch to our products from solid energy sources like coal or wood and are not familiar with liquefied energy products. With this

in mind, we provide guidance and training on safe use, particularly focusing on correct hose use as it carries the highest risk potential if improperly used.

Customer incidents are on a decreasing trend, which we attribute partly to our hard work on safety education. In 2022, we trained 3,127 customers how to safely use SHV Energy's products.



# Embedding innovation



PROGRESS IN 2022:

**71%** →  
of businesses  
participating in  
the Innovation Movement



## Our key achievements in 2022

# 1

▼ We used our **Open Innovation Platform** to engage with **external stakeholders on sustainability** and **foster a more risk-taking culture**. We had three Open Innovation Challenge engagements in 2022: transportation and health and safety, sustainable fuels, and one centred on Scope 1 and 2 emissions.

# 2

▼ We **significantly advanced our smart cylinder programme**. We grew the programme to incorporate the **use of data** in different projects aimed at improving **our cylinder management**.

# 3

▼ We started exploring **new value propositions** to help our domestic customers **progress through the energy transition**. We launched a **digital proposition pilot** in Ireland to help our customers assess their **current energy profile** and **readiness to change to less impactful energy sources**.

‘Embedding innovation’ appeared in our sustainability reporting for the first time in 2020, as a response to innovation’s increasing relevance to our business and how we approach our key challenges. This increased relevance was also reflected in the results of the materiality reassessment we undertook at the end of 2020. We asked key stakeholders to assess a list of important topics for their relevance and importance to SHV Energy – innovation’s high ranking was another factor in its inclusion.

We see innovation in a broad sense. It is an approach that defines how we respond to both present and future challenges. At present, we use innovation to understand and plan how we can better serve our customers, as well as how we can strengthen our businesses. Looking ahead, we apply innovation to building the future of SHV Energy by testing and exploring new solutions, products and business models.

To achieve successful innovation, it is crucial to have a deep understanding of our business challenges and our customers’ needs. At SHV Energy, we adopt an ‘outside-in’ approach by listening carefully to our customers, partners and colleagues to gain a comprehensive perspective on how we can improve and innovate effectively.





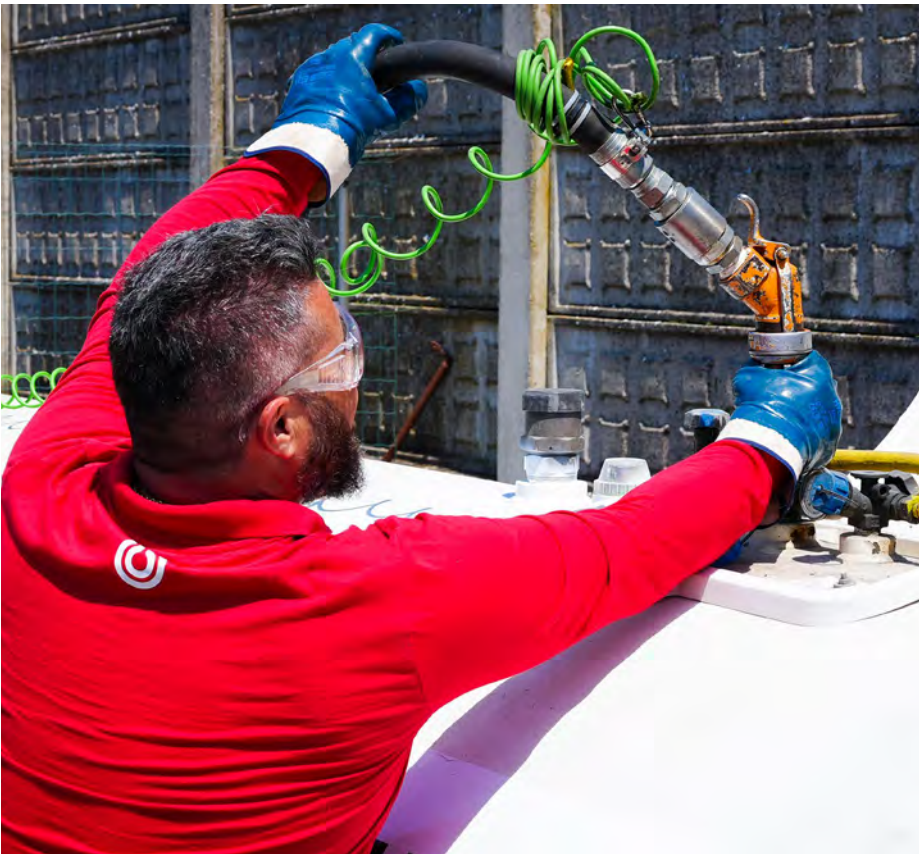
»The Innovation Champions exhibit high motivation and energy levels as they have chosen to pursue their interests by self-nomination«

SUDIPTA PRASAD, INNOVATION MANAGER, SUPERGAS

IMPACT STORY

**Shaping the work culture with Innovation Champions**

Innovation within an organisation accelerates when its people are motivated to share ideas and develop an organic innovative culture. Supergas began focusing on innovation by establishing a dedicated team in 2020, leading to the ‘Innovation Champions Programme’ being created to engage with the innovative, curious and inquisitive minds in the organisation. 43 applications to the program were received, out of which 24 were shortlisted for round two. Ultimately, 11 Champions were finalised for 2022. Champions were divided into three groups, each driving an innovation project in collaboration with SHV Energy.



**Building innovation capability and mindset**

We collected 347 ideas through our global ideation platform in 2022. This approach enabled us to capture ideas from diverse employees in different functions and areas. Each employee has a unique perspective based on their particular experience and the challenges they encounter every day. The submission process is as quick and straightforward as possible to encourage sharing.

While generating ideas is an essential component of innovation, testing them rapidly and building the organisational capacity to implement them successfully is equally essential. That is why fostering a culture that encourages innovation to thrive by supporting and stimulating our people to develop the right skills and mindset is so important.

We invested in training over 330 employees in 2022 to enhance their innovation capabilities,

and we launched our first e-learning course to reach an even wider audience. However, our commitment to innovation extends beyond these efforts. We prioritise developing our employees’ innovation skills on a local level. We decentralise our coordination and capability development through Innovation Leads, senior sponsors and project teams in our businesses, embedding innovation into our organisation’s fabric and driving sustainable growth. Together, we form the **Global Innovation Community**, which convenes monthly to exchange insights and discuss progress.

The Innovation teams also collaborate closely with various global functions, including Sustainability, Sustainable Fuels, Renewables, Procurement, and Health and Safety. These functions prioritise change in areas that often intersect with innovation, making an innovation-driven approach beneficial for all.

Our performance at a glance

Innovation Movement in 2022



65  
active innovation initiatives



150  
Innovation Leads, sponsors and ambassadors across SHV Energy\*



€2.8 million  
invested in active innovation projects

\*Our focus has shifted from tracking practitioners to monitoring the full-time equivalents (FTEs) committed to innovation. This approach enables us to accurately gauge the quantity of resources that are genuinely involved in driving innovation initiatives.





# Innovation supporting our purpose

In 2022, we reorganised our innovation efforts to strengthen their alignment with our purpose: ‘Courage to care for generations to come’.

To deliver on performance, we will keep developing innovations to optimise and grow our business. A relevant example was a project in Brazil where data models were developed to improve efficiency by optimising the number of cylinders we buy yearly and utilising the available assets, with both contributing to lower-impact operations.

To ensure innovation will positively contribute to our planet, we started an innovation programme focused on sustainability with a special focus on new solutions for Scope 1 and 2 CO<sub>2</sub> emission reduction, described in more detail in the chapter ‘Sustaining the environment’.

Our main Open Innovation Challenge in 2022 focused on sustainability, looking for innovative solutions to help reduce Scope 1 and 2 emissions. We received proposals from 51 start-ups and selected six finalists that pitched their ideas at our head office in Hoofddorp with the involvement of a selection committee composed of colleagues from several of our businesses. The three winners presented innovative technologies that are now collaboration projects with SHV Energy. We are also collaborating with two additional finalists to explore and implement their innovative solutions in our supply chain.

The first winning proposal came from a Dutch start-up which installs solar panels on top of trucks to reduce fuel consumption, especially in idle time, which is particularly interesting for SHV Energy due to the time needed for refuelling. The second is a digital platform to help SHV Energy manage its emissions and identify opportunities for reduction, which we see as the



next step of data-driven Scope 1 and 2 CO<sub>2</sub> reduction. The third came from a Swiss start-up producing the first-ever kit to convert diesel trucks to LPG or bioLPG. This exciting concept is in the research and development stage but presents the potential for breakthrough innovation in our sector.

We also started exploring new business opportunities, such as Youle, a new digital application

that we tested in Ireland to support customers in choosing their energy systems. This application calculates a customer’s current energy profile and level of energy consumption, then assesses their readiness to change to less impactful energy sources and assists them with the transition.

Looking ahead, one major challenge will be matching the rapid pace of change in our sector. We tracked the

speeds of our initiatives through the innovation funnel in 2022 and found room for improvement. In response, we will be working in 2023 and beyond to accelerate the speed at which we respond to business opportunities. We aim to combine different capabilities such as digital and analytics to continue to build the innovation capacity and agility of our businesses. This will be key to understanding and addressing the evolving needs of our customers.



»The Youle project helped Calor Ireland improve customer engagement and gather insights to deliver better value propositions to existing and future customers«

LOUISE CARRICK, HEAD OF MARKETING AND CUSTOMER EXPERIENCE, CALOR IRELAND

## IMPACT STORY Youle digital campaign reveals customer insights

In the summer of 2022, Youle was launched with the objective of finding new ways to support Irish domestic households. The project was informative for Calor Ireland in multiple ways, a key one being how customers are willing to engage with their brand and share key insights around their future home energy needs. Over the course of a 12-week digital campaign, Calor Ireland contacted over 800 of its existing customers, gathering insights and feedback which will be used to create future customer propositions.



»We are thrilled to partner with innovative startups to help bring their solutions to market so we can advance our CO<sub>2</sub> emission reduction«

NAVID ARDAKANI, GLOBAL INNOVATION MANAGER, SHV ENERGY

## IMPACT STORY Innovation challenge funds five sustainability solutions

SHV Energy launched a Global Open Innovation Challenge focusing on sustainability solutions and, more specifically, reducing Scope 1 and 2 emissions. Startups from around the world applied to the challenge, with six finalists selected to pitch their ideas in the SHV Energy head office in Hoofddorp, Netherlands. Three winning startups were selected to undertake fully funded innovation pilot projects in seven SHV Energy businesses, and we are also collaborating with two additional finalists. These startups provide a range of solutions that can improve emissions measurement, decision-making, logistics and facilities emission reductions.



# Sustaining the environment



## Our key achievements in 2022

Achieving our targets around CO<sub>2</sub> reduction, air quality, the energy transition and long-term value creation requires a coordinated global approach. This is led from the SHV Energy head office in Hoofddorp, Netherlands and championed across all of our businesses by our Sustainability Leaders.

All Sustainability Leaders report directly into their local business and work closely with the Group Sustainability Manager. A vital component of 'Advancing Energy Together' is global collaboration and commitment. A sense of collective responsibility towards the environment in our entire community of 15,750 employees is key for everyone to contribute.

At the core of our sustainability ethos is the message that "You don't need to have sustainability in your job title to drive positive change". We know that small changes can add up to big impact, so we work to engage our colleagues in all business functions and encourage them to find opportunities to contribute to our sustainability targets.

# 1

▼ We invited startups and scale-ups to pitch **practical solutions for reducing our CO<sub>2</sub> emissions** as part of our **Open Innovation Challenge**. We found three exciting new partners and two more potential partners.

# 2

▼ The cross-departmental working group responsible for preparing SHV Energy for **upcoming EU sustainability legislation** laid a strong foundation in 2022. A key focus point in the legislation alignment is climate-related disclosures, which we will **continue to build on in 2023** and beyond.

# 3

▼ We ran a successful session with our Management Board where we looked **beyond measuring our CO<sub>2</sub> emissions** to explore how climate change is impacting us.

TARGET:

**25%**  
reduction in kgCO<sub>2</sub>  
emissions per tonne  
LPG distributed  
by 2025\*

PROGRESS IN 2022:

**7.7% ↓**  
reduction

\*Versus 2016 baseline





»It is a real practice of innovation while embedding sustainability into our daily production and operation«

SAMUEL YE, OPERATIONS EXCELLENCE DIRECTOR, XIWEI CHINA

IMPACT STORY

Invention generates new efficiencies

At Xiwei, China, the Zhuhai technical team invented an automatic steam purging device and system for cylinders at the Zhuhai retesting station, receiving the Utility Model Patent Certificate from the China Intellectual Property Office in February 2022.

This device has improved the efficiency and productivity of cylinder retesting, increasing the daily maximum retest capacity from 800 to 1,500 cylinders. The vastly increased automation levels have greatly reduced the work safety risk for employees, as well as the use of LPG by three tonnes per year and electricity by 36,000 kwh per year.

Our focus areas

When it comes to SHV Energy’s work on sustaining the environment, 2022 can be summarised as compliance, awareness and improvement.

Preparing for incoming legislation

In recent years, the global regulatory response to the climate crisis has strengthened significantly. Since 2015, which marked the adoption of the Paris Agreement on climate change and the UN 2030 Agenda for Sustainable Development, governments have made significant progress in preparing for the transition to a more circular, less energy-intensive world.

This progress includes new regulations and legislation which will impact businesses all over the world by legally requiring them to report on their climate impact and climate change mitigation efforts. For example, the European Union’s Corporate Sustainability Reporting Directive (CSRD) is set to change the European sustainability report landscape significantly.

As SHV Energy is a player in the energy transition, CSRD’s climate-related disclosure requirements are of particular relevance. A key focus for 2023 will be understanding our existing alignment with disclosure requirements, as well as identifying related risks and opportunities and how they may impact SHV Energy’s value chain under different scenarios. This will be managed by our Environmental, Social and Governance (ESG) working group, which will be using the Task Force on Climate-Related Financial Disclosures (TCFD) as a framework for climate risk and opportunity assessment.

In 2022, the ESG working group held a workshop to engage with SHV Energy’s Management Board. The goals of the workshop were to exchange ideas on how to further improve our climate impact

reporting and facilitate an open discussion on climate-related risks and opportunities.

Engaging our colleagues on the topic of sustainability

We continue to raise awareness of how important sustainability is by emphasising the potential impact of making small changes. In 2020 and 2021, we ran a global sustainability awareness and engagement campaign in all our businesses. We focused on our work towards our aspirational goal ‘Sustaining the environment’, with the two key topics being CO<sub>2</sub> emissions and air quality. As part of the campaign, we asked colleagues in all our businesses to submit sustainability-related actions they had undertaken for other businesses to learn from. These actions were categorised by business function: procurement, operations, marketing and sales.

As a follow-up to maintain engagement with sustainability, we hosted a new series of global webinars in 2022 to further explore actions that could be taken by each business function. A key benefit from the campaign and webinars is improved interdepartmental cooperation. In addition, to ensure that prioritising sustaining the environment starts at the very top, we ran a challenge at our extended leadership team meeting where we asked leaders of our businesses to tell us their company’s CO<sub>2</sub> emissions off the top of their heads and what their plans were to further reduce these in 2023. This facilitated an open, transparent discussion.

Our emissions reduction progress

Improvement refers to our ongoing work to reduce our CO<sub>2</sub> emissions. SHV Energy aims to be transparent and consistent around company targets, goals and ambitions, and to ensure the information that we disclose is up to standard. New regulatory developments, as well as increasing demand from the

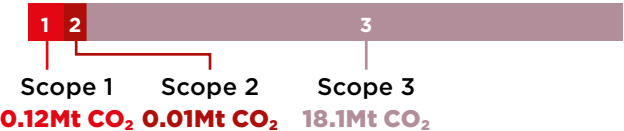
Our performance at a glance

Carbon emissions in 2022

17 million tonnes of CO<sub>2</sub> emissions

Total carbon footprint: 18.2 million tonnes (Mt)

Total carbon impact: 1.16 million tonnes



Reduction in 2022 vs. 2016 baseline



Air quality impact in 2022

We reduced emissions by switching customers to our cleaner energy carriers. We helped save:

CO  
562,723 tonnes of carbon monoxide emissions

SOx  
443,796 tonnes of sulphur oxides emissions

PM2.5  
120,505 tonnes of fine particulate matter

NOx  
668,086 tonnes of nitrogen oxides emissions

VOC  
115,563 tonnes of volatile organic compounds emissions

PM10  
131,567 tonnes of coarse particulate matter





## »An innovative solution to meet business and environmental challenges, and necessary to adapt to the changing market«

**SÉBASTIEN RAMM, CYLINDERS SALES DIRECTOR, PRIMAGAZ FRANCE**

### IMPACT STORY

#### Primagaz France responds to market needs

Primagaz France deployed automatic gas dispensers (AGDs) in the various retail chains where it sells its products. AGDs respond to a dual challenge of market and consumer trends, such as increasingly immediate automation. This innovative system allows customers to stock up on gas cylinders 24 hours a day, seven days a week – even on public holidays. Thanks to the real-time stock level enabled by these machines, Primagaz France have also improved distribution efficiency. This solution, powered by solar energy, also meets environmental challenges.



stakeholders, ask for more ambitious climate change mitigation actions. To meet these expectations, we decided to review and update the existing 25by2025 (25% CO<sub>2</sub> reduction by 2025) target. In 2022, we started to develop our new climate strategy aligned with the Paris Agreement, which will support SHV Energy in our CO<sub>2</sub> reduction target plans. We are also developing a more accurate method of CO<sub>2</sub> emissions accounting and plan to start reporting this alongside the updated target in 2023.

To further drive our emissions reduction ambition, we ran a sustainability-themed Open Innovation Challenge where we invited start-ups and scale-ups to pitch practical solutions in the areas of efficient transportation and logistics, smart facilities and decision support systems.

We announced three winners in November, each earning a fully paid pilot project with SHV Energy, including access to its global network and collaboration opportunities across the business. More details can be found in the 'Embedding innovation' chapter of this report.

We are also exploring collaboration with two other finalists. These new partners will be working closely with our businesses, because that is where we see the biggest impact and reduction opportunities.

### CO<sub>2</sub> emissions

At SHV Energy, we measure our CO<sub>2</sub> emissions in two distinct ways: our carbon footprint and our carbon impact. When we measure our carbon footprint, we look first and foremost at our direct emissions

(from our facilities and vehicles). However, we also assess where we can reduce our indirect emissions throughout the entire value chain. This includes purchased electricity, outsourced operations, consumer usage of our products, employee business travel, and extraction and production processes.

For example, we prefer to transport our products by railway instead of trucks wherever possible due to the significant reduction in CO<sub>2</sub> (and other) emissions. When trucks are used, we request the environmental classification of the trucks our logistics suppliers use and measure the CO<sub>2</sub> emissions to detect areas where we can improve. Some of our businesses are piloting using alternative fuels to deliver LPG. For example, Supergasbras is trialling an electric truck and Primagaz Belgium is using hydrotreated vegetable oil as a sustainable diesel alternative.

In 2022, we looked into different areas of our supply chain. First and foremost, we lowered our direct emissions by installing solar panels on our facilities, adopting route optimisation technologies, investing in alternative fuels for trucks and using bioLPG in our own operations. In addition, we looked for opportunities to lower our indirect emissions by using cleaner ships, negotiating cleaner means of transportation for outsourced trucking and increasing the share of sustainable fuels in our product portfolio.

### Air quality

In 2022, the World Health Organization (WHO) found that almost the entire global population (99%) breathes air exceeding WHO air quality limits. Over 6,000 cities in

## — Lowering CO<sub>2</sub> emissions —

We distinguish between two important principles as we look into our CO<sub>2</sub> emissions:

### Our carbon footprint

involves lowering our direct and indirect emissions throughout the entire value chain



Direct emissions from our facilities and vehicles are the easiest for us to reduce. We also look at our indirect emissions to assess where we can achieve reductions.

### Our carbon impact

involves offsetting our emissions by considering the effect of our products or services on our customers' carbon footprints



We use the impact of switching customers to cleaner, more sustainable fuels to offset SHV Energy's own carbon footprint.



117 countries are now monitoring air quality, but people living in them still breathe unhealthy levels of fine particulate matter and nitrogen dioxide, with low- and middle-income countries suffering the highest exposures.

Despite this, public awareness on the importance of reducing air pollution is not that widespread. We believe that air quality is just as important as CO<sub>2</sub> emissions, so we include it in our reporting and track it closely. Reporting on air quality is more complex than reporting on CO<sub>2</sub> emissions because of the variety of pollutants to track and the natural factors that affect them. Our approach is to calculate the air pollutants saved by using our products instead of traditional fossil fuels.

The severity of air pollution and air quality issues ranges significantly across the countries where our businesses operate. For example, in parts of India, China and Northern Italy, poor air quality is an everyday concern and threat to health.

Our different businesses therefore prioritise it according to their needs.

There are many factors that affect air quality, such as air temperature, urban topography, ventilation, wind speed and rainfall. However, the main factor in reducing air quality is the extraction and burning of fossil-based liquid and solid fuels like coal, oil, peat and woody biomass, and billions of people around the world still cook and heat their homes using open fires and simple stoves. Our products can help: using LPG for cooking and heating produces 20 times less CO<sub>2</sub> and 180 times less particulate matter compared to using wood.

### Looking ahead

In 2023, we will continue developing our understanding of how we impact climate change and how climate change is impacting us. We already know that the increasing frequency and severity of extreme weather events is affecting some of our businesses' operations. We will begin scenario planning and a detailed risk analysis to help us both prepare for the effects of climate change and identify related opportunities.



## »Collaboration between teams and a working environment that encourages thinking outside the box allow us to produce projects that will benefit the company and the environment«

**GÖKHAN YURTSEVEN, FACILITY OPERATIONS AND TERMINAL MANAGER, IPRAĞAZ TÜRKİYE**

### IMPACT STORY

#### Optimising logistics to enable local scrap capabilities

Previously, Ipragaz Türkiye accumulated scrap cylinders at Dörtöl prior to transporting them to a remote scrapping location 1,100 kilometres away. The need to accumulate scrap cylinders forced employees to work overtime, increasing both cost and health and safety risks. Optimisation of the network eliminated the plant-to-plant transportation movement by enabling local scrap capabilities, creating a safer and more efficient working environment. Additionally, Ipragaz Türkiye's annual carbon footprint plummeted by 140 tonnes.



# Enhancing employee and community development

## TARGET:

**25%**  
of senior leadership positions held by women by 2030

## PROGRESS IN 2022:

**22% ↑**  
of senior leadership team members are women

## TARGET:

At least one member of each senior management team coming from an under-represented nationality by 2030

## PROGRESS IN 2022:

**80% ↑**  
of our businesses meeting the target



## Key achievements in 2022

1

▼ The **active management** of senior leaders in our businesses around the globe, leveraging our **collective skills** across borders and enhancing both cultural and gender diversity, were our biggest priorities in 2022.

2

▼ Over the year, 46 job rotations within the Group Leadership Team and local Management Teams took place. **76%** of these roles were filled by candidates from within SHV.

3

▼ Our wellbeing programmes positively impacted our employees by providing support where necessary. These programmes play a big role in **employees choosing to stay with SHV Energy for a significant proportion of their careers.**

Our status as a family-owned company contributes to our friendly, supportive working environment, keeping the focus on performance. Through providing a safe, supportive and rewarding work environment where employees are encouraged to build their skills and take on new challenges and responsibilities, we strengthen our teams, improve retention and make progress in our aim to be the best place to work.

We want our employees to continuously develop themselves. This could be within their current roles by looking at further growth in areas like safety awareness, lean thinking, innovation or digitalisation. It could also be through cross-functional career moves or moving into a more senior role. Our commitment to excellent performance and development is supported by our Global Human Resources (HR) and local HR teams.

In 2021, SHV Holdings launched its new group purpose: 'Courage to care for generations to come'. It also launched a new set of five values that unite all SHV Holdings businesses, including SHV Energy: integrity, trust, curiosity, inclusivity and passion. Our HR team is responsible for ensuring our purpose and values are embedded in everything we do.





»The internship at Ipragaz gave me the opportunity to learn about the energy sector and put what I learned into practice with the help of professionals«

MIRAY TURHAN, SALES OPERATION SPECIALIST, IPRAGAZ TÜRKİYE

IMPACT STORY  
Familiarising interns with the energy sector

Ipragaz Business Academy, also known as Ibiza, is an internship programme run by Ipragaz Türkiye that is promoted as an employer branding activity. The main objectives of this internship programme are introducing Ipragaz’s corporate structure and strong team to potential candidates; providing an opportunity to have professional experience in Ipragaz; and hiring new talents for Ipragaz in the long term. This year, Ipragaz Türkiye launched the ‘technology school’ for IT interns to align with the business needs associated with future digital developments.



Our HR strategy

Generated with the SHV purpose and values in mind, the three pillars that the Human Resources (HR) department worked towards in 2022 were:

- Develop new capabilities and re-skill the workforce to accelerate strategy implementation
- Engage employees and continue developing talents
- Promote an inclusive culture to drive growth and the energy transition

Demographic shifts are changing the workforce. Going into 2022, our challenges were to retain the knowledgeable and experienced professionals in our organisation and also attract and retain new generations. This is a powerful combination to lead the energy transition. To help SHV Energy

become a more diverse company, local HR teams and hiring managers in businesses including Poland, Turkey and China have been trained in unconscious bias regarding job applications.

To further implement the HR Strategy, we developed four key projects:

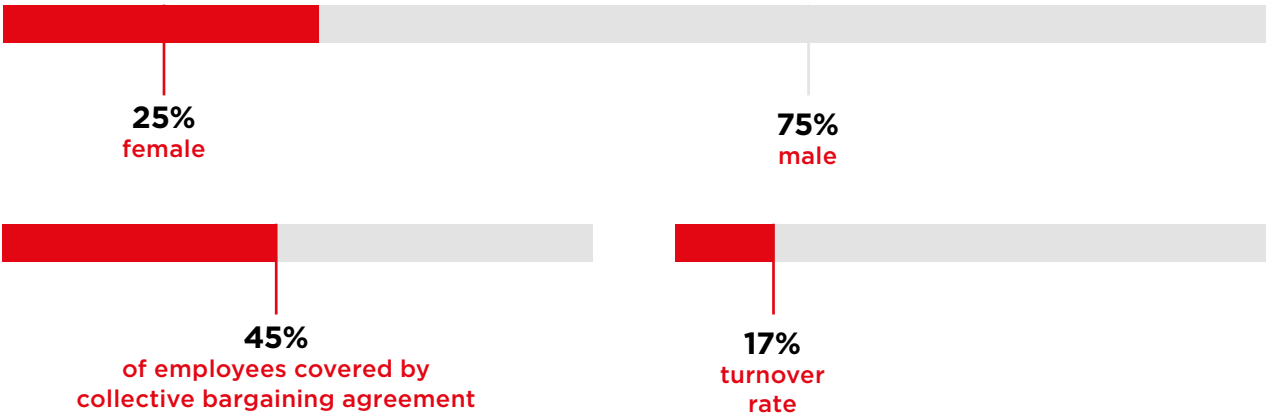
- Evolving leadership
- Developing future capabilities
- Enhancing the employee experience
- Strengthening the digital workplace

The first insights of these projects were used for the design of new training offerings across the company. At Calor GB, a successful pilot to include the SHV Leadership Model as part of the Performance Management process was conducted. Together with SHV’s internal data and analytics partner Adaptfy, several trainings were developed to increase data literacy within the company.

Our performance at a glance

Our employees in 2022

15,750  
employees



Employee training in 2022



Hiring in 2022



Community initiatives in 2022



>1 million\*  
individuals benefited from the programme ‘Start from the Heart’ or another community initiative

>€890,000  
of social investment and charitable contributions made

\*This number has significantly increased since last year’s report. This increase is largely driven by partnerships with two large hospitals in Brazil.



## Enriching the employee experience to drive our growth

Employee development, attraction and retention is vital to ensuring SHV Energy is equipped for the future. We must generate developmental opportunities for our people and help ready them to face the challenges ahead. We must also be able to attract new talent so we can continue to grow our ambitions and capabilities. Retaining our employees is important too, so that we have the right people in the right roles who stay with us long enough to develop their skills.

In 2022, one of the major areas of focus was an investment in developing our talents and building strategic capabilities to enable SHV Energy's strategy implementation. In 2023, we will continue refining how we attract, develop and retain talent. We will also continue investing in embedding leadership behaviours that we want to strengthen within the organisation, as well as creating a best practice framework linked to our purpose and values for our businesses to

develop suitable leadership development programmes.

We want to stretch our current capabilities to remain a leader in the energy industry. One way we will achieve this is by conducting a skills gap analysis to determine which skills SHV Energy needs to source, improve or develop to have the right future capabilities.

The first step to prepare for the digital workplace of the future is formulating an overall vision for HR around three topics:

- HR becoming more data-driven
- Supporting our businesses to develop this capability
- Being compliant with Environmental, Social and Governance (ESG) requirements

## Diversity and Inclusion at SHV Energy

Diversity is an area of focus for our organisation. We believe that inclusion and broad representation is key to a business' success, both in terms of tangible results and in creating a positive, supportive

atmosphere. Ultimately, we hire and promote based on who is the best candidate for a role, but significant attention is paid to diversity in both hiring and selecting participants for development programmes to ensure inclusion.

SHV Energy strives for a culture where:

- Employees can be themselves
- Employees feel completely included in any possible circumstance
- We embrace, respect and see the added value of people who think differently

We know that this results in:

- Better understanding and reflection of our customers and stakeholders
- Improved performance through increasing creativity and innovative, analytical and problem-solving capabilities
- A positive impact on our business results



»We understand the pressures that people are under and we want to grow awareness of the work of Samaritans Ireland«

DUNCAN OSBORNE, CEO, CALOR IRELAND

## IMPACT STORY

### Calor Ireland partners with Samaritans Ireland

In 2020, Calor Ireland and Samaritans Ireland began a charity partnership. Samaritans Ireland is a charity that provides emotional support 24 hours a day, seven days a week, 365 days a year across Ireland by providing a free helpline manned by volunteers. Calor Ireland has supported Samaritans Ireland's work and helped to grow awareness of their mental health services through social media. Since the partnership commenced, Calor Ireland has raised over €110,000 for Samaritans Ireland from both staff and company donations.

We are continuing towards our goals of at least 25% of our senior leadership positions being held by women by 2030, as well as at least one member of each local Management Team being from an under-represented nationality by the same deadline, and we remain on track. Women constitute a significantly smaller share of the workforce in the energy sector and we hope that having more women in leadership roles will help encourage more women to join our workforce across the business. In 2022, 22% of our senior leadership roles were filled by women and 81% of our local Management Teams met the planned nationality target.

We have a clear goal to achieve our targets, including setting up diverse assessment teams for the hiring processes and ensuring

our emerging internal talent pool is as close to a 50/50 gender split as possible. We believe this approach of initially focusing on gender and nationality in the journey of improving our diversity will indirectly improve the representation of other underrepresented groups.

We have Diversity and Inclusion (D&I) task forces at the level of our parent company, at an SHV Energy group level and at a local level in each business. These task forces are supported by D&I Ambassadors recruited within each business who act as a link between the taskforce and their colleagues. Exit interviews and employee engagement surveys also include questions on the topics of D&I. Each of these steps helps us to embed D&I considerations into our day-to-day routines.







»Children need a childhood with dirt, mud, puddles, trees and greenery. SUPERGAS Foundation believes that anything we teach in an indoor classroom can be taught outdoors in ways that are more enjoyable for children«

SREEMAN KADALI, TRUSTEE & SECRETARY, SUPERGAS FOUNDATION

#### IMPACT STORY

### Providing outdoor education to underprivileged children

The SUPERGAS Foundation (SGF) supports and promotes underprivileged children's education. SGF believes that education does not only happen in classrooms; children learn quickly when they have opportunities to move outside of the classroom environment and have hands-on learning experiences. With this in mind, SGF sponsored an educational daytrip for children in Bangalore, organised by the Prabodhan Trust charity. The children visited a planetarium, learned about science models, visited a green park for outdoor games and enjoyed an amphitheatre experience. In total, 50 children participated with 12 SGF volunteers and teachers.



SunSource colleagues gathering during a safety event.

We presented the results of our D&I initiatives worldwide in 2022. We leveraged collaboration amongst businesses to share best practices and collectively raise the bar on our D&I performance.

We comply with local legislation and human rights law in each country that SHV Energy works in, affecting both our employees and workers across SHV Energy's supply chain. In 2022, we started to make an analysis of a pilot scheme that analyses fair pay to prepare for upcoming EU legislation.

### Community development

Investing in people is a key part of SHV Energy's corporate philosophy. As well as defining our approach to talent management, it conveys our commitment to social responsibility. With this in mind, we focus our social responsibility and community programmes around education, which we view as making a long-term investment in people and communities. We believe that the best way to change people's

lives is giving them the capability and opportunity to make their own choices. We refer to this collection of programmes as our 'Start from the Heart' campaign.

Our businesses are uniquely positioned to understand the socioeconomic challenges and needs of their local communities, so we encourage them to find local projects to support and to set up their own. Through education, along with the confidence that comes from learning in a supportive environment, our

beneficiaries are supported to support themselves.

For example, in India, we supported blind and partially sighted children by providing all the necessary adaptive equipment to help them study. In Brazil, we work with women in the community and their local schools to support children and improve their future job opportunities. There are many success stories; a particularly special one is a student who we supported at one of these schools in Brazil, who is now an SHV Energy employee.

We have different initiatives in different cities and regions, especially in larger countries like Brazil and India. We have a strong due diligence process to select local organisations that we can build long-term programme partnerships with.

Our educational programmes also include constructing and operating schools, providing training on cooking safely with LPG and LNG fuel products, and teaching children about air pollution.



# Safeguarding integrity

## TARGET:

**100%**  
of suppliers signing the Supplier Code of Conduct\*

## PROGRESS IN 2022:

**69% ↑**  
of suppliers have signed the Supplier Code of Conduct\*\*

\*This target percentage describes how many of the total active suppliers (>€40k) of our businesses have accepted a Code of Conduct in our digital procurement platform Jaggaer.

\*\*This percentage indicates the percentage of active suppliers (>€40k) that have signed the Supplier Code of Conduct in the last 12 months. There are two ways to ensure this policy: a) acceptance of our Business Partner Code of Conduct, b) suppliers providing their own Code of Conduct which must cover the same principles as ours. In both cases, the supplier must be registered as an active supplier in Jaggaer.



## Our key achievements in 2022

# 1

2022 saw an increase in **trade sanctions**, particularly in relation to the situation regarding Russia and Ukraine. From the very first moment, we decided to go a step further and cease the import of LPG from Russia, despite a material financial impact on our business and even though importing LPG from Russia is still not prohibited.

# 2

Across our businesses and in our head office, we continued to enforce the right behaviour. We do not tolerate behaviour that is against our values. In 2022, **enforcing the right behaviour** included investigating several cases of alleged harassment and taking action where necessary.

# 3

Like in previous years, we focused on creating an **adequate level of awareness** on E&C topics to ensure that people have the necessary knowledge to perform their job in a compliant manner.

Business results are important to us, but how we reach those results is just as significant. Fair and honest business conduct is paramount to safeguarding integrity, as is adhering to the law and our SHV group policies. Safeguarding integrity also means taking responsibility for our value chain, not just our own actions.

It all starts with ensuring the right tone at the top through the commitment of our Management Board to honest and ethical leadership. Our high level of integrity is supported by the Ethics & Compliance (E&C) function and a solid E&C framework. This framework includes regularly updated policies, manuals and guidelines, implementation of those into our business processes, and adequate E&C training and awareness.

The main subjects E&C covers are anti-bribery & corruption, competition law, trade sanctions & trade controls, privacy & data protection, and fraud. We also advise on other topics such as anti-money laundering, lobbying and insider trading. Our awareness programmes, revised third-party due diligence process and internal whistleblowing process (Speak Up) are instrumental in mitigating risks related to E&C.





»Ethical behaviour is doing the right thing when no one else is watching«

KADRA ALEXANDER, DIRECTOR OF LEGAL AND CHIEF COMPLIANCE OFFICER, PINNACLE PROPANE

IMPACT STORY

Embracing ethics and compliance

From 28th November to 2nd December 2022, Pinnacle Propane held its second Annual Ethics & Compliance Week. The week’s emphasis was on putting Ethics & Compliance into practice. Pinnacle believe that Ethics & Compliance is not just something we learn, but something we live. It is part of its DNA, the foundation of the company’s strategy and critical to doing good business. The main topics covered during the week were general Ethics & Compliance, privacy, SHV’s purpose and values, e-learning, using the Compliance Register and third-party due diligence.

Our open culture

We strive to have an open culture where all employees feel comfortable raising any concerns or questions about whether the law or our policies have been breached or are at risk of being breached. If an employee has a question or concern, we encourage them to discuss it directly with the person or people involved. If addressing the concern directly is not possible, we ask our employees to talk to their manager, a Human Resources representative or their Compliance Officer. If an employee feels that these options are unsatisfactory, they can report the concern by using the Speak Up helpline, the central whistle-blower programme of SHV. The Speak Up helpline can be reached by telephone or through the online portal 24 hours a day in their local language.

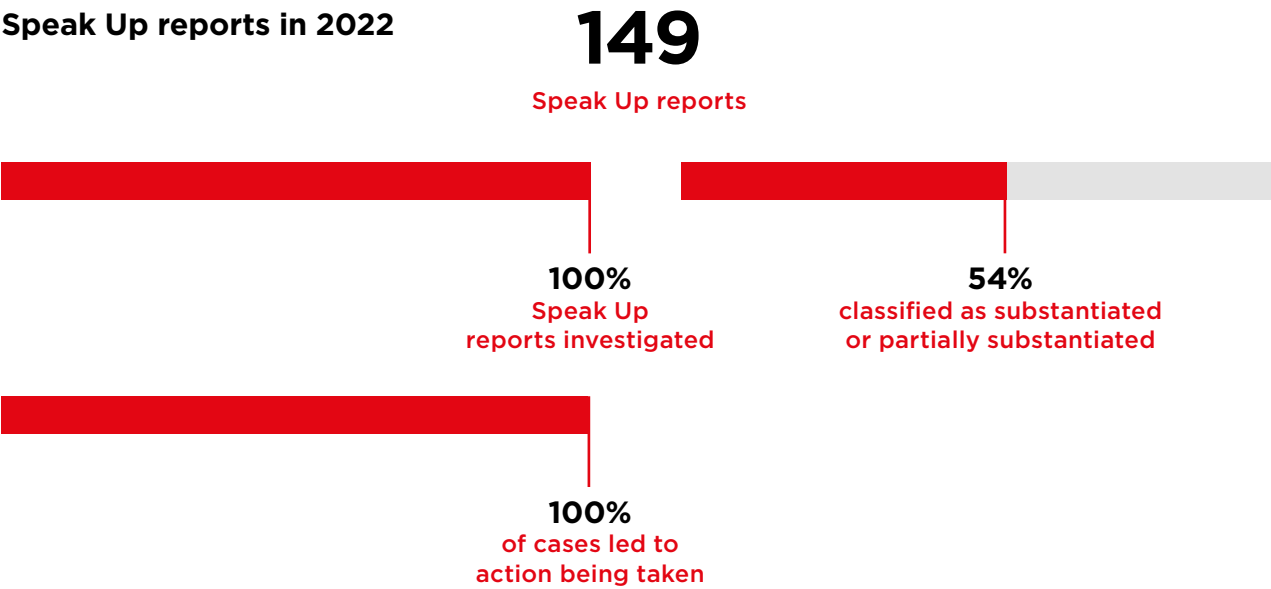
A reported concern will be handled objectively and locally, and by management staff at least one level senior to the people involved in the reported issue. SHV Energy takes all reports very seriously. Therefore, a reported concern will be analysed on its merits before taking the next steps.

Reports can be filed anonymously, but we encourage the reporter to come forward with their name so we can discuss their concern and gather any evidence. Reports will be treated in a confidential manner. We keep the group of people involved in the investigation and any follow-up interviews as small as possible. We do not tolerate any retaliation against anyone who, in good faith, reports a potential violation of the law, our Code of Conduct or our internal policies.



Our performance at a glance

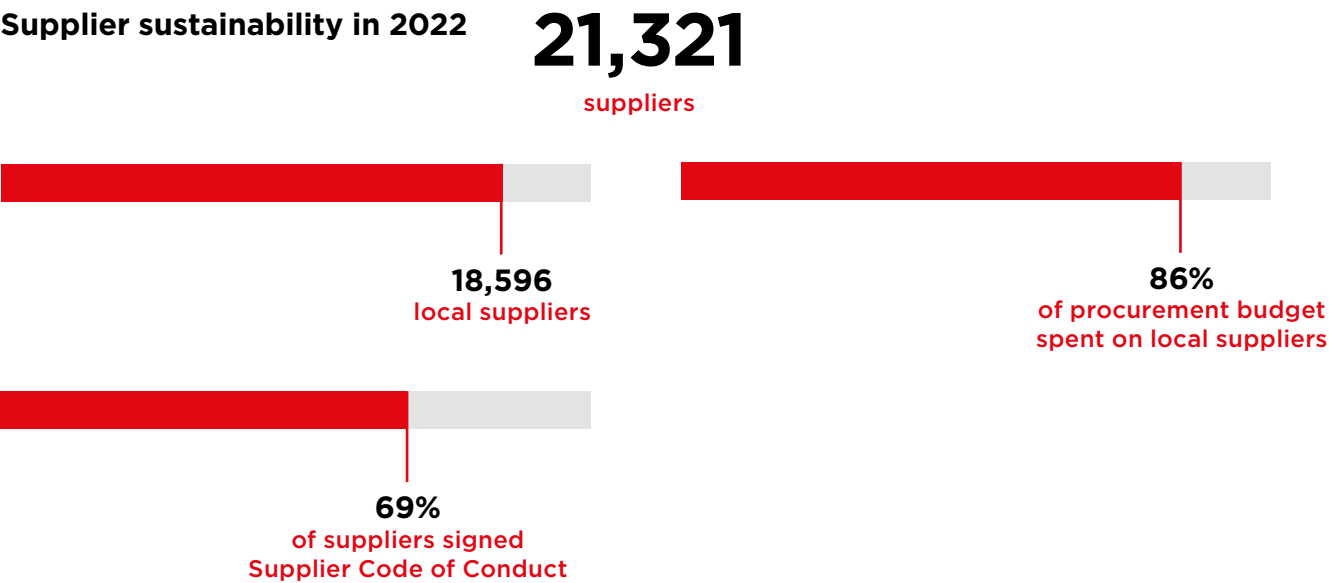
Speak Up reports in 2022



Creating awareness in 2022



Supplier sustainability in 2022







»To be efficient, compliance must be integrated into all business processes, understood by all and easy to handle«

THOMAS ROBARDET, LEGAL COUNSEL AND COMPLIANCE OFFICER, PRIMAGAZ FRANCE

IMPACT STORY

The importance of third-party due diligence (TPDD)

TPDD is one of the processes in Primagaz France to detect and mitigate possible compliance risks. It relies primarily on employees to initiate the assessment. The Compliance team at Primagaz France decided, in collaboration with the Procurement department, to integrate an automatic check of the TPDD procedure when a supplier is entered into the database. They also integrated other elements of the compliance process during the initial supplier set-up, such as a question about conflict of interests.



Our areas of focus in 2022

Trade compliance was of particular importance in 2022 due to the Russian invasion of Ukraine. We made an immediate decision to stop importing LPG from Russia, although it was and still is not prohibited, because we felt it was ethically correct. There was significant effort involved and many businesses were affected, with our Polish business Gaspol most impacted. We always ensure we comply with relevant sanctions, but in 2022 this was an area of enhanced focus.

We finished rolling out our revised third-party due diligence (TPDD) programme to all of our businesses. The revisions included changes regarding scope, as well as the due diligence activities per third party type. This has led to a more robust and risk-based due diligence process throughout the organisation.

We continued to onboard the businesses SHV Energy acquired in 2020 and 2021: Irish energy efficiency company EM3 and Indian solar energy provider SunSource. These businesses are very different to our traditional LPG and LNG companies and they have different risks from an E&C perspective. We also started to onboard Petromax, our newly acquired LPG company in Bangladesh.

Our approach to E&C is risk-based and tailored to the risks of each business and the context in which it operates. We conduct validation sessions on the E&C subjects to assess specific risks, review the mitigating measures and advise on additional measures where relevant. We have minimum standards for E&C set on a global level, but enhance or amend depending on local legislation, the type of business and the region in which it operates.

Enhancing awareness and understanding of Ethics & Compliance

As in previous years, raising awareness of E&C within our businesses was a priority in 2022. We trained colleagues on the relevant E&C topics relevant to their function using a combination of e-learning and targeted face-to-face training sessions, which are conducted either in person or via videoconferencing. We are mindful of how these are provided to the various teams as we want to make sure the trainings are tailored to the target groups.

Our anti-bribery and corruption (ABC) rules are addressed in our Code of Conduct and our ABC policy, as well as in other materials including our guidelines for gifts and entertainment, conflict of interest, sponsoring, charitable donations and lobbying. Our Code of Conduct training, as well as ABC

training, is currently approached in various ways throughout SHV Energy. For example, a large number of our businesses use a learning management system (LMS). Where employees do not have access to the LMS or where further training is required, Code of Conduct and ABC training is conducted via classroom sessions and face-to-face trainings. We use a similar approach for other E&C topics, such as competition law, privacy and trade compliance.

As travel restrictions and restrictions on in-person contact relaxed in 2022, our Compliance Officers were able to conduct more in-person visits. Having in-person interactions with E&C team members helps to enhance an open culture where employees are more confident asking questions and raising concerns.

We hosted a three-day E&C conference at the SHV Energy head office in Hoofddorp, the

Netherlands, to share knowledge and exchange best practices with the Compliance Officers from our businesses. We invited internal and external experts to delve deeper into specific topics, including how to promote an open culture and a safe working environment, and guidance on competition law linked to sustainable development.

Data privacy

Data privacy is part of our portfolio. As with all of our E&C topics, we take a risk-based approach to data privacy measures, including continuously building awareness throughout our organisation. To ensure we are adequately safeguarding the personal data of our colleagues, customers and other business partners, we monitor external trends and our internal processes. We implemented the General Data Protection Regulation (GDPR) in 2018. In 2022, new data privacy legislation in Brazil required us to recheck specific requirements in Supergasbras to ensure all our processes complied, while also raising awareness of the new rules amongst our Brazilian employees.

Workers' welfare

Protecting workers' welfare is relevant to many different business functions at SHV Energy. For example, ensuring safe working conditions in our operations protects workers' welfare, as do the requirements of our Code of Conduct and Supplier Code of Conduct regarding integrity – both in our own businesses and suppliers' businesses.

In 2021, we performed an initial human rights assessment based on the OECD guidelines for multinational enterprises. In 2022, we created a shortlist of the most salient human rights for SHV Energy, with input from our businesses. In 2023 and beyond, we will work with other departments on these topics.

Future-proofing our procurement practices

Safeguarding integrity also means taking responsibility for



our supply chain. We monitor our full supply chain but refer only to the upstream elements when we talk about procurement.

At SHV Energy, we separate procurement into gas and non-gas. The LPG part of our gas procurement is predominantly managed by our business SHV Gas Supply and Risk Management (S&RM). S&RM procures LPG on behalf of our businesses. LNG procurement and logistics in Europe is managed by a business called Prima LNG.

Non-gas procurement is managed on a global level by our Procurement team at the SHV Energy head office in Hoofddorp and on a local level by Procurement teams within our businesses. Non-gas procurement covers a broad spectrum of products, from tanks, cylinders and valves to logistics, installation services and consultancy services. We make sourcing decisions at both global and local levels based on our global strategy, but the supplier relationship is mostly managed on a local level, with 87.7% of suppliers defined as local. Sustainability is increasingly fundamental to our supplier selection and procurement processes. It is not an additional overhead expense, but part of ensuring that we get the most value from our suppliers. This, in turn, drives bottom-line cost reduction.

The role of our Procurement teams in improving the sustainability of our supply chain continues to grow. We work with SHV Holdings and other businesses within the SHV family to define and share procurement best practices, with sustainability as an important consideration.

### Sustainability progress in our gas procurement

S&RM continues to progress in its sustainability journey. It registered with EcoVadis in 2021, inspired by Primagaz France's success in maintaining a gold rating for several years and upgrading to platinum in 2022. S&RM completed the EcoVadis questionnaire in 2022, receiving a gold rating.



To further improve its score and continue to drive sustainability and cost efficiencies, S&RM is working with SHV Energy's business EM3 to optimise its processes for efficiency, reduce electricity consumption and identify improvements in processes at the terminals it commercially manages. At the Primagaz Lavera Terminal, this could be achieved by carports equipped with solar panels and reductions in the electricity consumption of the propane pumps that use about 75% of the terminal's 2.5GW yearly consumption.

SHV Energy's Karlshamn Terminal, located in southern Sweden, launched a project to allow hot water (minimum 65C) from the nearby district heating facility to enter the terminal and warm up fully refrigerated propane (at -40C) to ambient temperatures by sending it to the terminal's heat exchanger. This project requires minimal cost and a return on investment is expected in about two years, as the terminal will no longer need propane for the boilers that currently heat the water used in the heat exchanger. The municipality is now laying the pipe connections, one for the supply of hot water and another for the return of cold water, that will connect the district heating facility to the terminal's new heat exchanger. The terminal should start using the new set-up by the end of 2023.

S&RM's team also continued exploring possibilities to charter dual-fuel tankers using LPG for gas transport. Next to time and cost savings, using dual-fuel tankers also has significant sustainability benefits as they produce lower levels of CO<sub>2</sub> emissions and pollution.

As a result of our decision to no longer do business with Russia for our LPG supply, S&RM is diversifying its imports, including, for example, importing more LPG from the United States of America.





»The use of renewable energy in our bulk distribution shows Supergasbras' concern about the future of our planet«

EDUARDO ASSIS COUTINHO,  
LOGISTICS, SUPERGASBRAS

IMPACT STORY

Delivering LPG with electric trucks

Supergasbras started an unprecedented bulk distribution of LPG via Volkswagen electric trucks, the first project of its kind, to reduce CO<sub>2</sub> emissions. With a range of up to 250km, the vehicles are initially expected to deliver within Rio de Janeiro. The tank was built in Paulínia and complies with both the American Society of Mechanical Engineers' standard and RTQ6C standard, an INMETRO (National Institute of Metrology Standardization and Industrial Quality) requirement related to periodic inspections for road transport trucks. The model chosen for the design and construction of the truck was a Volkswagen e-Delivery with 100% electric power, the first vehicle with the technology fully developed in Latin America.

**Sustainability progress in our non-gas procurement**

Sustainability is an area of increasing priority for SHV Energy's Procurement team, who are responsible for purchasing operational categories such as tanks and cylinders, alongside managing indirect procurement categories like ICT services and consultancy. We had a clear objective in 2022 of continuing to build our sustainability roadmap, but the roadmap was not finalised due to changes in senior Procurement personnel. This project's planned completion date has been shifted to 2023 instead.

Maintaining business continuity alongside these leadership changes was challenging, particularly in addition to the stresses of a high inflation environment, but no major disruption occurred.

We made progress in reducing our business' overdependence on individual suppliers by introducing second or third suppliers of choice. This is part of the wider improvement of our business' procurement maturity by reducing the risk to our operations associated with a critical supplier going out of business or other problems associated with businesses providing us with products.

**SHV Energy's Procurement Policy**

The SHV Energy Procurement Policy formalises our ambition that Procurement contributes to a more sustainable supply chain. We continue to upgrade and update the policy, with updates emphasising our guiding principles of sustainable procurement and how they should



be covered in the key phases of the purchasing activity of any good or service. For example:

- Supplier selection: SHV Energy strives to work with suppliers that have accepted the terms and conditions of the Supplier Code of Conduct. This includes a supplier agreeing to adhere to their own existing code, providing it has similar requirements. In addition, if all relevant items are covered in our agreement with the supplier, then we also count the supplier as accepting the terms and conditions of our Supplier Code of Conduct. We are in the process

of finalising acceptance of the Supplier Code with 31% of our suppliers.

- Contracting: parallel to adding language that safeguards compliance, contracts will request suppliers report their CO<sub>2</sub> emissions and evolution in lost time for injury (LTI) and accidents for those categories that are applicable.
- Relationship management: open discussion with our suppliers allows us to evaluate their performance, conduct audits and apply corrective measures when necessary.



»I am proud of how members of the SHV Energy community reacted to Russia's invasion of Ukraine, both as people and professionals«

MICHAŁ FALISZEWSKI,  
LEGAL COUNSEL, GASPOL

IMPACT STORY

Transitioning away from Russian LPG

As soon as the invasion of Ukraine began, Gaspol grew concerned about the impact of the war on its business, which until then had been largely based on the purchase of LPG from Russia. The import of LPG and LNG from Russia is still not banned by much of the Western world, but many companies decided to pull out of or stop any business with Russia. SHV Energy took this courageous and ethical step in the days immediately following the invasion, which meant no new contracts could be entered into and term agreements were promptly terminated.





# Outlook

As a family-owned company, we have the benefit of a long-term perspective, along with the ability to set ambitious goals and steadily progress towards them. As such, our strategy and objectives do not change dramatically from year to year. Instead, they consistently contribute to our purpose to care for generations to come.

Of course, unprecedented events such as the illegal invasion of Ukraine and subsequent disruption of the global energy system force businesses to adapt even the best-laid plans, but we remain focused on the bigger picture and the future we want to create for our employees, our customers and our planet.

Our strategy therefore remains the same, but 2023 will see an adaptation of our operating model to facilitate freeing up the necessary capital for our sustainability journey

to continue progressing. We will also continue to develop the maturity of our sustainability reporting in preparation for the EU's Corporate Sustainability Reporting Directive, building on the progress we made in 2022. This will include increasingly integrating sustainability KPIs into our financial reporting.

Just as importantly, we will continue embedding the highest ethics and compliance standards in everything we do, supporting our colleagues

and local communities to thrive, and exploring new opportunities to innovate. Above all, we will continue safeguarding the health, safety and well-being of our customers and colleagues. These five aspirational goals combined constitute our purpose in practice – the courage to care for people, planet and performance.

In 2023 ever more, we will continue Advancing Energy Together across teams, departments and geographies.





# About this report

This is the sixth annual sustainability report of SHV Energy N.V., focusing on our sustainability operations across all our businesses during the 2022 calendar year.

## Scope of the report

The scope of the report is SHV Energy, established in Hoofddorp, the Netherlands.

The report applies only to the geographical markets where we had active operations in the full year 2022. Our scope of reporting does not include markets where businesses were sold or acquired during the financial year, cylinder tank manufacturing businesses, businesses where we do not have management control, or terminals and businesses that represent less than 0.5% of our service revenue. The exceptions are EM3 and SunSource, which are included in scope as these two entities are strategically important. The activities of any other associates are not in scope.

In 2022, through our subsidiaries, we continue to expand and acquire new facilities (such as an LPG storage terminal expansion in India and Sigli Group LPG business in Italy). With these transactions we strengthen our product portfolio and increased our customer base.

## Reporting boundaries

This report was developed using the reporting principles defined by the GRI Standards. The content of the report is built around the group's direct impact on economy, environment and people, its value to stakeholders and its five aspirational goals.

Each aspirational goal covers the topics that are identified as most material for SHV Energy and our stakeholders. The process for defining the material topics, as well as the list of material topics, is described in the materiality assessment section on page 19.

## Data quality

The report uses qualitative descriptions and quantitative metrics to describe our policies, programmes, practices and performance. Where possible, we derived the quantitative information in this report from our own systems locally and on a group level. To support our ambition of continuously improving the data quality, in 2022 we have worked on enhancing our data collection methods. This includes collecting data on a more granular level per business and also recording what system or programme the source data is coming from. We have done this to prepare for the more stringent reporting and CSRD regulations that we aim to be compliant with in 2025.

The qualitative information was provided and justified by the staff members responsible for the various topics. The data was verified and consolidated at group level. The reported data was generated with the highest level of reliability possible, but we note that uncertainties are inherent in measuring methods and data collection.

The number of employees reported may differ from our financial reporting due to different calculation methodology. They calculate average FTE whereas we count FTE at the end of the year.

To capture our carbon footprint, we measure Scope 1, Scope 2 and Scope 3 emissions arising from our operations. We have made certain assumptions and estimations in relation to energy use and carbon footprint in our supply chain (Scope 3). The calculation of carbon dioxide equivalent emissions is based on the GHG Protocol. We use UNFCC, GHG Protocol, DEFRA and IEA as

our emission factors sources. Where we reference CO<sub>2</sub> emissions in this report, we also refer to CO<sub>2</sub> equivalents.

Our carbon impact calculation involves offsetting our emissions by considering the effect of our products or services on our customers' carbon footprint. This is what we call 'switching' our customers.

This report has not been externally assured. We are working towards obtaining external assurance in the coming years, as we are preparing for the requirements of the CSRD (Corporate Sustainability Reporting Directive) and want to increase the credibility of the report.

## Changes in the reporting

This year, we restate the figure for the total invested in community development for 2021 as €469,880, as the figure was incorrectly included in the previous year's report. We also restate the figure for 2021 carbon impact as 1,285,774 t CO<sub>2</sub>e, as the figure was incorrectly included in the previous year's report. We changed how we track participants in the Innovation Movement and removed practitioners from the total to better gauge the quantity of resources that are genuinely involved in driving innovation initiatives. In addition, we will no longer report on NEBOSH-certified employees, as we have completed training for all the employees where this is relevant. Instead, we report on the number of Health and Safety training sessions conducted. We report on a new KPI, energy consumption, for the first time this year. For the first time, we also gave employees the option to not specify their gender.

This report has been prepared with reference to the GRI standards. The GRI Content Index can be found on our website.

## Definitions of the most material topics

Aspirational goal	Most material topic	Definition	Impact
Improving health, safety and well-being	Product safety	The design, manufacture and provision of safe products that ensure the safety of the consumer and which minimise the risk to people, assets and the natural environment.	Our responsibility is to exercise any leverage we might have in preventing and mitigating negative process and product safety impacts on our local communities, our employees and our customers.
	Process safety	The manufacturing, handling and use of dangerous substances and the management of pressurised systems have the potential to present major hazards to people, assets and the natural environment. (Accidental) spills of oils, chemicals and other harmful substances are also part of this topic.	
	Occupational Health and Safety	An organisation's duty of care, where low injury and absentee rates are generally linked to positive trends in staff morale and productivity.	The well-being of our employees, contractors, their families, customers and the surroundings in which we operate.
Embedding innovation	Innovation and technology	Activities that an organisation undertakes to innovate and introduce new products and services.  In SHV Energy, Innovation and technology is particularly focused on driving the business towards the transition to cleaner energy.	Technological development and innovative initiatives drive customer satisfaction and increase the safety of our employees.
Sustaining the environment	Air quality	The generation of other air emissions that cause a local effect on health and the environment. Examples are NOx, SOx, VOC emissions and PM.  At SHV Energy, this entails air pollutants saved because of using our products instead of traditional fossil fuels.	Contribution to climate objectives, for example via CO <sub>2</sub> reduction and air quality improvement, through distributing our products and switching our customers to cleaner energy sources.
	Climate change	The company's efforts to quantify, report and reduce greenhouse gas (GHG) emissions arising from their operations.  At SHV Energy, this entails the GHG emissions from our own and outsourced operations.	
Employee and community development	Employee development	The training and development of employees to ensure a skilled workforce for the future.	By providing a safe, supportive and rewarding work environment, we encourage our employees to develop their skills and take on new challenges and responsibilities.
	Community initiatives	Community investments or social initiatives with a focus on community development.	We focus our social responsibility and community programmes around education, which we view as making a long-term investment in people and communities.
	Diversity and equal opportunities	The breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity. Examples are gender diversity at leadership level and the inclusion of minority groups for employment opportunities.	Our aspiration is to achieve a balanced composition of the senior management team that reflects the diversity of the societies in which we operate.
Safeguarding integrity	Business integrity	The company's values, principles, standards and norms (often described in a Code of Conduct/Code of Ethics). General principles of governance and business values are accountability, transparency, integrity and compliance.	We trust that our external and internal stakeholders can rely on a relationship with SHV Energy based on integrity.
	Sustainable supply chain	An organisation's awareness of and transparency regarding its significant actual and potential negative environmental, social, economic and legal impacts in the supply chain (including contractors and subcontractors).	An uninterrupted supply keeps the economy and society up and running.



# SHV Energy's key figures

Improving health, safety and well-being						
Health and Safety audits		2022	2021	2020		
Health and Safety audits planned		1,131	744	538		
Health and Safety audits completed (%)		91%	94%	78%		
Corrective actions (SIF/pSIF)		2022	2021	2020		
Corrective actions raised		275	306	279		
Actions overdue		0	0	0		
Customer Health and Safety		2022	2021	2020		
Significant product and service categories for which health and safety impacts are assessed for improvement (%)		100%	100%	100%		
Health and Safety training		2022	2021	2020		
Number of Health and Safety training sessions attended by workers		67,775	53,423	21,217		
Work-related injuries	2022		2021		2020	
	Employees	Other workers	Employees	Other workers	Employees	Other workers
Fatalities	0	0	0	3	0	1
High consequence work-related injuries (SIFs)	2	2	4	2	3	2
Recordable work-related injuries	265	49	335	60	323	45*
Hours worked	40,462,899	9,942,294	41,260,774	9,221,408	43,937,019	6,055,622
*2020 data has been corrected.						

Embedding innovation*			
Innovation Movement	2022	2021	2020
Businesses that are part of the Innovation Movement	10	10	10
Innovation Leads, sponsors and ambassadors*	150	183	240
Active Innovation initiatives	65	70	43
*In previous years, innovation practitioners were tracked alongside the other categories. Our focus has shifted from tracking practitioners to monitoring the full-time equivalents (FTEs) committed to innovation. This approach enables us to accurately gauge the quantity of resources that are genuinely involved in driving innovation initiatives.			



Sustaining the environment			
CO <sub>2</sub> emissions	2022	2021	2020*
Carbon footprint (absolute) - Total [t CO <sub>2</sub> e]	18,175,955	18,945,901	18,152,939
Carbon footprint (absolute) - Scope 1 [t CO <sub>2</sub> e]	118,081	121,494	123,947
Carbon footprint (absolute) - Scope 2 [t CO <sub>2</sub> e]	9,923	10,607	13,966
Carbon footprint (absolute) - Scope 3 [t CO <sub>2</sub> e]**	18,047,951	18,813,800	18,015,026
Carbon impact (absolute) [t CO <sub>2</sub> e]	-1,164,424	-1,285,774	-1,014,345
CO <sub>2</sub> emissions (intensity) [kg CO <sub>2</sub> eq/t LPGe]	3,107	3,218	3,229
CO <sub>2</sub> emissions (intensity) - delta against 2016 baseline [%]	-7.7%	-7.9%	-5.7%
Energy consumption [MWh]	550,277	Not reported	Not reported
Air quality impact	2022	2021	2020
CO - carbon monoxide (tonnes)	-562,723	-514,991	-3,763,816
VOC - volatile organic compounds (tonnes)	-115,563	-106,532	-403,726
SOx - sulphur oxides (tonnes)	-443,796	-406,660	-3,311,394
NOx - nitrogen oxides (tonnes)	-668,086	-644,407	-912,724
PM2.5 - fine particulate matter (tonnes)	-120,505	-111,782	-498,427
PM10 - coarse particulate matter (tonnes)	-131,567	-122,251	-538,844

\*2020 figures for carbon have been restated based on new information. \*\*Scope 3 CO<sub>2</sub>e emissions exclude wholesale volumes of S&RM.



Enhancing employee and community development														
Employees by employment contract (based on the head count as per December 31, 2022)	Permanent							Temporary						
	2022			2021		2020		2022		2021		2020		
	Male	Female	Not specified*	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Europe	4,244	1,715	4	3,920	1,586	4,258	1,643	261	136	233	105	243	106	
Asia	3,505	1,196	0	3,570	1,210	3,798	1,295	0	0	0	0	1	0	
America	3,762	893	2	3,682	830	3,608	787	9	23	21	40	7	14	
Employees by employment type (based on EOY head count)	Full-time							Part-time						
	2022			2021		2020		2022		2021		2020		
	Male	Female	Not specified*	Male	Female	Male	Female	Male	Female	Not specified*	Male	Female	Male	Female
	11,772	3,694	6	11,331	3516	11,844	3,600	57	221	0	96	253	71	245

\*In 2022, we gave employees the option not to specify their gender for the first time.

New employee hires and employee turnover*	Hires									Turnover								
	2022			2021			2020			2022			2021			2020		
	Europe	Asia	America	Europe	Asia	America	Europe	Asia	America	Europe	Asia	America	Europe	Asia	America	Europe	Asia	America
<30 years old	430	199	383	299	188	304	222	192	273	197	171	281	185	210	160	159	298	166
30-50 years old	697	364	43	535	511	298	381	448	276	485	562	401	523	758	426	420	728	448
>50 years old	284	43	69	184	28	52	104	43	58	235	155	109	322	74	143	225	164	236
Male (share of the total headcount)	4%	4%	4%	5%	4%	3%	8%	10%	11%	4%	4%	4%	5%	5%	4%	9%	18%	15%
Female (share of the total headcount)	2%	1%	1%	2%	1%	1%	3%	3%	3%	2%	1%	1%	2%	2%	1%	3%	6%	4%
Not specified (share of the total headcount)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Learning and Development	2022		2021		2020	
	Male	Female	Male	Female	Male	Female
Average training hours per employee	9**	10**	11	11	10*	9*
Learning and Development budget	€2.5 million		€2.5 million		€2.3 million	

\*2020 data excludes the USA, 2022 data excludes Belgium and Luxembourg due to data availability.  
 \*\*2022 data excludes Great Britain, Bosnia and Herzogovina, Austria, Belgium and India due to data availability.

Diversity of Senior Management*				2022			2021			2020		
<30 years old				0			0			0		
30-50 years old				56			81			71		
>50 years old				49			72			57		
Male				82			119			106		
Female				23			34			22		

\*This indicator was introduced in 2020. 2022 data excludes Czech Republic, Bosnia and Herzogovina, Austria and Sweden.

Safeguarding integrity			
Speak Up reports	2022	2021	2020
Speak Up reports	149	168	169
Accounting & Auditing (%)	3%	2%	0%
Business Integrity (%)	10%	17%	27%
Environment, Health & Safety (%)	9%	6%	15%
HR: Diversity and Workplace Respect (%)	70%	67%	54%
Misuse or misappropriation of corporate assets (%)	5%	5%	4%
Other (%)	3%	4%	Not reported
Investigated reports (%)	100%	100%	100%
Reports classified as substantiated or partially substantiated (%)	51%	54%	44%
Cases led to action being taken (%)	100%	100%	88%
Sustainable supply chain	2022	2021	2020
Number of suppliers	22,321	21,211	23,244
of which are local (%)	83%	85%	79.47%
Procurement budget spent on local suppliers (%)	86%	76%	78%
Suppliers which signed the Supplier Code of Conduct (%)	69%	63%	53%





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